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Predictors of perfluorooctanoic acid levels in regular and contract workers of a
fluoropolymer manufacturing plant

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An abstract of
A thesis submitted to the Faculty of the
Rollins School of Public Health of Emory University
in partial fulfillment of the requirements for the degree of
Master of Science in Public Health
in Environmental Health - Epidemiology
2015

Abstract

Predictors of perfluorooctanoic acid levels in regular and contract workers of a fluoropolymer manufacturing plant

By Jessica F. Li

BACKGROUND: Perfluorooctanoic acid (PFOA) is a known human carcinogen that was released by a chemical plant, contaminating the drinking water in the mid-Ohio Valley. Occupational exposures in this plant are much higher than residential exposures from drinking water consumption.

OBJECTIVE: We examined predictors of PFOA between regular and contract workers of a chemical plant and determined the differences between PFOA levels.

METHODS: We studied 4,010 workers of DuPont Washington Works (WW) who had measured PFOA serum levels from a 2005-2006 survey. Of these, 1,923 were regular workers and 2,087 were community members who had reported working at DuPont WW in a survey but were not in the regular worker cohort, the “contract” workers. We also analyzed a subset of workers (48%) for whom we had the start and end dates of employment. We ran linear regression models to determine serum PFOA predictors.

RESULTS: Median PFOA serum level was 109.2 ng/mL for regular workers and 50.8 ng/mL for contract workers. The most important predictors were worker status (regular workers higher), years worked at DuPont WW, years worked in the Teflon division, current water district, and year ending employment (R^2 model = 0.49). PFOA was higher for workers who are male, who had a lower education level, and who began work in recent years. The effect of more recent years of employment termination on PFOA levels increased for regular workers compared to contract workers.

CONCLUSIONS: PFOA levels in contract workers were lower than regular workers. The effect of the year of employment termination is different between the worker groups, with much higher levels in regular workers who had ended employment most recently.

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Acknowledgements

I would like to thank my family for supporting me throughout my life and my journey in discovering what truly lights my fire. Even though you are far away and I do not get to see you as often as I would like, I know that you are there for me and that is what matters.

I would like to thank my friends for staying up long nights with me in the Rollins basement or Dunkin' Donuts (side thanks to the facilities staff of Rollins and to Dunkin' Donuts for keeping me running), for celebrating with me, for the laughs, for the Stone Mountain hikes, for the candy, and for your guidance in life, love, and the pursuit of leaving a positive impact on this world.

I would also like to thank Dr. Steenland for being a very very patient and kind man for putting up with my procrastination. When I hear about my peers' thesis horror stories, I give a silent thanks to the thesis gods for you being so understanding and awesome.

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Introduction

Perfluorooctanoic acid (PFOA or C8) is a man-made perfluorocarbon that has been used as a surfactant in the manufacture of several fluoropolymers, which are used in stain- and dirt-resistant industrial and consumer products, including Teflon and Gore-Tex. PFOA is found in the serum of over 99% of the U.S. population, with a median level of approximately 4.0 ng/mL (0.04 parts per million (ppm)) in 2003 – 2004 (Calafat et al. 2007b). PFOA has a half-life of 2.3 – 3.4 years and is not metabolized in the human body (Bartell et al. 2010, Olsen et al. 2003). Additionally, PFOA is persistent and does not break down naturally, resulting in environmental buildup and bioaccumulation. As a result, populations living near manufacturing facilities that use PFOA have higher serum PFOA concentrations than the general U.S. population.

Human exposure to PFOA may occur via ingestion of contaminated food or drinking water or inhalation of air or dust (Winqvist et al. 2013). Serum levels of PFOA and negative health outcomes have been analyzed in two worker cohorts and residents in the communities surrounding the two main facilities, 3M in Minnesota and DuPont in West Virginia/Ohio, which manufactured and used PFOA (Steenland et al. 2010). The plant workers, especially those working in the Teflon Division, have a higher serum PFOA level compared to the surrounding residents that have an elevated background PFOA exposure from contaminated drinking water sources.

Animal models have shown that PFOA is likely concentrated in the liver, kidney, and blood in the human body. In rodents, PFOA is seen to cause testicular, liver, pancreas, and possibly breast cancers (US EPA 2005). In its draft risk assessment of

PFOA, the U.S. EPA also suggests that there is evidence that PFOA is carcinogenic in humans (US EPA 2005).

PFOA has been used in the manufacture of fluoropolymers at the DuPont facility in Washington, West Virginia (Washington Works, WW) since 1951, with peak usage occurring in the late 1990s. In this facility, PFOA was used as a surfactant in the polymerization of trifluoroethylene to make Teflon. Due to the strength of the multiple carbon-fluorine bonds, PFOA does not naturally break down in the environment (Steenland et al. 2010). The DuPont WW facility deposited PFOA into the environment through air emissions that deposited on the soil around the plant and leached downward into water sources, direct emissions into the Ohio River which entered the groundwater contaminating public drinking water sources, and by disposing of liquid and solid waste in local landfills and on-site digestion ponds (Paustenbach et al 2007). As a result, drinking water was the primary route of exposure to PFOA for residents living in the surrounding water districts of Belpre, Little Hocking, Lubeck, Mason, Tappers Plains, and Pomeroy. Additionally, several private wells within those districts were also determined to be contaminated with PFOA (Emmett et al. 2006).

From late 2001 through early 2002, a class action lawsuit was filed against DuPont by individuals in West Virginia or Ohio whose drinking water had been contaminated with a quantifiable amount of PFOA from industrial releases by DuPont's WW facility (Frisbee et al. 2009). As part of the settlement terms reached in 2004, DuPont was ordered to pay 1) for a baseline health survey and PFOA measurement for people living in six contaminated water districts, 2) for filters to remove PFOA from the water supply in the six affected water districts (Figure 1, taken from Shin et al. 2011),

and 3) for studies to be conducted by a panel of three epidemiologists (the C8 Science Panel) to determine if there was a “probable link” between PFOA exposure and various human disease and health conditions (Steenland et al. 2014).

The baseline health survey, known as the “C8 Health Project” (C8HP), included 69,030 residents living in the Ohio River Valley (Frisbee et al. 2009), and was conducted in 2005/2006. The C8HP consisted of a questionnaire about demographics, health-related behaviors, medical history, occupational history, and residential history. Blood draws were used to establish baseline measurements of serum PFOA and nine other perfluorocarbons, as well as other clinical laboratory measurements (Frisbee et al. 2009).

Later work by the C8 Science Panel consisted of interviews from 2008-2011 with C8HP adult participants, as well as interviews in 2008-2011 with workers at the DuPont plant who had not participated in the C8HP but had been identified by DuPont as workers in a worker cohort that DuPont had assembled earlier. A number of community residents interviewed by the C8 Science Panel in 2008-2011 reported working at DuPont but were not included in the DuPont worker cohort. These were considered likely to have been temporary contract workers who were not regular DuPont employees.

We sought to compare serum PFOA levels between regular and “contract” workers at DuPont. A previous paper focused on serum PFOA levels in contract workers involved in the demolition of a PFOA manufacturing facility at a 3M plant using PFOA (Olsen et al. 2012) was the motivation of the present work. Olsen et al. (2012) found that contract workers conducting the demolition had much lower levels than regular 3M workers at the beginning of the project, but had increased serum PFOA levels at the end of the demolition compared to regular 3M workers; the regular 3M workers had much

lower serum PFOA levels due to no longer being exposed during ongoing operations involving PFOA.

The DuPont contract workers had previously been excluded from previous occupational PFOA studies conducted by the C8SP because their lack of work history prevented prediction of their PFOA serum levels over time, unlike regular DuPont workers whose information was recorded (Woskie et al. 2012). Hence, we were also interested in whether regular workers at the DuPont plant had different serum PFOA levels than the contract workers, and what variables might predict such differences.

Materials and Methods

Study participants.

The C8 Health Project (conducted by Brookmar Inc.) collected data from August 2005 to August 2006. The survey questionnaire collected health data from community members throughout the Ohio River Valley in the water districts surrounding the DuPont WW facility. A battery of blood tests, including a test to quantify the concentration of PFOA in serum, was also conducted. Subjects were eligible to participate in the C8 Health Project if they had consumed drinking water supplied by these contaminated water districts (Little Hocking Water Association, City of Belpre, Tupper Plains Chester Water District, Village of Pomeroy, Lubeck Public Service District, Mason County Public Service District, or private water sources in these areas that were contaminated by PFOA) for at least 1 year before December 3, 2004. Subjects were also eligible if they could document that they had worked or attended school in a contaminated water district for at

least 1 year. Subjects were compensated \$400 if they filled out the questionnaire and donated a blood sample at a local survey station.

The C8 Health Project collected data on 69,030 subjects. Because the eligible population was not enumerated due to lack of knowledge regarding past populations of the water districts and the number of eligible people living outside the contaminated water districts, it is unknown what proportion of the eligible population participated. It is assumed that most of the eligible population participated due to the financial incentive and widespread public interest. The participation rate was estimated to be 81% among current residents ≥ 20 years of age (Steenland et al. 2009).

The C8 Science Panel further studied C8 Health Project adults who consented to be part of further studies (74%). In addition, the C8 Science Panel also interviewed workers at the DuPont plant who had not been included in the community-based C8 Health Project. Both community residents and workers were interviewed by the C8 Science Panel in at least once in the period 2008-2011.

The original DuPont worker cohort had been assembled earlier by DuPont researchers (Leonard et al. 2008). It consisted of 6,026 DuPont workers who worked at the DuPont WW facility for at least one day between plant start-up on January 1, 1948 and December 31, 2002 (Leonard et al. 2008). These workers all had detailed work history records. Of these 6,026 participants, 4,391 were interviewed by the C8 Science Panel in 2008-2011. Of these, 1,923 had PFOA serum measurements when they had participated in the C8 Health Project in 2005-2006 (Figure 2)

In addition, 2,087 subjects not in the DuPont worker cohort, reported working at DuPont when interviewed by the C8 Science Panel. These subjects were assumed to be

contract workers and had been excluded from occupational studies by the C8 Science Panel due to their lack of detailed work history records, which made it impossible to estimate their past occupational exposure.

Figure 2 depicts the study population analyzed here (n = 4,010). This study population consists of the 1,923 regular DuPont workers who were in the DuPont workers cohort, as well as 2,087 subjects interviewed by the C8 Science Panel who reported that they had worked at DuPont WW, the “contract” workers. All of these 4,010 workers reported the number of years they worked at DuPont and whether they had worked in Teflon production, where PFOA exposure was highest. All subjects also had participated in the C8 Health Project and had serum PFOA levels measured in 2005/2006.

In addition, among the 4,010 studied here, dates of employment were available for 2,630 participants consisting of 1,923 workers in the DuPont cohort who had detailed work histories, as well as for 707 workers self-reporting DuPont work but not in the DuPont worker cohort. However, not all of these 2,630 participants are included in the statistical model because there are workers who stated in the C8HP that they did not work at DuPont WW even though they participated in the C8 Science Panel as a cohort or contract worker.

Statistical analysis.

Measured serum PFOA levels in 2005/2006 were the outcome variable in a linear regression analysis. Our principle variable of interest was type of worker (cohort, versus contract worker). We also believed *a priori* that other employment-related variables would predict measured serum PFOA levels, including the length of time worked at DuPont WW, working in the Teflon department of DuPont WW, and length of time

worked in the Teflon department, and pay status (hourly/salaried). Data for these variables were reported during C8 Science Panel surveys.

Based on a past study (Steenland et al. 2009), we also included in our model past and present residential water districts, with subjects in more distant water districts expected to have lower serum levels and current and past contaminated water district were reported in the C8 Health Project. Subjects in the C8 Health Project were required to document past or present consumption of contaminated public water from one of the six contaminated water districts by either living in, working, or attending school in a contaminated water district for at least 1 year, or having consumed water from private wells with documented contamination. The documented water district of exposure is referred to as the “qualifying” water district. Water districts were classified into 12 groups: six for drinking public water at the time of the interview in one of the six contaminated water districts, and six for not currently drinking public water but having been exposed by previously drinking water in one of the six contaminated water districts.

Several predictors of serum PFOA from a prior study (Steenland et al. 2009) were also considered as *a priori* variables to be associated with serum PFOA, i.e. age, race, sex, BMI, education, and month of testing in 2005/2006. Our regression model was thus based on including these *a priori* variables found to be important in the literature, as well as the variables pertaining to employment at DuPont WW. The worker cohort and cohort workers who had self-reported in C8 Health Project to have previously or currently been employed at DuPont WW excluding those without serum PFOA measurements or information on time worked at DuPont WW (n = 4,010) were included in analysis using an initial regression model. The main predictor variable indicated whether or not a

subject was in the worker cohort (1 for cohort worker and 0 for contract worker). Other potentially important variables were included, ultimately retaining those with a significant association ($p \leq 0.05$) with PFOA.

The natural log transformation of the serum concentration of PFOA was used as the outcome of the model to ensure a normal distribution for the outcome variable. Results from regression models in which the log of PFOA was the outcome were transformed back to the original unlogged scale, resulting in multiplicative effects for predictor variables. All predictor variables were categorical. Predicted values were reported as a percent change compared with baseline referent values for each categorical variable in the regression.

In a second model in a reduced study population, variables indicating the start and end date of employment at DuPont WW were also included the volume of usage of PFOA increased over time with peak usage in the 1990s, followed by a decline. The results from this regression were be used to see if the year in which subjects began and ended employment is associated with differential serum PFOA levels. Effect modification between significant predictor variables and the variable indicating worker status (cohort or contract worker) were considered for inclusion in the model, retaining those with a significant association with PFOA when the cohort variable and the predictor variable were included.

Results

Table 1 provides descriptive data for the study population of DuPont cohort (n = 1,923) and contract workers (n = 2,087) with measured serum PFOA levels and years

worked at DuPont WW (n = 4,010). The observed median levels of serum PFOA are higher in cohort workers than in contract workers. The proportion of missing observations is larger in contract workers than in cohort workers for several variables with missing observations: pay status, reporting working in the Teflon division, years worked in the Teflon division, and current water district.

Figure 3 shows the distribution of measured serum PFOA, and Figure 4a shows the normal distribution of the natural log of PFOA. Figure 4b shows the distribution of the natural log of PFOA stratified by worker status, which is also normally distributed.

Table 2 shows the results of the model for the DuPont worker cohort and contract workers (model R^2 , 0.47) with variables from Table 1 (n = 3,297). The model (Table 2) shows strong effects of working as a cohort worker, years worked in the Teflon division, years worked at DuPont WW, pay status (hourly/salaried), current water district, and sex. Figure 5 shows the normally distributed residuals from this model. Our data indicate that contract workers are likely to have had lower exposure than regular workers even after adjusting for other occupational variables, presumably because they were generally exposed to lower levels of PFOA during their work at DuPont WW (Figure 6). Long-term occupational exposure, especially in the Teflon division, was significantly correlated with much higher PFOA levels (Figure 7). The observed median PFOA levels of workers reporting to be working in the Teflon division is higher than those who did not report working in the Teflon division in both cohort workers (150.5 ng/mL versus 81.1 ng/mL) and contract workers (79.5 ng/mL versus 38.4 ng/mL). Additionally, working as an hourly worker is associated with higher PFOA levels than working as a salaried worker. Male workers have higher PFOA levels than female workers. Other significant

variables that attribute less to the serum PFOA levels are race, education, and the month of testing.

Because the volume and frequency of PFOA use in manufacture at DuPont WW was not constant throughout the years of its use, the years that a worker began and ended work at DuPont was thought to be associated with PFOA levels. The peak of PFOA usage occurred in the 1990s, followed by a steady decline in PFOA use. Table 3 shows the distribution of years in which cohort and contract workers began and ended employment at DuPont WW for those study subjects with data on dates of employment. The proportion of cohort workers with start years ($n = 1,725$; 89.7%) and end years ($n = 1,723$; 89.6%) is much greater than the proportion of contract workers with start years ($n = 548$; 26.3%) and end years ($n = 542$; 26.0%). The model (Table 4), using a subset of the population from Table 2 with start and end years of employment, shows strong effects of the previously significant variables as well as highly significant associations with the start and end years of employment; the model as a whole has a good R^2 of 0.49. Beginning and ending employment in more recent years (up to 2006) are associated with higher levels of PFOA. Figure 8 displays the increase with more recent start years of employment, and Figure 9 displays the increase with more recent end years of employment. The variables for age, race, and month of testing became insignificant ($p > 0.05$) and were not included in this model; the new variables for years starting and ending employment presumably captured the prior effects of age.

As suggested in previous studies, current water district is also associated with PFOA levels, although this impact on PFOA levels is lower than in previous studies of community members. This makes sense as the current study population is made up of

workers with predicted high occupational exposure to PFOA where residential PFOA exposure would be expected to have a relatively smaller effect on serum PFOA levels. Current residence in water districts closest to WW have higher PFOA levels, while past residence in water districts becomes insignificant in predicting serum PFOA levels in workers exposed to PFOA. Table 1 shows this association with water district; current consumption of water from Little Hocking is associated with the highest levels of PFOA. This makes sense because the well field for Little Hocking is located directly across the river from the plant. The furthest water district of Mason had the lowest levels, and there was no data for workers currently residing in Pomeroy.

In general, there are clear differences in the demographics and employment characteristics between cohort workers and contract workers. Contract workers are younger, have worked at DuPont WW for fewer years, have worked in the Teflon division for fewer years (if applicable), are less likely to be salaried, and are less educated than cohort workers. These differences between the worker groups are notable because the majority of these characteristics are strongly associated with PFOA levels. However, when these variables were controlled for in the regression analyses, this suggests that contract workers had less heavy exposure to PFOA even after taking all these other occupational variables into account.

When effect modification in the subset model (Table 4) was considered using the likelihood ratio test, a significant interaction variable with the variable indicating worker status was year ended work at WW. The effect on serum PFOA level associated year ending work at DuPont WW is different if the worker is a regular versus contract worker, and is significantly higher amongst regular cohort workers. Among cohort workers,

having a later end year is associated with higher serum PFOA levels compared to their contract worker counterparts. After adjusting for effect modification from these variables, the R^2 increased slightly to 0.50. The predictor variables of sex, salary status, years worked at WW, years worked in Teflon division, current water district, education, and employment start year were still significantly associated with PFOA levels after adjustment.

Discussion

PFOA is important chemical introduced in the mid-20th century and heavily used in manufacturing until the late 1990s. As a result, it is present in the blood of almost the entire U.S. population. The community and occupational studies following the class-action lawsuit have shown associations between elevated levels of serum PFOA with the negative health outcomes of kidney cancer, testicular cancer, ulcerative colitis, high cholesterol, thyroid disease, and pregnancy-induced hypertension (C8 Science Panel).

Prior studies on the DuPont WW workers have found higher levels of serum PFOA compared to the already elevated levels in Ohio River Valley community members who lived in the six water districts surrounding the DuPont WW plant. Studies of the community members found that age, sex, current water district, and past qualifying water districts are the most influential predictors of high serum PFOA levels in community members; working at DuPont WW, the source of the contamination in the area, was associated with markedly higher levels of PFOA. Occupational studies determined that 1,000 workers at DuPont WW had a mean serum level of 428 ng/mL in 2004 (Sakr et al. 2007) and a subset of current workers at the plant had a mean serum level of 427 ng/mL

in 2005-2006. Occupational exposure assessments of PFOA (Woskie et al. 2012) determined that workers in jobs that directly handled PFOA had the highest PFOA levels, followed by jobs that intermittently handled PFOA. An analysis of contract workers involved in the demolition of a 3M plant that manufactured PFOA (Olsen et al. 2012) found that these contract workers had much lower levels than regular 3M workers at the beginning of the demolition project, but had higher levels compared to regular 3M workers by the end of the project. The subset of the community members in the Ohio River Valley who claimed to have worked at DuPont WW but were not in the regular worker cohort had not been previously analyzed or included in any occupational exposure studies.

Here we have studied the occupational exposures these temporary or contract workers who had occupational exposure to PFOA, comparing them to the regular worker cohort. This population has been exposed to PFOA primarily through working at a manufacturing plant that manufactured products requiring PFOA to produce (eg. Teflon). Those working in the Teflon division naturally had higher exposures to PFOA, which were reflected in the median serum levels, as well as the predicted levels from the models. Those who were in the DuPont WW cohort had markedly higher levels of PFOA (median 109.2 ng/mL) compared to those who were contract workers at DuPont (median 50.8 ng/mL), which are both higher than those from the community who did have this occupational exposure but were exposed to PFOA through drinking water contamination (median 24 ng/mL) (Steenland et al. 2009).

Overall, in this population, PFOA levels decrease as the years worked in WW increases while PFOA levels increase as the years worked in the Teflon division

increases. This means that longer exposure to PFOA in the high-Teflon area is associated with higher serum PFOA levels, and that as a worker gains seniority, he or she could be promoted or transferred into jobs that come in less contact with PFOA. Workers who are paid hourly have a higher levels than salaried workers. Additionally, those who began and ended employment in more recent years at WW had higher levels of PFOA, which is consistent with the peak of PFOA exposure having occurred in the 1990s, and with the gradual excretion of PFOA from the body following high exposure.

A major non-occupational factor influencing PFOA levels was the distance of current residence from the plant. Current residence in water districts near the plant (eg. Little Hocking and Lubeck) was associated with the highest levels. In this population, prior residence near the plant was not significantly associated with PFOA levels due to gradual excretion of PFOA after high exposure ceases. Past studies of the general population based on National Health and Nutrition Examination Survey (NHANES) data found that males had higher levels, whites had higher levels than Hispanics and blacks, and that increased education was associated with higher serum PFOA levels (Calafat et al. 2007a, 2007b). We found that in this population, the association with sex and race (whites compared to non-whites) were also seen. However, increased education was associated with lower serum PFOA levels, presumably because those with more education would be employed in managerial and office positions that had minimal contact with PFOA. Steenland et al. (2009) found a J-shaped relationship with serum PFOA, with higher levels in the young and the old. Compared to community, the youngest age groups of 0-9 and 10-19 are ineligible to be in this worker population; serum levels increase with age until 50-59 and then decrease. The age association is

weak except when there is a strong downward trend for the oldest age groups of 60-69 and over 70. There is a sharp decrease at these ages, presumably because these groups are retiring and leaving work at DuPont WW. In the subset model, age became insignificant, presumably because in these workers, age was serving as a proxy for the years of starting and ending employment.

Because this worker population was not identified or planned for prior to survey distribution and study implementation, there are limitations on the conclusions made in this analysis. Since the pattern of missing observations is disproportionate comparing the cohort and contract workers, the results of the regression analyses could be skewed if missing observations are associated with serum PFOA levels. This is likely, since many contract workers did not have data on the start and end years of employment and thus were not included in the subset regression analysis. Another limitation of this analysis is the inability to gather information, such as job functions, about the contract workers. Knowing the tasks and job titles of the contract workers would allow for the creation and application of a job-exposure matrix specifically catered to contract and temporary workers.

Recently the Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) have begun focusing on better protecting temporary workers, often overlooked in the past, from job hazards (OSHA 2014). This specific population group of cohort workers were analyzed because they were treated as non-occupationally exposed community members in past analyses. Certain contract and temporary worker populations have higher exposures to a contaminant than regular full-time workers. Additionally, the contexts (eg. Job function,

job title, exposure duration) in which contract workers are exposed to a contaminant could very well be different from regular workers, as was the case with the 3M plant demolition contract workers.

In conclusion, in a population that has PFOA levels high above background levels due to occupational exposure and contaminated water consumption, the contract or temporary workers of DuPont WW have serum PFOA levels that are between that of the lower levels of community members and the higher levels of DuPont WW regular cohort workers.

Conclusions and Recommendations

We have studied the occupational exposures these temporary or contract workers who had occupational exposure to PFOA, comparing them to the regular worker cohort. This population has been exposed to PFOA primarily through working at a manufacturing plant that manufactured products requiring PFOA to produce (eg. Teflon). Those working in the Teflon division naturally had higher exposures to PFOA, which were reflected in the median serum levels, as well as the predicted levels from the models. Those who were in the DuPont WW cohort had markedly higher levels of PFOA (median 109.2 ng/mL) compared to those who were contract workers at DuPont (median 50.8 ng/mL), which are both higher than those from the community who did have this occupational exposure but were exposed to PFOA through drinking water contamination (median 24 ng/mL) (Steenland et al. 2009).

Although in this population, contract workers have lower exposure levels and serum levels of the contaminant, this study and population is not generalizable to other situations, since each exposure and exposure setting is distinctly different from another. Thus, each worker group, along with their associated contract and temporary worker groups must be assessed individually to determine if there are significant (and more importantly, higher) exposures in contract workers as compared to regular workers and which predictor variables may be associated with a difference in exposure and contaminant levels.

References

- Bartell S, Calafat A, Lyu C, Kato K, Ryan B, Steenland K. 2010. Rate of decline in serum PFOA concentrations after granular activated carbon filtration at two public water systems in Ohio and West Virginia. *Environ Health Perspect* 118:222–228.
- C8 Science Panel. 2012. C8 Science Panel: C8 Probable Link Reports. Available: http://www.c8sciencepanel.org/prob_link.html [accessed 26 October 2014].
- Calafat AM, Kuklennyik Z, Reidy JA, Caudill SP, Tully JS, Needham LL. 2007a. Serum concentrations of 11 polyfluoroalkyl compounds in the US population: data from the National Health and Nutrition Examination Survey (NHANES). *Environ Sci Technol* 41:2237–2242.
- Calafat AM, Wong LY, Kuklennyik Z, Reidy JA, Needham LL. 2007. Polyfluoroalkyl chemicals in the U.S. population: data from the National Health and Nutrition Examination Survey (NHANES) 2003–2004 and comparisons with NHANES 1999–2000. *Environ Health Perspect* 115:1596–1602.
- Ehresman DJ, Forehlich JW, Olsen GW, Chang S-C, Butenhoff JL. 2007. Comparison of human whole blood, plasma and serum matrices for the determination of perfluorooctanesulfonate (PFOS), perfluorooctanoate (PFOA) and other fluorochemicals. *Environ Res* 103:176–184.
- Emmett EA, Shofer FS, Zhang H, Freeman D, Desai C, Shaw LM. Community exposure to perfluorooctanoate: relationships between serum concentrations and exposure sources. *J Occup Environ Med*. 2006a;48:759–770.

- Flaherty JM, Connolly PD, Decker ER, Kennedy SM, Ellefson ME, Reagan WK, et al. 2005. Quantitative determination of perfluorooctanoic acid in serum, and plasma by liquid chromatography mass spectrometry. *J Chromatogr B* 819:329–338.
- Frisbee SJ, Brooks AP, Maher A, Flensburg P, Arnold S, Fletcher T, et al. 2009. The C8 Health Project: design, methods, and participants. *Environ Health Perspect* 117:1873–1882.
- Leonard RC, Kreckmann KH, Sakr CJ, Symons JM. 2008. Retrospective cohort mortality study of workers in a polymer production plant including a reference population of regional workers. *Ann Epidemiol* 18(1):15–22.
- Longnecker MP, Smith CS, Kissling GE, Hoppin JA, Butenhoff JL, Decker E, et al. 2008. An interlaboratory study of perfluorinated alkyl compounds levels in human plasma. *Environ Res* 107:152–159.
- Olsen GW, Burriss JM, Burlew MM, Mandel JH. 2003. Epidemiologic assessment of worker serum perfluoro- octanesulfonate (PFOS) and perfluorooctanoate (PFOA) concentrations and medical surveillance examinations. *J Occup Environ Med* 45(3):260–270.
- Olsen GW, Buehrer BD, Gibson BA, Butenhoff JL, Zobel LR. 2012. Longitudinal Assessment of lipid and hepatic clinical parameters in workers involved with the demolition of perfluoroalkyl manufacturing facilities. *J Occup Environ Med* 54(8):974-83.
- OSHA (Occupational Safety and Health Administration). 2014. Temporary Workers Homepage. Available: https://www.osha.gov/temp_workers/ [accessed 26 October 2014].

- Paustenbach DJ, Panko JM, Scott PK, Unice KM. 2007. A methodology for estimating human exposure to perfluorooctanoic acid (PFOA): a retrospective exposure assessment of a community (1951–2003). *J Toxicol Environ Health A* 70(1):28–57.
- Shin HM, Vieira VM, Ryan PB, Steenland K, Bartell SM. 2011b. Retrospective exposure estimation and predicted versus observed serum perfluorooctanoic acid concentrations for participants in the C8 Health Project. *Environ Health Perspect* 119:1760–1765.
- Steenland K, Fletcher T, Savitz DA. 2010. Epidemiologic evidence on the health effects of perfluorooctanoic acid (PFOA). *Environ Health Perspect* 118: 1100-1108.
- Steenland K, Savitz DA, Fletcher T. 2014. Commentary: Class action lawsuits: can they advance epidemiologic research? *Epidemiology* 25:167-169.
- Steenland K and Woskie S, Mortality patterns among workers exposed to PFOA, *Am J Epidemiol* 2012,176:909-17
- U.S. EPA. 2005. Draft Risk Assessment of the Potential Human Health Effects Associated with Exposure to Perfluorooctanoic Acids and Its Salts. U.S. Environmental Protection Agency. Available: www.epa.gov/oppt/pfoa/pubs/pfoarisk.htm [accessed 25 October 2014].
- Winqvist A, Lally C, Shin H, Steenland K. 2013. Design, methods, and population for a study of PFOA health effects among highly exposed Mid-Ohio Valley community residents and workers. *Environ Health Perspect* 121:893-89

Woskie SR, Gore R, Steenland K. 2012. Retrospective Assessment of Perfluorooctanoic Acid Serum Concentrations at a Fluoropolymer Manufacturing Plant. *Ann Occup Hyg* 56:1025-1037.

Tables and Figures

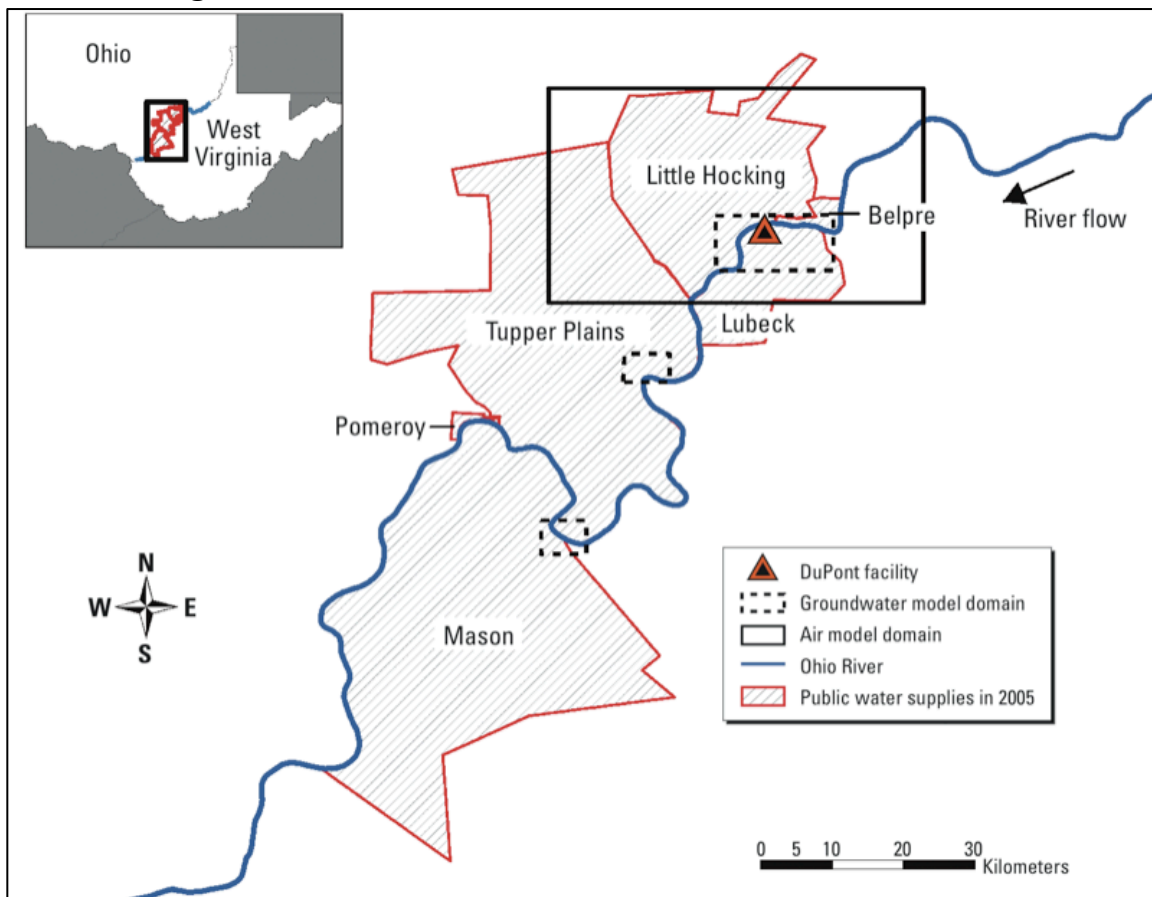


Figure 1. DuPont Washington Works Facility and surrounding water districts in the Ohio River Valley (taken from Shin et al. 2011)

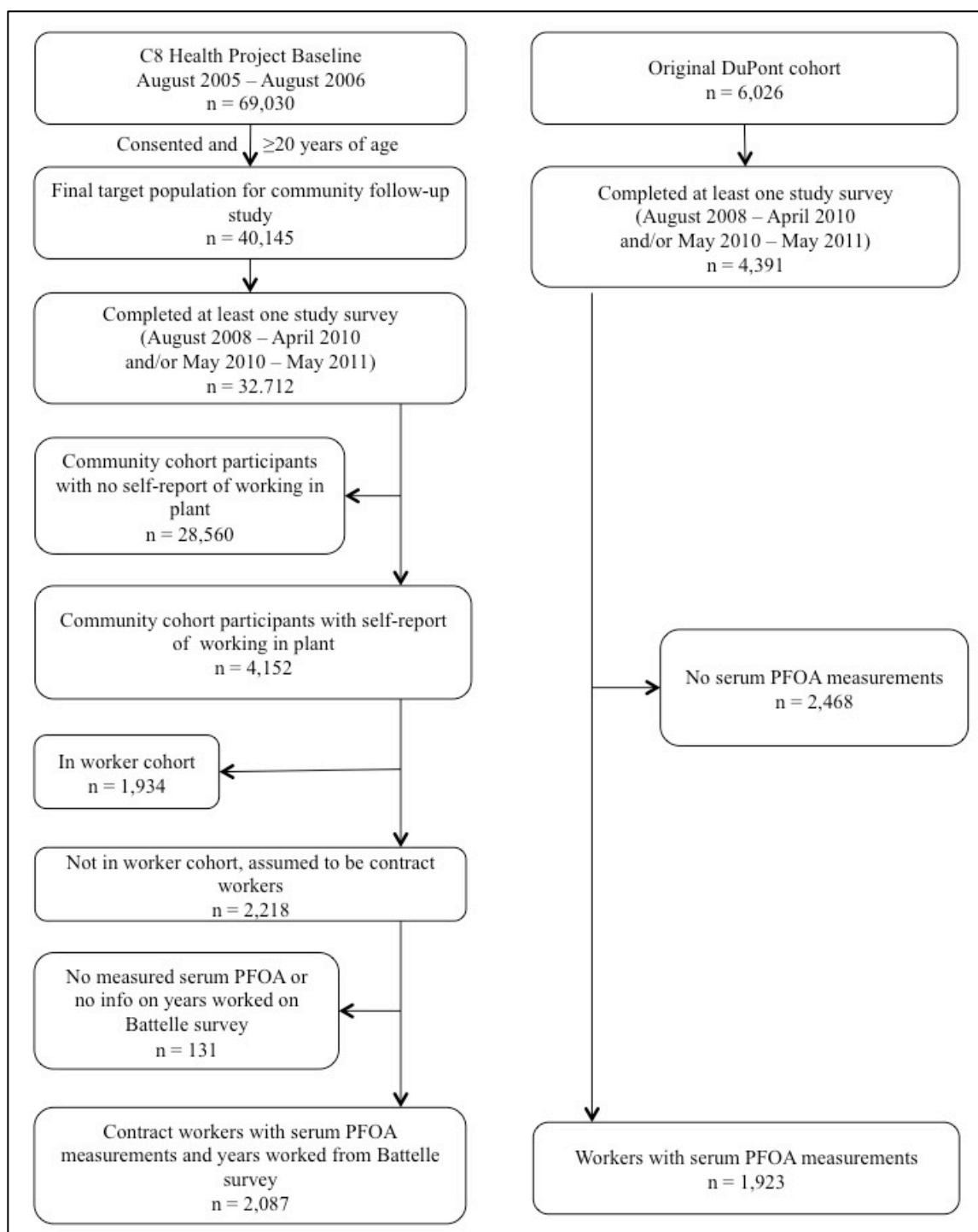


Figure 2. Description of study population of cohort and contract workers (adapted from Winquist et al. 2013)

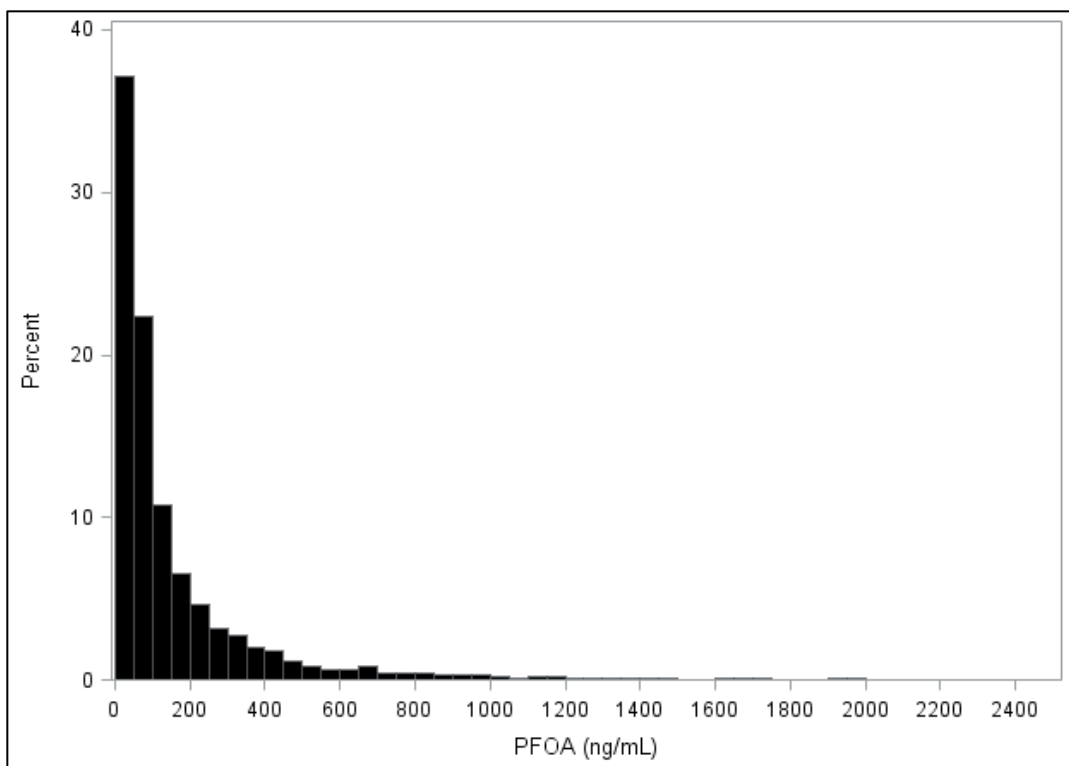


Figure 3. Distribution of measured serum PFOA levels (41 observations > 7,500 ng/mL not shown)

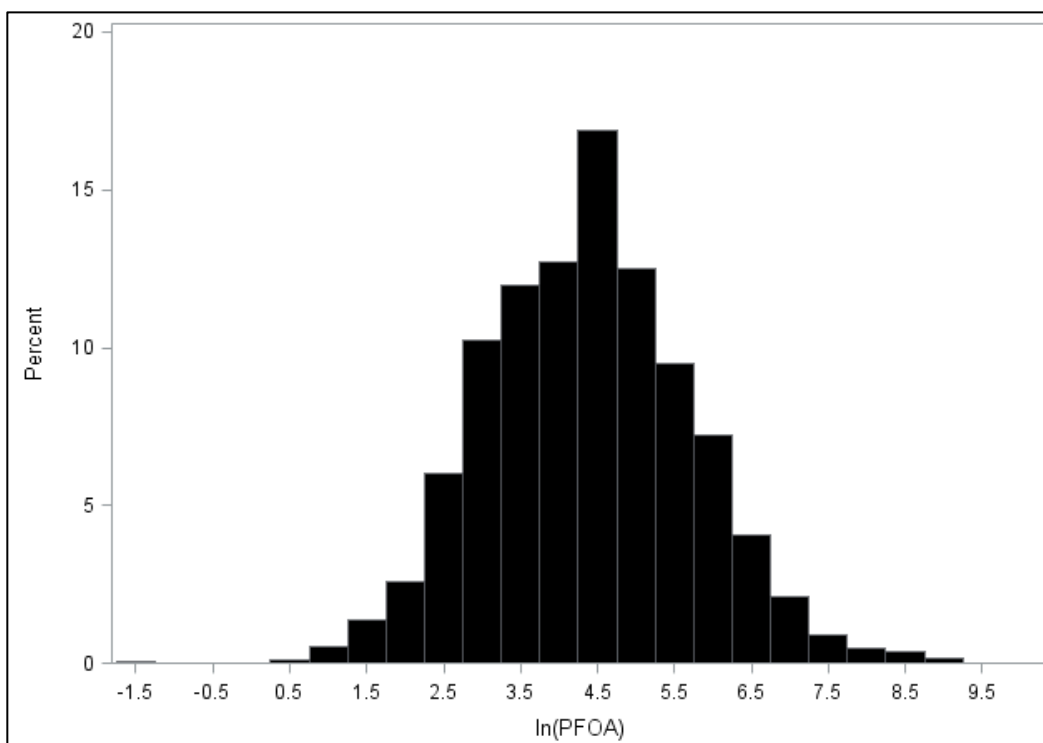


Figure 4a. Distribution of the natural log of measured serum PFOA levels. This transformation leads to a normally distributed outcome for regression analysis.

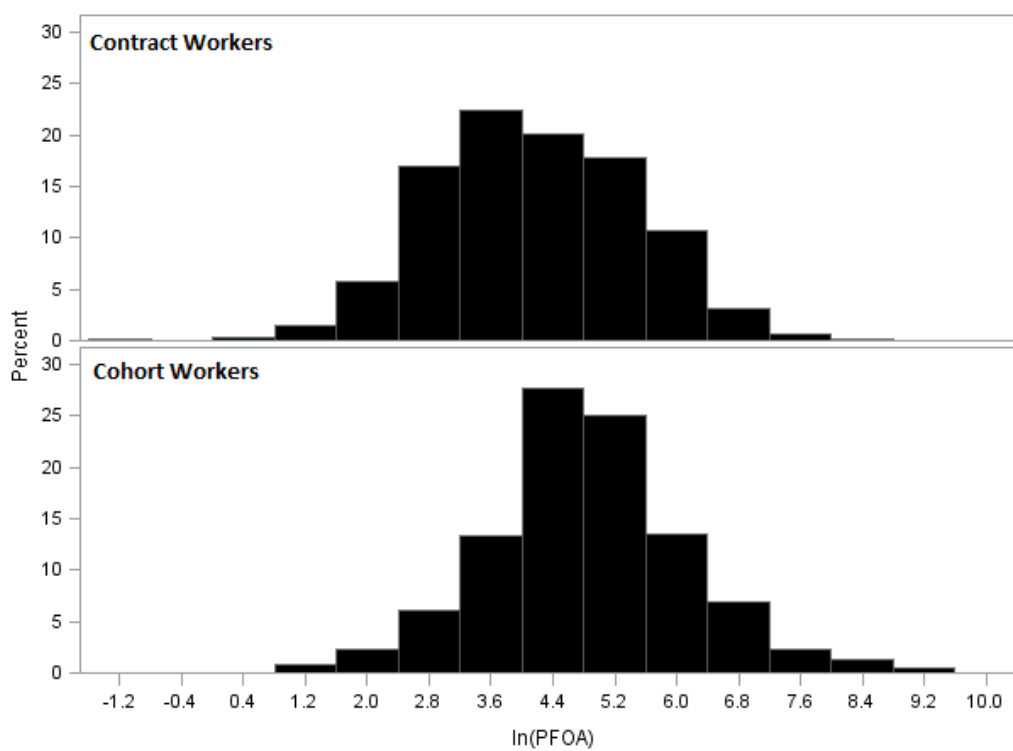


Figure 4b. Distribution of the natural log of measured serum PFOA levels stratified by worker status. Overall, cohort workers have higher levels compared to contract workers.

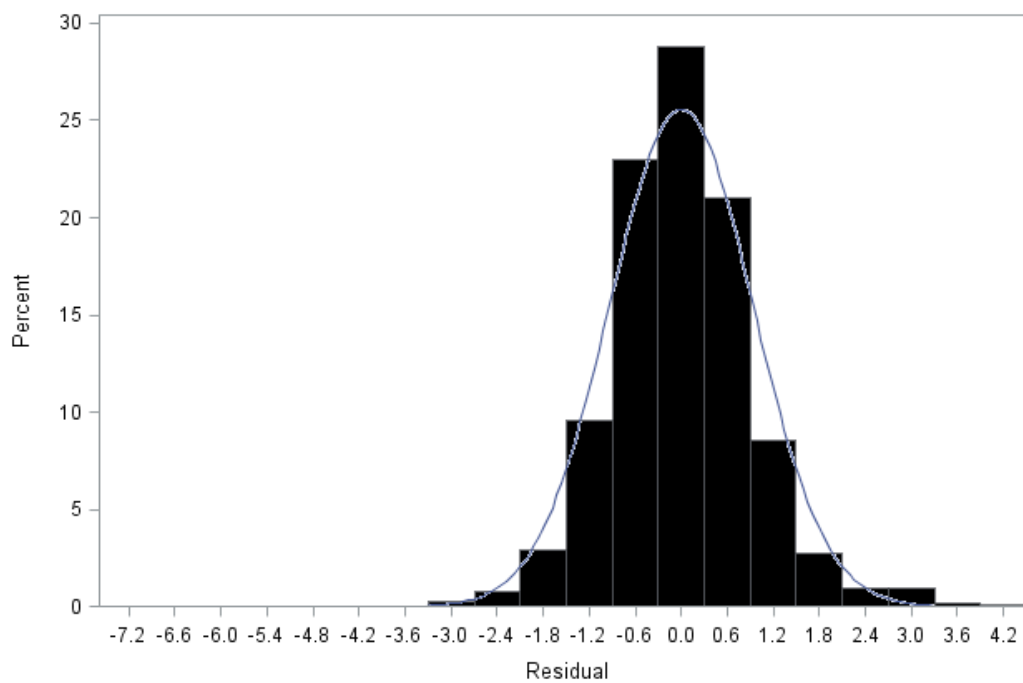


Figure 5. Distribution of residuals from first regression model (Table 2).

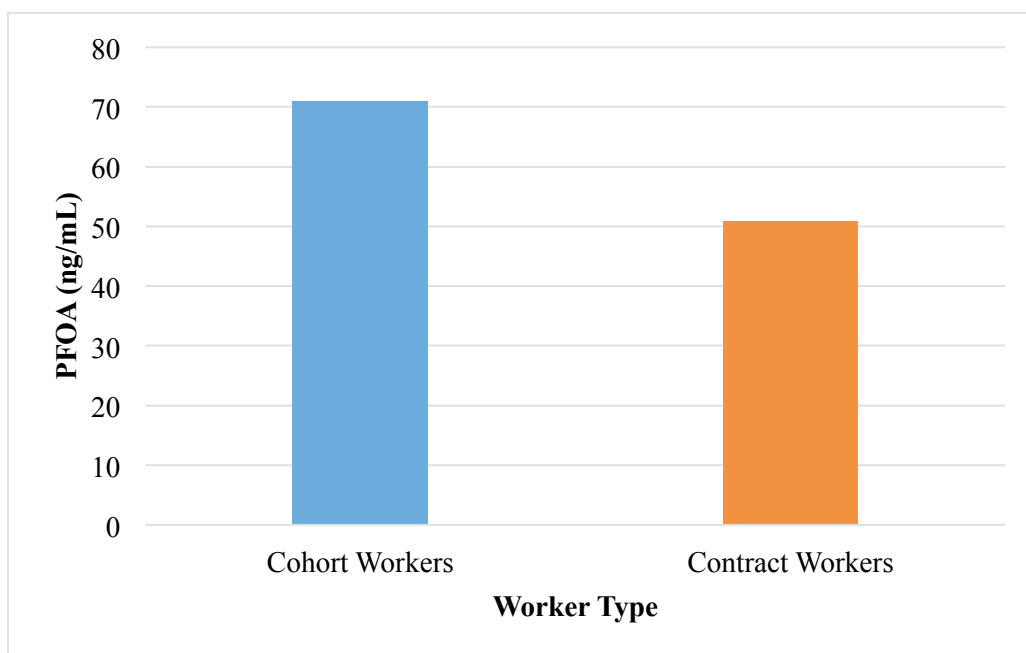


Figure 6. PFOA level (geometric mean) by worker status. Contract workers refer to C8HP participants who reported working at DuPont WW but were not part of the DuPont worker cohort (C8 Science Panel). Model prediction compared with observed median value of 50.8 ng/mL for contract workers.

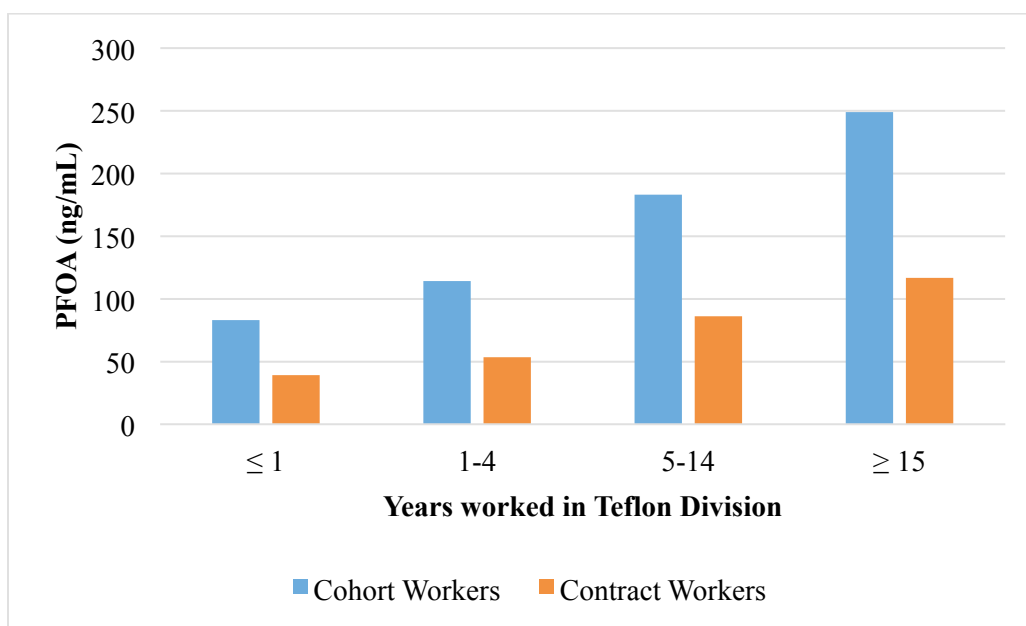


Figure 7. PFOA level (geometric mean) according to years worked in the Teflon division of DuPont WW. Model prediction compared with observed median values of 83.1 ng/mL for cohort workers working < 1 year in the Teflon division and 39.0 ng/mL for contract workers working < 1 year in the Teflon division.

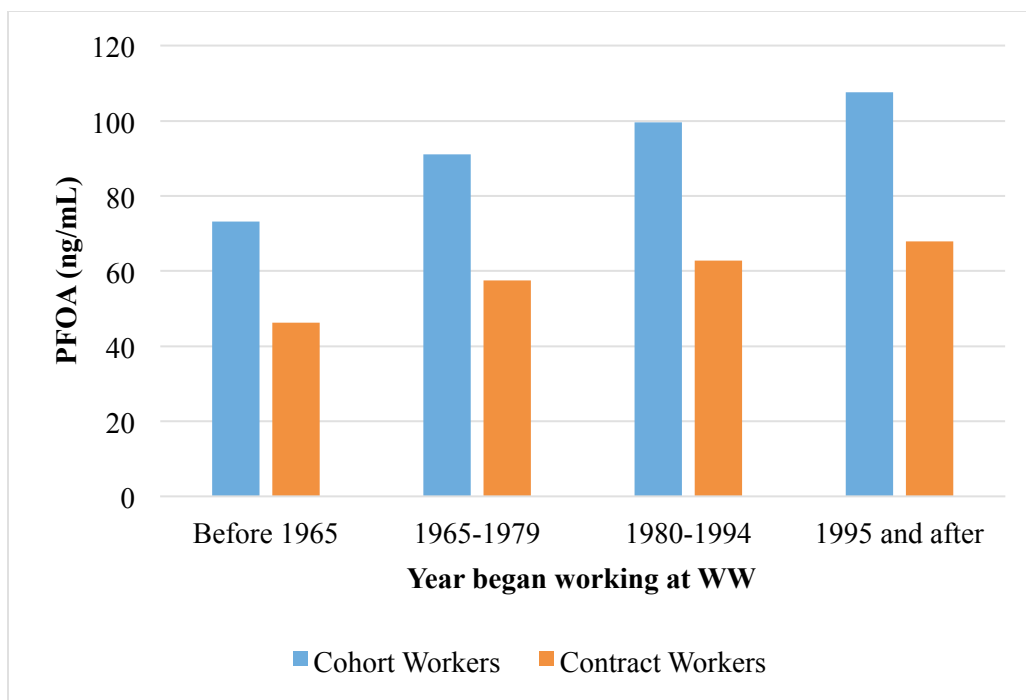


Figure 8. PFOA level (geometric mean) according to years in which workers began employment at DuPont WW. Model prediction compared with observed median values of 73.2 ng/mL for cohort workers beginning employment before 1965 and 46.2 ng/mL for contract workers beginning employment before 1965.

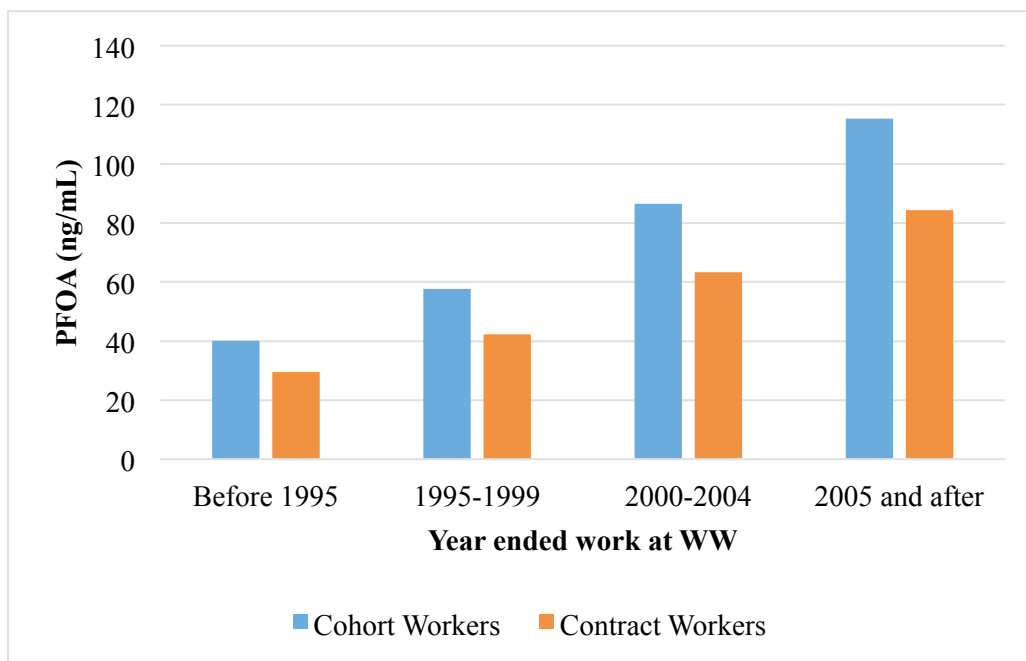


Figure 9. PFOA level (geometric mean) according to years in which workers ended employment at DuPont WW. Model prediction compared with observed median values of 40.2 ng/mL for cohort workers ending employment before 1995 and 29.4 ng/mL for contract workers ending employment before 1995

Table 1. Descriptive statistics for DuPont WW cohort and contract workers (n = 4,010).				
Variable	Cohort Workers (n = 1,923)		Contract Workers (n = 2,087)	
	No. (%)	Median PFOA (ng/mL)	No. (%)	Median PFOA (ng/mL)
Serum PFOA in 2005-2006	1,923 (100)	109.2	2,087 (100)	50.8
Age at time of C8HP in 2005/2006				
20-29	10 (0.5)	78.1	211 (10.1)	48.2
30-39	267 (13.9)	99.5	350 (16.8)	48.3
40-49	296 (15.4)	123.7	575 (27.6)	46.5
50-59	511 (26.6)	147.4	540 (25.9)	56.5
60-69	587 (30.5)	106.9	289 (13.8)	56.8
≥ 70	252 (13.1)	49.3	122 (5.8)	57.1
Sex				
Male	1,566 (81.4)	122.5	1,592 (76.3)	61.5
Female	357 (18.6)	78.7	495 (23.7)	32.0
Race				
White	1,872 (97.3)	107.4	2,036 (97.6)	50.9
Nonwhite	51 (2.7)	204.1	51 (2.4)	48.6
BMI				
< 24	314 (16.3)	94.2	353 (16.9)	43.0
24-26	478 (24.9)	115.7	463 (22.2)	56.8
27-29	524 (27.2)	114.4	480 (23.0)	54.0
≥ 30	607 (31.6)	111.3	791 (37.9)	50.8
Years worked at WW				
< 10	205 (10.7)	41.4	1,745 (83.6)	44.8
10-19	409 (21.3)	148.4	207 (9.9)	84.4
20-29	448 (23.3)	101.5	97 (4.6)	200.3
≥ 30	861 (44.8)	119.6	38 (1.8)	190.3
Salaried worker				
Salaried	514 (26.7)	91.3	168 (8.0)	41.4
Hourly	1,321 (68.7)	125.6	1,719 (82.4)	53.9
Missing	88 (4.6)		200 (9.6)	
Reported working in Teflon Division				
Yes	1,176 (61.2)	150.5	936 (44.8)	79.5
No	726 (37.8)	81.1	1,046 (50.1)	38.4
Missing	21 (1.1)		105 (5.0)	
Years worked in Teflon Division				
0	726 (37.8)	81.1	1,046 (50.1)	38.4
< 1	188 (9.8)	87.7	314 (15.0)	41.1
1-4	338 (17.6)	116.2	327 (15.7)	83.7
5-14	318 (16.5)	178.9	154 (7.4)	136.2
≥ 15	307 (16.0)	300.0	63 (3.0)	229.2
Missing	46 (2.4)		183 (8.8)	
Currently resident in water district				
Belpre	80 (4.2)	91.3	175 (8.4)	38.8
Tuppers Plains	50 (2.6)	95.8	137 (6.6)	56.1
Little Hocking	201 (10.5)	420.7	267 (12.8)	318.8
Lubeck	399 (20.7)	157.8	331 (15.9)	89.9
Mason County	5 (0.3)	99.6	81 (3.9)	15.9
Pomeroy	0 (0.0)	--	10 (0.5)	13.4
Private well	112 (5.8)	98.3	97 (4.6)	44.8
Other water district	923 (48.0)	80.1	796 (38.1)	30.9
Missing	153 (8.0)		193 (9.2)	

Previously resided or worked in water district					
Belpre	98 (5.1)	68.8	328 (15.7)	30.4	
Tuppers Plains	55 (2.9)	92.9	189 (9.1)	47.8	
Little Hocking	237 (12.3)	344.1	388 (18.6)	186.4	
Lubeck	1,521 (79.1)	100.2	1,052 (50.4)	54.4	
Mason County	7 (0.4)	77.3	105 (5.0)	16.6	
Pomeroy	0 (0.0)	--	16 (0.8)	13.4	
Private Well	5 (0.3)	98.7	9 (0.4)	50.8	
Education					
< High School	14 (0.7)	172.2	170 (11.5)	59.2	
High School Diploma	817 (42.5)	116.0	845 (40.5)	53.3	
Some College	666 (34.6)	124.2	821 (39.3)	58.4	
Bachelors or higher	426 (22.2)	89.7	251 (12.0)	28.9	
Date of testing					
First 2 months	299 (15.5)	131.0	241 (11.5)	70.8	
Second 2 months	343 (17.8)	131.7	252 (12.1)	74.0	
Third 2 months	612 (31.8)	115.6	612 (29.3)	55.9	
Fourth 2 months	454 (23.6)	96.4	601 (28.8)	42.3	
Fifth 2 months	93 (4.8)	89.6	187 (9.0)	32.1	
Last 2 months	122 (6.3)	57.9	194 (9.3)	34.8	
Survey completed by proxy					
Yes	32 (1.7)	54.8	16 (0.8)	59.1	
No	1,811 (94.2)	108.9	1,994 (95.5)	51.4	
Missing	80 (77.0)		77 (3.7)		

Table 2. Multiple linear regression model for the log of PFOA level for DuPont worker cohort and contract workers (model $R^2 = 0.47$, $n = 3,297$).					
Variable	Predicted change (%) in PFOA vs. referent group	Regression coefficient [change in log PFOA (95% CI)]	p-value	Variance (%) in PFOA (partial R^2)	
In worker cohort					
No	Referent				
Yes	40	0.33 (0.22, 0.44)	<0.0001	1.1	
Age					
20-29	Referent				
30-39	0	-0.00 (-0.18, 0.17)	0.966	<1	
40-49	1	0.01 (-0.16, 0.18)	0.934	<1	
50-59	10	0.09 (-0.08, 0.26)	0.297	<1	
60-69	-23	-0.26 (-0.44, -0.08)	0.005	<1	
≥ 70	-50	-0.68 (-0.88, -0.48)	<0.0001	1.4	
Sex					
Female	Referent				
Male	49	0.40 (0.31, 0.49)	<0.0001	2.4	
Race					
Nonwhite	Referent				
White	-19	-0.21 (-0.43, 0.00)	0.051	<1	
Salary					
Salaried	Referent				
Hourly	13	0.14 (-0.24, -0.05)	0.004	1.1	
Years worked at WW					
≤ 9	Referent				
10-20	86	0.62 (0.50, 0.74)	<0.0001	3.0	
20-30	62	0.48 (0.34, 0.62)	<0.0001	1.3	
≥ 30	34	0.29 (0.14, 0.45)	<0.001	<1	
Years worked in Teflon Division					
≤ 1	Referent				
1-4	37	0.32 (0.22, 0.41)	<0.0001	1.3	
5-14	121	0.79 (0.68, 0.90)	<0.0001	5.6	
≥ 15	200	1.10 (0.97, 1.23)	<0.0001	8.0	
Currently resident in water district					
Belpre	24	0.21 (0.07, 0.35)	0.003	<1	
Tupper Plains	44	0.37 (0.20, 0.54)	<0.0001	<1	
Little Hocking	449	1.70 (1.60, 1.81)	<0.0001	22.6	
Lubeck	99	0.69 (0.59, 0.78)	<0.0001	5.8	
Mason County	-54	-0.77 (-1.01, -0.53)	<0.0001	1.2	
Pomeroy	-51	-0.71 (-1.40, -0.02)	0.044	<1	
Private Well	13	0.12, (-0.03, 0.27)	0.117	<1	
Other	Referent				
Education					
Bachelor's Degree or higher	Referent				
Some college	36	0.31 (0.21, 0.42)	<0.0001	1.0	
High School Diploma	37	0.32 (0.21, 0.43)	<0.0001	<1	
Less than High School	86	0.62 (0.41, 0.83)	<0.0001	1.0	
Date of testing					
First 2 months	Referent				
Second 2 months	17	0.15 (0.03, 0.28)	0.014	<1	
Third 2 months	3	0.03 (-0.08, 0.14)	0.577	<1	
Fourth 2 months	0	-0.00 (-0.12, 0.11)	0.978	<1	
Fifth 2 months	-10	-0.10 (-0.27, 0.06)	0.214	<1	
Last 2 months	-17	-0.18 (-0.34, -0.03)	0.023	<1	

Table 3. Employment statistics for DuPont WW cohort and contract workers (n = 4,010).				
Variable	Cohort Workers (n = 1,923)		Contract Workers (n = 2,087)	
	No. (%)	Median PFOA (ng/mL)	No. (%)	Median PFOA (ng/mL)
Year began working at WW				
Before 1965	401 (20.9)	73.2	17 (0.1)	46.2
1965-1979	649 (33.7)	139.1	83 (4.0)	58.2
1980-1994	454 (23.6)	118.2	199 (9.5)	52.1
1995 and after	221 (11.5)	154.1	249 (11.9)	67.0
Missing	198 (10.3)		1,539 (73.7)	
Year ended work at WW				
Before 1995	325 (16.9)	40.2	162 (7.8)	29.4
1995-1999	246 (12.8)	82.1	71 (3.4)	45.9
2000-2004	331 (17.2)	136.7	98 (4.7)	88.5
2005 and after	821 (42.7)	165.3	211 (10.1)	96.8
Missing	200 (10.4)		1,545 (74.0)	

Table 4. Multiple linear regression model for the log of PFOA level for DuPont worker cohort and contract workers with employment start and end (model R ² = 0.49, n = 1,939).					
Variable	Predicted change (%) in PFOA vs. referent group	Regression coefficient [change in log PFOA (95% CI)]	p-value	Variance (%) in PFOA (partial R ²)	
In worker cohort					
No	Referent				
Yes	31	0.27 (0.13, 0.40)	<0.001	<1	
Sex					
Female	Referent				
Male	52	0.42 (0.30, 0.53)	<0.0001	2.7	
Salary					
Salaried	Referent				
Hourly	28	0.32 (0.21, 0.44)	<0.0001	1.6	
Years worked at WW					
≤ 9	Referent				
10-20	49	0.40 (0.25, 0.56)	<0.0001	1.3	
20-30	43	0.36 (0.17, 0.54)	<0.001	<1	
≥ 30	39	0.33 (0.11, 0.54)	0.003	<1	
Years worked in Teflon Division					
≤ 1	Referent				
1-4	36	0.31 (0.19, 0.43)	<0.0001	1.4	
5-14	116	0.77 (0.65, 0.89)	<0.0001	7.3	
≥ 15	220	1.16 (1.03, 1.30)	<0.0001	13.1	
Currently resident in water district					
Belpre	38	0.32 (0.12, 0.52)	0.002	<1	
Tupper Plains	25	0.22 (-0.02, 0.46)	0.0701	<1	
Little Hocking	286	1.35 (1.21, 1.49)	<0.0001	15.9	
Lubeck	71	0.53 (0.43, 0.64)	<0.0001	4.7	
Mason County	-42	-0.55 (-1.21, 0.11)	0.105	<1	
Pomeroy	--	--	--	--	
Other	8	0.07 (-0.10, 0.25)	0.417	<1	
Private Well	Referent				
Education					
Bachelor's Degree or higher	Referent				
Some college	19	0.18 (0.05, 0.31)	0.008	<1	
High School Diploma	27	0.24 (0.10, 0.38)	0.001	<1	
Less than High School	41	0.35 (-0.04, 0.73)	0.077	<1	
Year began working at WW					
Before 1965	Referent				
1965-1979	24	0.22 (0.06, 0.37)	0.005	<1	
1980-1994	36	0.31 (0.10, 0.52)	0.004	<1	
1995 and after	47	0.39 (0.13, 0.65)	0.004	<1	
Year ended work at WW					
Before 1995	Referent				
1995-1999	44	0.36 (0.21, 0.51)	<0.0001	1.1	
2000-2004	115	0.77 (0.61, 0.92)	<0.0001	4.6	
2005 and after	187	1.05 (0.90, 1.21)	<0.0001	8.4	

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****PLEASE PRINT WHEN FILLING OUT ALL SURVEY QUESTIONS****

DEMOGRAPHIC

Please include the full name, address, phone numbers, and date of birth of the study participant for survey verification purposes.

Participant name:

First: _____ Middle initial: _____ Last: _____

Suffix (Jr., Sr., etc.): _____

Street Address: _____ Apartment Number: _____

City: _____ State: _____ Country: _____ ZIP Code: _____

Telephone Number: Home phone: _____ Cell phone: _____

E-Mail address: _____

Date of Birth (DOB): ____/____/____/ *Please enter in numerical format, month/date/year*

Gender: Male Female

Guardian's name: _____ Are you the legal guardian? Yes No

Guardian's street address: _____

Guardian's City: _____ Guardian's State: _____ Guardian's Country: _____

Guardian's ZIP Code: _____

Guardian's phone number: _____

Guardian's E-Mail address: _____

Glossary of terms:

A glossary of terms used in this survey can be found at the end of this questionnaire. Any terms in boldface print can be found in the glossary.

Water Usage at Residences

You will also be asked to record water usage information for previous residences; please see the additional pages in the back to record this information.

1. What month and year did you begin living at your current address? _____ Month _____ Year Don't Know

2. What is the main source of water you use in your home **for drinking**?

- Public Water (filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you use bottled water,
2a. In what month and year did you start buying bottled water for drinking? _____ Month _____ Year

3. What is the main source of water you use in your home **for cooking**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you use bottled water,
3a. In what month and year did you start buying bottled water for cooking? _____ Month _____ Year

4. What is the main source of water you use in your home **for showering or bathing**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Other
- I Don't Know

If you use PRIVATE WATER
(i.e. well, **cistern**), please answer the following questions:

If you use PUBLIC WATER
(i.e. tap water), please answer the following questions:

5a. For your well or cistern, has your **C-8 level** been tested?

Yes No I don't know

If yes,
5b. What was the C8 level?

_____ Enter number Don't remember

5c. When was the last test done?

_____ Month _____ Year Not sure

6. Which of the following water districts provides your water at your present residence?

- City of Belpre, OH
- Tappers Plains
- Little Hocking Water Association
- Lubeck Public Service District
- Mason County
- Village of Pomeroy
- Some other water district, please specify: _____
- I don't know/Not sure

EMPLOYMENT HISTORY

1. Are you currently employed? Yes No (If "No", skip to "Unemployed" below)

2. Do you currently work for more than one employer? Yes No

3. If "yes" to question #2, please list the names of your current employers or companies.

Please list the employer you consider to be your MAIN employer (or the place that you work most hours) first.

Name of employer: _____ Kind of Business: _____

City: _____ State: _____

Name of employer: _____ Kind of Business: _____

City: _____ State: _____

Name of employer: _____ Kind of Business: _____

City: _____ State: _____

UNEMPLOYED

1a. If you answered "no" to question 1, which of the following best describes your current situation? (please enter one response only.)

<input type="radio"/> Homemaker	<input type="radio"/> Laid Off
<input type="radio"/> Retired	<input type="radio"/> Disabled
<input type="radio"/> Unemployed	<input type="radio"/> Student
	<input type="radio"/> Other: _____

1b. If you answered "disabled", is your disability permanent? Yes No I don't know

1c. If you answered "disabled", is your **disability acquired**? Yes No



FIRST CURRENT JOB:

Please list the date you started working there: _____ Month _____ Year

What kind of work do you do at this job? _____ (i.e. manufacturing, automotive, retail, mining, nursing, etc.)

What are your most important activities on this job or in this business? _____

Are you exposed to chemicals or agents at this place of employment?

- Yes
 No
 Don't know/Not sure

If yes, please list the chemicals or agents you are exposed to at your current place of employment:

What is the source of drinking water at your place of employment?

(Check all that apply)

- Public
 Private (well, **cistern**)
 Bottled
 I don't know

If your current place of employment has public water, which of the following water districts provides the water for your employer?

- | | |
|--------------------------------------------------------|---------------------------------------------------------------------------|
| <input type="radio"/> City of Belpre, OH | <input type="radio"/> Mason County |
| <input type="radio"/> Tupper Plains | <input type="radio"/> Village of Pomeroy |
| <input type="radio"/> Little Hocking Water Association | <input type="radio"/> Some other water district,
please specify: _____ |
| <input type="radio"/> Lubeck Public Service District | <input type="radio"/> I don't know |

Thinking only about your current job, do you *currently* work in any of the following places or with any of the listed materials? (Check all that apply)

- | | |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------|
| <input type="radio"/> Power Plant | <input type="radio"/> Solvents such as Metal Cleaners/Degreasers |
| <input type="radio"/> Refinery | <input type="radio"/> Typesetting or Printing |
| <input type="radio"/> Metal Refining | <input type="radio"/> Electronics Manufacturing or Assembly |
| <input type="radio"/> Explosives or Nitrate Manufacturing | <input type="radio"/> Gas Station |
| <input type="radio"/> Pharmaceuticals or Chemicals | <input type="radio"/> Manufacture of Chemicals |
| <input type="radio"/> Manufacture or Use of Dyes | <input type="radio"/> Fluorocarbons (used for Teflon, Scotch Guard, Gortex). |
| <input type="radio"/> Rubber or Plastic Industry | <input type="radio"/> Chlorofluorocarbons (used in air conditioning units) |
| <input type="radio"/> Dry Cleaning | <input type="radio"/> Underground mining |
| <input type="radio"/> Textile Manufacturing | <input type="radio"/> Coal preparation |
| <input type="radio"/> Photo or Graphic Arts | <input type="radio"/> Timber and wood products |

If you would like to add any information to the previous question, please do so in the space provided below:

SECOND CURRENT JOB:

Please list the date you started working there: _____Month _____Year

What kind of work do you do at this job? _____ (i.e. manufacturing, automotive, retail, mining, nursing, etc.)

What are your most important activities on this job or in this business? _____

Are you exposed to chemicals or agents at this place of employment?

- Yes
- No
- Don't know/Not sure

If yes, please list the chemicals or agents you are exposed to at your current place of employment:

What is the source of drinking water at your place of employment?

(Check all that apply)

- Public
- Private (well, **cistern**)
- Bottled
- I don't know

If your current place of employment has public water, which of the following water districts provides the water for your employer?

- | | |
|--------------------------------------------------------|---------------------------------------------------------------------------|
| <input type="radio"/> City of Belpre, OH | <input type="radio"/> Mason County |
| <input type="radio"/> Tupper Plains | <input type="radio"/> Village of Pomeroy |
| <input type="radio"/> Little Hocking Water Association | <input type="radio"/> Some other water district,
please specify: _____ |
| <input type="radio"/> Lubeck Public Service District | <input type="radio"/> I don't know |

Thinking only about your current job, do you *currently* work in any of the following places or with any of the listed materials? (Check all that apply)

- | | |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------|
| <input type="radio"/> Power Plant | <input type="radio"/> Solvents such as Metal Cleaners/Degreasers |
| <input type="radio"/> Refinery | <input type="radio"/> Typesetting or Printing |
| <input type="radio"/> Metal Refining | <input type="radio"/> Electronics Manufacturing or Assembly |
| <input type="radio"/> Explosives or Nitrate Manufacturing | <input type="radio"/> Gas Station |
| <input type="radio"/> Pharmaceuticals or Chemicals | <input type="radio"/> Manufacture of Chemicals |
| <input type="radio"/> Manufacture or Use of Dyes | <input type="radio"/> Fluorocarbons (used for Teflon, Scotch Guard, Gortex). |
| <input type="radio"/> Rubber or Plastic Industry | <input type="radio"/> Chlorofluorocarbons (used in air conditioning units) |
| <input type="radio"/> Dry Cleaning | <input type="radio"/> Underground mining |
| <input type="radio"/> Textile Manufacturing | <input type="radio"/> Coal preparation |
| <input type="radio"/> Photo or Graphic Arts | <input type="radio"/> Timber and wood products |

If you would like to add any information to the previous question, please do so in the space provided below:

THIRD CURRENT JOB:

Please list the date you started working there: _____ Month _____ Year

What kind of work do you do at this job? _____ (i.e. *manufacturing, automotive, retail, mining, nursing, etc.*)

What are your most important activities on this job or in this business? _____

Are you exposed to chemicals or agents at this place of employment?

- Yes No Don't know/Not sure

If yes, please list the chemicals or agents you are exposed to at your current place of employment:

What is the source of drinking water at your place of employment?

(Check all that apply)

- Public
 Private (well, **cistern**)
 Bottled
 I don't know

If your current place of employment has public water, which of the following water districts provides the water for your employer?

- | | |
|--------------------------------------------------------|---------------------------------------------------------------------------|
| <input type="radio"/> City of Belpre, OH | <input type="radio"/> Mason County |
| <input type="radio"/> Tupper Plains | <input type="radio"/> Village of Pomeroy |
| <input type="radio"/> Little Hocking Water Association | <input type="radio"/> Some other water district,
please specify: _____ |
| <input type="radio"/> Lubeck Public Service District | <input type="radio"/> I don't know |

Thinking only about your current job, do you *currently* work in any of the following places or with any of the listed materials? (Check all that apply)

- | | |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------|
| <input type="radio"/> Power Plant | <input type="radio"/> Solvents such as Metal Cleaners/Degreasers |
| <input type="radio"/> Refinery | <input type="radio"/> Typesetting or Printing |
| <input type="radio"/> Metal Refining | <input type="radio"/> Electronics Manufacturing or Assembly |
| <input type="radio"/> Explosives or Nitrate Manufacturing | <input type="radio"/> Gas Station |
| <input type="radio"/> Pharmaceuticals or Chemicals | <input type="radio"/> Manufacture of Chemicals |
| <input type="radio"/> Manufacture or Use of Dyes | <input type="radio"/> Fluorocarbons (used for Teflon, Scotch Guard, Gortex). |
| <input type="radio"/> Rubber or Plastic Industry | <input type="radio"/> Chlorofluorocarbons (used in air conditioning units) |
| <input type="radio"/> Dry Cleaning | <input type="radio"/> Underground mining |
| <input type="radio"/> Textile Manufacturing | <input type="radio"/> Coal preparation |
| <input type="radio"/> Photo or Graphic Arts | <input type="radio"/> Timber and wood products |

If you would like to add any information to the previous question, please do so in the space provided below:

PREVIOUS WORK EXPERIENCE

Now we are going to ask you to list all of the places you have worked for at least six months in the past 25 years—that is all the places you have been employed for at least six months since 1980. It is important that you list every place of employment. In this section we are only asking you to list places you have worked other than your current place(s) of employment. Please do not include your current place(s) of employment, as you have already entered that information.

If you worked for a company that merged with another company, was bought out by another company, or simply changed the company name, please list only the most recent name of the company.

If you worked for the same company in different cities, please list each of those job assignments separately.

For persons with military service – Please do not list your time in the military here in this section. There will be a section later in the survey to record information about your time in military service.

1. Previous employer or company name: _____

Kind of business: _____ City: _____ State: _____

2. Please enter the date you *started* working at this previous employer:

Started: _____ Month _____ Year

Please enter the date you *stopped* working at this previous employer:

Finished: _____ Month _____ Year

3. What kind of work did you do at this previous employer (for example, manufacturing, automotive, retail, mining, nursing, etc.)? _____

4. What were your most important activities on this job? _____

5. Were you exposed to chemicals or agents at this previous employer?

Yes No Don't know/Not sure

5a. If yes, please list the chemicals or agents you were exposed to at this previous employer:

6. What was the source of drinking water at this previous employer? (Check all that apply)

- Public
- Private (well, **cistern**)
- Bottled
- I don't know

6a. If this past place of employment had public water, which of the following water districts provided the water for this employer?

<input type="radio"/> City of Belpre, OH	<input type="radio"/> Mason County
<input type="radio"/> Toppers Plains	<input type="radio"/> Village of Pomeroy
<input type="radio"/> Little Hocking Water Association	<input type="radio"/> Some other water district, please specify: _____
<input type="radio"/> Lubeck Public Service District	<input type="radio"/> I don't know

7. Thinking about your job with this previous employer, was this job in any of the following places or did it involve working with any of the listed materials? (Check all that apply)

- | | |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------|
| <input type="radio"/> Power Plant | <input type="radio"/> Solvents such as Metal Cleaners/Degreasers |
| <input type="radio"/> Refinery | <input type="radio"/> Typesetting or Printing |
| <input type="radio"/> Metal Refining | <input type="radio"/> Electronics Manufacturing or Assembly |
| <input type="radio"/> Explosives or Nitrate Manufacturing | <input type="radio"/> Gas Station |
| <input type="radio"/> Pharmaceuticals or Chemicals | <input type="radio"/> Manufacture of Chemicals |
| <input type="radio"/> Manufacture or Use of Dyes | <input type="radio"/> Fluorocarbons (used for Teflon, Scotch Guard, GorTex). |
| <input type="radio"/> Rubber or Plastic Industry | <input type="radio"/> Chlorofluorocarbons (used in air conditioning units) |
| <input type="radio"/> Dry Cleaning | <input type="radio"/> Underground mining |
| <input type="radio"/> Textile Manufacturing | <input type="radio"/> Coal preparation |
| <input type="radio"/> Photo or Graphic Arts | <input type="radio"/> Timber and wood products |

7a. If you would like to add any information to the previous question, please do so in the space provided below:

8. What has been your main job over your lifetime? _____

PLEASE SEE THE BACK OF THIS SURVEY FOR ADDITIONAL PAGES TO RECORD PREVIOUS WORK HISTORY.

MILITARY HISTORY

1. Have you ever served in the military? Yes No *(If no, please skip to the next section, "Past Medical History")*

1a. If yes, which branch of the military did you serve in?

- | | |
|---------------------------------|---------------------------------------|
| <input type="radio"/> Army | <input type="radio"/> Merchant Marine |
| <input type="radio"/> Navy | <input type="radio"/> Coast Guard |
| <input type="radio"/> Marines | <input type="radio"/> National Guard |
| <input type="radio"/> Air Force | <input type="radio"/> Reserve |

Please list the dates of your military service:

Service began: _____ Month _____ Year

Service ended: _____ Month _____ Year

2. Have you served in the military more than once?

- Yes No *(If "No", please skip to Question #3)*

- 2a. Please list the other dates of your military service.

Other Military Service:

Service began: _____ Month _____ Year

Service ended: _____ Month _____ Year

Branch: _____

Other Military Service:

Service began: _____ Month _____ Year

Service ended: _____ Month _____ Year

Branch: _____

Other Military Service:

Service began: _____ Month _____ Year

Service ended: _____ Month _____ Year

Branch: _____

3. Do you have any military service related disabilities?

- Yes No I don't know/Not sure

4. Were you exposed to harmful chemicals or agents while in the military?

- Yes No Don't know/Not sure

4a. If you answered yes, to the above question, please list any chemicals and/or agents that you were exposed to while in the military:

I don't know the name of the chemicals or agents

5. What was (or currently is) your **role** in the military: _____

6. When you were in the military, did you have any **overseas** postings? Yes No

6a. If yes, name all the **overseas** locations where you were posted.

_____	_____
_____	_____
_____	_____

7. Please list all of the locations you were posted within the United States.

_____	_____
_____	_____
_____	_____

PAST MEDICAL HISTORY

1. Have you ever had:

- | | | | |
|--------------------|---------------------------|--------------------------|----------------------------------|
| Mumps | <input type="radio"/> Yes | <input type="radio"/> No | <input type="radio"/> Don't know |
| Chicken Pox | <input type="radio"/> Yes | <input type="radio"/> No | <input type="radio"/> Don't know |
| Measles | <input type="radio"/> Yes | <input type="radio"/> No | <input type="radio"/> Don't know |

2. Have you ever been told by a doctor that you have or had:

For your convenience, we have provided a glossary of the technical terms used in the list of conditions below. Any term in boldface type has a definition for it in the glossary at the end of this survey.

If you have you ever been told by a doctor that you have or had any of the conditions listed below, please put a check-mark in the circle beside the condition.

If you have not been told by a doctor that you have a condition, please leave the circle blank.

<input type="radio"/> Addison's disease	<input type="radio"/> Immune Disease
<input type="radio"/> Alzheimer's Disease	<input type="radio"/> Kidney Disease (including kidney stones & infection) <input type="radio"/> Protein in Urine <input type="radio"/> Kidney Infection <input type="radio"/> Albumin in Urine <input type="radio"/> Kidney Stones <input type="radio"/> Blood in Urine
<input type="radio"/> Amyotrophic Lateral Sclerosis (Lou Gehrig's Disease)	<input type="radio"/> Liver Disease <input type="radio"/> Hepatitis <input type="radio"/> Other Liver Diseases
<input type="radio"/> Anemia . If you have/had anemia, does (or did) it affect: <input type="radio"/> White Blood Cells <input type="radio"/> Red Blood Cells <input type="radio"/> Platelets <input type="radio"/> Don't know/Not sure	<input type="radio"/> Lupus/SLE
<input type="radio"/> Aneurysm	<input type="radio"/> Multiple Sclerosis
<input type="radio"/> Asthma	<input type="radio"/> Osteoarthritis
<input type="radio"/> Cerebrovascular Accident (CVA)	<input type="radio"/> Parkinson's Disease
<input type="radio"/> Chronic bronchitis	<input type="radio"/> Prostate Disease <input type="radio"/> Prostatitis (inflammation of the prostate) <input type="radio"/> Enlarged prostate <input type="radio"/> High PSA level
<input type="radio"/> Chronic obstructive pulmonary disease (COPD or Black Lung Disease)	<input type="radio"/> Raynaud's Syndrome
<input type="radio"/> Cushing's Syndrome	<input type="radio"/> Rheumatoid Arthritis
<input type="radio"/> Diabetes: How old were you at the age of diabetes onset:? _____Enter age in years Which type of diabetes do you have? <input type="radio"/> Type I (Insulin dependent)	<input type="radio"/> Scleroderma

<input type="radio"/> Type II (Non-insulin dependent)	
<input type="radio"/> Emphysema	<input type="radio"/> Sjogren's Syndrome
<input type="radio"/> Epstein Barr (Mononucleosis)	<input type="radio"/> Stroke
<input type="radio"/> Fibromyalgia (FMS)	<input type="radio"/> Thyroid disease <input type="radio"/> Goiter <input type="radio"/> Grave's Disease <input type="radio"/> Hashimoto's <input type="radio"/> Other, please specify: _____
<input type="radio"/> Heart Disease (including heart attack) <input type="radio"/> Myocardial Infarction (Heart Attack) <input type="radio"/> Arteriosclerosis <input type="radio"/> Coronary artery disease (CAD) <input type="radio"/> Some other heart disease, please specify: _____	<input type="radio"/> Urinary Infection

3. Have you ever been told by a doctor that you have or had cancer?

- Yes No (*skip to Question #8*)

4. If yes, how old were you when you were first diagnosed with cancer?

Enter age _____ Don't know/Not sure

5. If yes, what treatment did you receive for your cancer? (list all that apply)

- Radiation Other, please specify: _____
 Chemotherapy None
 Surgery Don't know/Not sure

6. Are you still receiving treatment?

- Yes No

Please continue the survey on the next page...

7. Please indicate site of cancer from the list in the chart to the right. Please indicate whether the cancer site is/was primary or secondary and also record the year the cancer was diagnosed.

Use check marks to indicate if the cancer was primary or secondary, recording the year in the last column. See the sample in the first row.

Site of Cancer	Primary	Secondary	Year
SAMPLE ENTRY	✓		1990
Bladder			
Blood			
Bone			
Brain			
Breast			
Cervical			
Colon			
Esophagus			
Gall Bladder			
Kidney			
Larynx			
Leukemia			
Liver			
Lung			
Lymphoma			
Melanoma			
Mouth			
Ovarian			
Pancreas			
Prostate			
Rectal			
Skin			
Stomach			
Testis			
Thyroid			
Uterine			
List other cancer type: _____			

8. In the last 12 months, have you gained weight? Yes No

8a. If yes, how many pounds have you gained in the last 12 months? _____lbs

9. In the last 12 months, have you lost weight? Yes No

9a. If yes, how many pounds have you lost in the last 12 months? _____lbs

10. Do you now take medication regularly, that is at least 3 times a week, to lower your cholesterol?

- Yes No Don't know

11. Do you take medication regularly, that is at least 3 times a week, to lower your blood pressure?

- Yes No Don't know

12. Are you taking any other medications?

- Yes No Don't know

13. If yes, please list ALL of the medications that you are currently taking--both prescription and over the counter medications. Please include the dosage amount for each medication.

Medication	Dosage in Milligrams
1 _____	_____
2 _____	_____
3 _____	_____
4 _____	_____
5 _____	_____
6 _____	_____
7 _____	_____
8 _____	_____

14. Are you allergic to anything?

- Yes No

15. If yes, please list allergies: (include medications, environmental, and food)

_____	_____
_____	_____
_____	_____

16. Has a representative from a school or a health professional ever told you that your child has/had a learning problem?

- Yes No Don't have children Don't know

17. Has a representative from a school or a health professional ever told you that you have/had a learning problem?

- Yes No Don't know

18. Have any of your children been diagnosed by a doctor or health professional with “Attention Deficit Disorder” (ADD or ADHD)?

- Yes No Don't have children Don't know

19. Has a doctor or health professional ever told you that you have/had “Attention Deficit Disorder” (ADD or ADHD)?

- Yes No Don't know

20. In the last five years, that is since 2000, how often have you experienced any of the following symptoms?

Indicate for each symptom: Frequently = regularly to always
 Sometimes = every now and then
 Rarely = very infrequently
 Never = has not occurred in the past five years

Please note that these symptoms are general health questions commonly asked by a physician to assess general health. None of these are known to be associated with having high C-8 levels in the blood.

CONDITION	Frequently	Sometimes	Rarely	Never
Blurred vision?				
Do you see dark spots?				
Eye irritation? (blinking or tearing)				
Spots in front of eyes during or before headache?				
Reduced sense of smell?				
Headache?				
Headaches get worse at work?				
Lightheadedness?				
Loss of balance?				
Dizziness?				
Loss of consciousness?				
Dryness of mouth, nose or throat?				
Do you get nose bleeds?				
Cough with blood-tinged mucous?				
Cough with mucous?				
Sinusitis?				
Throat irritation?				
Dry cough?				
Shortness of breath?				
Do you have colds or flu?				
Do you have trouble swallowing?				

CONDITION	Frequently	Sometimes	Rarely	Never
Do you have pain, burning or a sour taste at the back of your mouth?				
Chest pain while at rest?				
Chest pain on exertion?				
Chest tightness?				
Do you have heartburn?				
Does your heart race or speed up?				
Does your heart skip a beat?				
Pain or burning in chest?				
Palpitations/rapid heart action?				
Do your feet or ankles swell?				
Loss of appetite?				
Nausea?				
Abdominal pain?				
Stomach swells or is bloated?				
Indigestion?				
Constipation?				
Do you have hemorrhoids?				
Diarrhea?				
Is there blood in your stool?				
Poor bladder control?				
Do you have weakness in your legs?				
Joint pain?				
Muscle weakness?				
Skin rash?				
Skin redness, excessive dryness or itching?				
Hair loss (other than male baldness)?				
Insomnia (can't get to sleep)?				
Insomnia (sleeping for only few hours)?				
Insomnia (wake up frequently)?				
Somnolence (unusual need for sleep)?				
Extreme fatigue?				
Instability of mood?				
Irritability?				
Lack of concentration?				
Long term memory loss?				
Recent memory loss?				

21. Do you have any other symptoms or conditions you would like to add?

FOR WOMEN ONLY

1. At what age did you begin menstruation (have your first period)?

- Younger than 10 Have not yet begun to menstruate
 10 to 12 Never menstruated
 13 to 15 Don't know/Not sure
 16 or older

2. Do you have your period regularly (every month)?

- Yes No Don't know

3. Are you pregnant now?

- Yes No Don't know

4. If you are pregnant, in which month of pregnancy are you?

_____ Enter month Don't know/Not sure

5. How many times have you been pregnant in your life? _____ Enter number

Now we'd like to get a bit of information about each of your pregnancies. Let's start with the month and year that each of your pregnancies ended. Please fill out the following pages for each pregnancy you have had. IF YOU HAD ANY PREGNANCIES FOR WHICH THERE WERE MULTIPLE BIRTHS, please see the additional pages in the back of this survey to enter your responses for multiple birth pregnancies.

In the chart below, please list when each pregnancy ended:

	Month Ended	Year Ended	Not sure
Pregnancy 1			
Pregnancy 2			
Pregnancy 3			
Pregnancy 4			
Pregnancy 5			
Pregnancy 6			
Pregnancy 7			

Starting with your first pregnancy, please tell us about the outcome of each pregnancy by answering the follow-up questions below. Again, if you have any pregnancies that resulted in multiple births, please go to the back of the survey to record those answers.

PREGNANCY 1

What was the outcome from this pregnancy?

- Live birth of a single child (*If yes, please continue to "Single Birth Information" below*)
- Live birth of multiple children (*Please go to the back of the survey to fill out information about this pregnancy. This is the last section before the glossary of terms.*)
- Miscarriage

If you miscarried, how many weeks into the pregnancy did you miscarry? _____ Enter # of Weeks

Did your miscarriage end with a surgical procedure such as a **D&C** or a **D&E**?

- Yes No Don't know/not sure

- Still born

If pregnancy resulted in stillbirth, how many weeks into the pregnancy were you when the pregnancy ended? _____ Enter Number of Weeks

Did you receive any medical intervention for the stillbirth? Yes No

- Tubal Pregnancy
- Molar Pregnancy**

Single Birth Information

Did you have a vaginal or Cesarean delivery from your first pregnancy?	<input type="radio"/> Vaginal <input type="radio"/> Cesarean
What was the gender of this child?	<input type="radio"/> Male <input type="radio"/> Female
For your first pregnancy, did the birth occur three or more weeks before the due date?	<input type="radio"/> Yes <input type="radio"/> No
Did the child from your first pregnancy weigh more or less than 5.5 pounds when born?	<input type="radio"/> More than 5.5 pounds <input type="radio"/> Less than 5.5 pounds
Did a doctor or nurse say you had pre-eclampsia during your first pregnancy?	<input type="radio"/> Yes <input type="radio"/> No
Did the baby have any major birth defects, something that required medical treatment from your first pregnancy?	<input type="radio"/> Yes <input type="radio"/> No
What was the birth defect? (Please check all that apply)	
<input type="radio"/> Congenital heart defect	<input type="radio"/> Sickle Cell Disease
<input type="radio"/> Down's Syndrome	<input type="radio"/> Spina Bifida
<input type="radio"/> Club foot or other foot	<input type="radio"/> Genital or urinary tract
<input type="radio"/> Marfan Syndrome	<input type="radio"/> Nose Defect
<input type="radio"/> Oral clefts	<input type="radio"/> Eye Defect
<input type="radio"/> Other defect, please describe:	

PREGNANCY 2

What was the outcome from this pregnancy?

- Live birth of a single child *(If yes, please continue to "Single Birth Information" below)*
- Live birth of multiple children *(Please go to the back of the survey to fill out information about this pregnancy This is the last section before the glossary of terms.)*
- Miscarriage

If you miscarried, how many weeks into the pregnancy did you miscarry? _____ Enter # of Weeks

Did your miscarriage end with a surgical procedure such as a **D&C** or a **D&E**?

- Yes No Don't know/not sure

- Still born

If pregnancy resulted in stillbirth, how many weeks into the pregnancy were you when the pregnancy ended? _____ Enter Number of Weeks

Did you receive any medical intervention for the stillbirth? Yes No

- Tubal Pregnancy
- Molar Pregnancy**

Single Birth Information

Did you have a vaginal or Cesarean delivery from your first pregnancy?	<input type="radio"/> Vaginal <input type="radio"/> Cesarean
What was the gender of this child?	<input type="radio"/> Male <input type="radio"/> Female
For your first pregnancy, did the birth occur three or more weeks before the due date?	<input type="radio"/> Yes <input type="radio"/> No
Did the child from your first pregnancy weigh more or less than 5.5 pounds when born?	<input type="radio"/> More than 5.5 pounds <input type="radio"/> Less than 5.5 pounds
Did a doctor or nurse say you had pre-eclampsia during your first pregnancy?	<input type="radio"/> Yes <input type="radio"/> No
Did the baby have any major birth defects, something that required medical treatment from your first pregnancy?	<input type="radio"/> Yes <input type="radio"/> No
What was the birth defect? (Please check all that apply)	
<input type="radio"/> Congenital heart defect	<input type="radio"/> Sickle Cell Disease
<input type="radio"/> Down's Syndrome	<input type="radio"/> Spina Bifida
<input type="radio"/> Club foot or other foot	<input type="radio"/> Genital or urinary tract
<input type="radio"/> Marfan Syndrome	<input type="radio"/> Nose Defect
<input type="radio"/> Oral clefts	<input type="radio"/> Eye Defect
<input type="radio"/> Other defect, please describe:	

PREGNANCY 3

What was the outcome from this pregnancy?

- Live birth of a single child *(If yes, please continue to "Single Birth Information" below)*
- Live birth of multiple children *(Please go to the back of the survey to fill out information about this pregnancy. This is the last section before the glossary of terms.)*
- Miscarriage

If you miscarried, how many weeks into the pregnancy did you miscarry? _____ Enter # of Weeks

Did your miscarriage end with a surgical procedure such as a **D&C** or a **D&E**?

- Yes No Don't know/not sure

- Still born

If pregnancy resulted in stillbirth, how many weeks into the pregnancy were you when the pregnancy ended? _____ Enter Number of Weeks

Did you receive any medical intervention for the stillbirth? Yes No

- Tubal Pregnancy
- Molar Pregnancy**

Single Birth Information

Did you have a vaginal or Cesarean delivery from your first pregnancy?	<input type="radio"/> Vaginal <input type="radio"/> Cesarean
What was the gender of this child?	<input type="radio"/> Male <input type="radio"/> Female
For your first pregnancy, did the birth occur three or more weeks before the due date?	<input type="radio"/> Yes <input type="radio"/> No
Did the child from your first pregnancy weigh more or less than 5.5 pounds when born?	<input type="radio"/> More than 5.5 pounds <input type="radio"/> Less than 5.5 pounds
Did a doctor or nurse say you had pre-eclampsia during your first pregnancy?	<input type="radio"/> Yes <input type="radio"/> No
Did the baby have any major birth defects, something that required medical treatment from your first pregnancy?	<input type="radio"/> Yes <input type="radio"/> No
What was the birth defect? (Please check all that apply)	
<input type="radio"/> Congenital heart defect	<input type="radio"/> Sickle Cell Disease
<input type="radio"/> Down's Syndrome	<input type="radio"/> Spina Bifida
<input type="radio"/> Club foot or other foot	<input type="radio"/> Genital or urinary tract
<input type="radio"/> Marfan Syndrome	<input type="radio"/> Nose Defect
<input type="radio"/> Oral clefts	<input type="radio"/> Eye Defect
<input type="radio"/> Other defect, please describe:	

PREGNANCY 4

What was the outcome from this pregnancy?

- Live birth of a single child *(If yes, please continue to "Single Birth Information" below)*
 Live birth of multiple children *(Please go to the back of the survey to fill out information about this pregnancy. This is the last section before the glossary of terms.)*
 Miscarriage

If you miscarried, how many weeks into the pregnancy did you miscarry? ____ Enter # of Weeks

Did your miscarriage end with a surgical procedure such as a **D&C** or a **D&E**?

- Yes No Don't know/not sure

- Still born

If pregnancy resulted in stillbirth, how many weeks into the pregnancy were you when the pregnancy ended? ____ Enter Number of Weeks

Did you receive any medical intervention for the stillbirth? Yes No

- Tubal Pregnancy
 Molar Pregnancy

Single Birth Information

Did you have a vaginal or Cesarean delivery from your first pregnancy?	<input type="radio"/> Vaginal <input type="radio"/> Cesarean
What was the gender of this child?	<input type="radio"/> Male <input type="radio"/> Female
For your first pregnancy, did the birth occur three or more weeks before the due date?	<input type="radio"/> Yes <input type="radio"/> No
Did the child from your first pregnancy weigh more or less than 5.5 pounds when born?	<input type="radio"/> More than 5.5 pounds <input type="radio"/> Less than 5.5 pounds
Did a doctor or nurse say you had pre-eclampsia during your first pregnancy?	<input type="radio"/> Yes <input type="radio"/> No
Did the baby have any major birth defects, something that required medical treatment from your first pregnancy?	<input type="radio"/> Yes <input type="radio"/> No
What was the birth defect? (Please check all that apply)	
<input type="radio"/> Congenital heart defect	<input type="radio"/> Sickle Cell Disease
<input type="radio"/> Down's Syndrome	<input type="radio"/> Spina Bifida
<input type="radio"/> Club foot or other foot	<input type="radio"/> Genital or urinary tract
<input type="radio"/> Marfan Syndrome	<input type="radio"/> Nose Defect
<input type="radio"/> Oral clefts	<input type="radio"/> Eye Defect
<input type="radio"/> Other defect, please describe:	

PREGNANCY 5

What was the outcome from this pregnancy?

- Live birth of a single child *(If yes, please continue to "Single Birth Information" below)*
 Live birth of multiple children *(Please go to the back of the survey to fill out information about this pregnancy. This is the last section before the glossary of terms.)*
 Miscarriage

If you miscarried, how many weeks into the pregnancy did you miscarry? ____ Enter # of Weeks

Did your miscarriage end with a surgical procedure such as a **D&C** or a **D&E**?

- Yes No Don't know/not sure

- Still born

If pregnancy resulted in stillbirth, how many weeks into the pregnancy were you when the pregnancy ended? ____ Enter Number of Weeks

Did you receive any medical intervention for the stillbirth? Yes No

- Tubal Pregnancy
 Molar Pregnancy

Single Birth Information

Did you have a vaginal or Cesarean delivery from your first pregnancy?	<input type="radio"/> Vaginal <input type="radio"/> Cesarean
What was the gender of this child?	<input type="radio"/> Male <input type="radio"/> Female
For your first pregnancy, did the birth occur three or more weeks before the due date?	<input type="radio"/> Yes <input type="radio"/> No
Did the child from your first pregnancy weigh more or less than 5.5 pounds when born?	<input type="radio"/> More than 5.5 pounds <input type="radio"/> Less than 5.5 pounds
Did a doctor or nurse say you had pre-eclampsia during your first pregnancy?	<input type="radio"/> Yes <input type="radio"/> No
Did the baby have any major birth defects, something that required medical treatment from your first pregnancy?	<input type="radio"/> Yes <input type="radio"/> No
What was the birth defect? (Please check all that apply)	
<input type="radio"/> Congenital heart defect	<input type="radio"/> Sickle Cell Disease
<input type="radio"/> Down's Syndrome	<input type="radio"/> Spina Bifida
<input type="radio"/> Club foot or other foot	<input type="radio"/> Genital or urinary tract
<input type="radio"/> Marfan Syndrome	<input type="radio"/> Nose Defect
<input type="radio"/> Oral clefts	<input type="radio"/> Eye Defect
<input type="radio"/> Other defect, please describe:	

PREGNANCY 6

What was the outcome from this pregnancy?

- Live birth of a single child *(If yes, please continue to "Single Birth Information" below)*
- Live birth of multiple children *(Please go to the back of the survey to fill out information about this pregnancy. This is the last section before the glossary of terms.)*
- Miscarriage

If you miscarried, how many weeks into the pregnancy did you miscarry? ____ Enter # of Weeks

Did your miscarriage end with a surgical procedure such as a **D&C** or a **D&E**?

Yes No Don't know/not sure

- Still born

If pregnancy resulted in stillbirth, how many weeks into the pregnancy were you when the pregnancy ended? ____ Enter Number of Weeks

Did you receive any medical intervention for the stillbirth? Yes No

- Tubal Pregnancy
- Molar Pregnancy**

Single Birth Information

Did you have a vaginal or Cesarean delivery from your first pregnancy?	<input type="radio"/> Vaginal <input type="radio"/> Cesarean
What was the gender of this child?	<input type="radio"/> Male <input type="radio"/> Female
For your first pregnancy, did the birth occur three or more weeks before the due date?	<input type="radio"/> Yes <input type="radio"/> No
Did the child from your first pregnancy weigh more or less than 5.5 pounds when born?	<input type="radio"/> More than 5.5 pounds <input type="radio"/> Less than 5.5 pounds
Did a doctor or nurse say you had pre-eclampsia during your first pregnancy?	<input type="radio"/> Yes <input type="radio"/> No
Did the baby have any major birth defects, something that required medical treatment from your first pregnancy?	<input type="radio"/> Yes <input type="radio"/> No
What was the birth defect? (Please check all that apply)	
<input type="radio"/> Congenital heart defect	<input type="radio"/> Sickle Cell Disease
<input type="radio"/> Down's Syndrome	<input type="radio"/> Spina Bifida
<input type="radio"/> Club foot or other foot	<input type="radio"/> Genital or urinary tract
<input type="radio"/> Marfan Syndrome	<input type="radio"/> Nose Defect
<input type="radio"/> Oral clefts	<input type="radio"/> Eye Defect
<input type="radio"/> Other defect, please describe:	

PREGNANCY 7

What was the outcome from this pregnancy?

- Live birth of a single child *(If yes, please continue to "Single Birth Information" below)*
 Live birth of multiple children *(Please go to the back of the survey to fill out information about this pregnancy. This is the last section before the glossary of terms.)*
 Miscarriage

If you miscarried, how many weeks into the pregnancy did you miscarry? ____ Enter # of Weeks

Did your miscarriage end with a surgical procedure such as a **D&C** or a **D&E**?

- Yes No Don't know/not sure

- Still born

If pregnancy resulted in stillbirth, how many weeks into the pregnancy were you when the pregnancy ended? ____ Enter Number of Weeks

Did you receive any medical intervention for the stillbirth? Yes No

- Tubal Pregnancy
 Molar Pregnancy

Single Birth Information

Did you have a vaginal or Cesarean delivery from your first pregnancy?	<input type="radio"/> Vaginal <input type="radio"/> Cesarean
What was the gender of this child?	<input type="radio"/> Male <input type="radio"/> Female
For your first pregnancy, did the birth occur three or more weeks before the due date?	<input type="radio"/> Yes <input type="radio"/> No
Did the child from your first pregnancy weigh more or less than 5.5 pounds when born?	<input type="radio"/> More than 5.5 pounds <input type="radio"/> Less than 5.5 pounds
Did a doctor or nurse say you had pre-eclampsia during your first pregnancy?	<input type="radio"/> Yes <input type="radio"/> No
Did the baby have any major birth defects, something that required medical treatment from your first pregnancy?	<input type="radio"/> Yes <input type="radio"/> No
What was the birth defect? (Please check all that apply)	
<input type="radio"/> Congenital heart defect	<input type="radio"/> Sickle Cell Disease
<input type="radio"/> Down's Syndrome	<input type="radio"/> Spina Bifida
<input type="radio"/> Club foot or other foot	<input type="radio"/> Genital or urinary tract
<input type="radio"/> Marfan Syndrome	<input type="radio"/> Nose Defect
<input type="radio"/> Oral clefts	<input type="radio"/> Eye Defect
<input type="radio"/> Other defect, please describe:	

--End of Pregnancy Questions--

WOMEN'S HEALTH, Continued

6. Have you gone through your change of life (menopause)?

- Yes No Don't know/Not sure

7. Have you had a hysterectomy, that is, surgery to remove your uterus or womb?

- Yes No Don't know

8. How old were you when you had your hysterectomy? _____Enter age in years

9. If you did have a hysterectomy, was it a partial or total hysterectomy?

- Partial (uterus only) Total (uterus and ovary or ovaries) Don't know/Not sure

10. Have you ever been told by a doctor that you have **uterine fibroids**?

- Yes No

11. Have you ever been told by a doctor that you have **endometriosis**?

- Yes No

12. Not including hormones used for birth control or infertility, have you ever used female hormones such as estrogen and progesterone?

- Yes No Don't know Refused to respond

12a. If yes, in what form was that? Was it...

- Pills Cream Patch Injectables

13. Are you taking female hormones now?

- Yes No Don't know Refused to respond

14. Not counting any time when you stopped taking them, for how long altogether have you taken female hormones?

_____Months _____Years

SOCIAL HISTORY

1. Where were you born?

City _____

State _____

Country _____

2. What is your current marital status?

- | | |
|--------------------------------|-------------------------------------------|
| <input type="radio"/> Single | <input type="radio"/> Separated |
| <input type="radio"/> Married | <input type="radio"/> Widowed |
| <input type="radio"/> Divorced | <input type="radio"/> Living with partner |

3. Ethnicity:

- | | |
|--------------------------------|-------------------------------------------------------------|
| <input type="radio"/> White | <input type="radio"/> Asian |
| <input type="radio"/> Black | <input type="radio"/> American Indian |
| <input type="radio"/> Hispanic | <input type="radio"/> Something else, please specify: _____ |

4. What was your average family income for the last three years *(For this question, calculate your total family income from the past three years, and divide by 3 to obtain the average family income.)*

- | | |
|-------------------------------------------|-------------------------------------------|
| <input type="radio"/> Less than \$10,000 | <input type="radio"/> \$40,000 - \$49,999 |
| <input type="radio"/> \$10,000 - \$19,999 | <input type="radio"/> \$50,000 - \$59,999 |
| <input type="radio"/> \$20,000 - \$29,999 | <input type="radio"/> \$60,000 - \$69,999 |
| <input type="radio"/> \$30,000 - \$39,999 | <input type="radio"/> \$70,000 or more |
| | <input type="radio"/> I do not know |

5. What is the highest level of education you have completed?

- | | |
|-------------------------------------------------------|----------------------------------------------------------------------------------------|
| <input type="radio"/> Less than a high school diploma | <input type="radio"/> Some college/Associates Degree or other post-secondary education |
| <input type="radio"/> High school Diploma or GED | <input type="radio"/> Bachelor's degree (4 years of college) or higher |

IF THE PERSON FOR WHOM THE SURVEY IS BEING FILLED OUT IS UNDER THE AGE OF 18, PLEASE SKIP THE TOBACCO AND ALCOHOL RELATED QUESTIONS AND GO RIGHT TO QUESTION #19.

6. Have you ever smoked cigarettes? Yes No

6a. Do you currently smoke cigarettes? Yes No

7. On average, how many cigarettes do you smoke a day? (Note: 1 pack = 20 cigarettes)

- Less than one a day 1 to 2 packs a day
 A few cigarettes a day 2 to 3 packs a day
 Half a pack a day More than 3 packs a day
 2 -3 packs per day Don't know/not sure

8. How old were you when you started smoking?

_____ Enter Age Don't know/Not sure

9. How old were you when you quit?

_____ Enter Age Don't know/Not sure

10a. How long have you smoked?

_____ Enter years Don't know/Not sure

10b. How many years did you smoke before you quit?

_____ Enter years Don't know/Not sure

11a. Have you ever used any other tobacco products regularly? Yes No

11b. Do you currently use any other tobacco products regularly? Yes No

12. What other tobacco products have you used or do you currently use? (check all that apply)

- Pipe Smokeless tobacco
 Cigar Something else, please specify: _____
 Chewing tobacco Don't know

13a. How long have you used these tobacco products?

_____ Enter years Don't know/Not sure

13b. For how many years did you use other tobacco products?

_____ Enter years Don't know/Not sure

14. Approximately how many times have you tried to quit using tobacco products, including cigarettes?

_____ Enter number of times None/Never Don't know/Not sure

15. If you ever used any other tobacco products, that is pipe, Cigar, Chewing tobacco , Smokeless tobacco, or other tobacco products, **intermittently**, how many total years did you use them?

- _____ Enter number of years None/Never used other tobacco products **intermittently**
 Don't know/Not sure

16. Do you drink alcoholic beverages at all? (includes beer, wine, wine coolers, hard lemonade, spirits)

- Yes No

17. If "yes" to question 16, how much alcohol do you drink?

- 1 -3 drinks/day Over five drinks/day
 3 - 5 drinks/day Don't know

18. If no to question 16, have you ever drunk alcoholic beverages? (includes beer, wine, wine coolers, hard lemonade, spirits)

- Yes No

19. If you have quit drinking, how long ago did you quit?

- Less than 5 years ago
 More than 5 years ago
 Don't know

19. Are you a vegetarian (eat no meat products)? Yes No

20. Do you grow your own vegetables? Yes No

21. Do you engage in an exercise program? Yes No

22. How often do you engage in an exercise program, such as aerobics, basketball, running, walking, etc.?

- Once a week Four to six times a week
 Two to three times a week Seven times a week

23. How long do you exercise each time?

- Less than 10 minutes 40 - 60 minutes
 10 - 20 minutes More than 60 minutes
 20 - 40 minutes

24. How do you classify your exercises?

- a Cardiovascular Both cardiovascular and weight lifting
b Weight Lifting Don't know

FAMILY HISTORY

1. Do any of your blood relatives (children parents, or siblings) currently have cancer or have they had cancer?
(Please note we are only asking about family members who are blood relatives to you, please answer for your children ,parents, and siblings.)

Yes No

2. In all, how many family members (including yourself) have had (or now have) cancer?

_____ Enter number Don't know

If yes, please complete the following:

First blood relative:

Parent Sibling Child

Type of cancer: _____

Living Deceased Year of cancer diagnosis _____

Second blood relative:

Parent Sibling Child

Type of cancer: _____

Living Deceased Year of cancer diagnosis _____

Third blood relative:

Parent Sibling Child

Type of cancer: _____

Living Deceased Year of cancer diagnosis _____

Fourth blood relative:

Parent Sibling Child

Type of cancer: _____

Living Deceased Year of cancer diagnosis _____

Fifth blood relative:

Parent Sibling Child

Type of cancer: _____

Living Deceased Year of cancer diagnosis _____

Sixth blood relative:

Parent Sibling Child

Type of cancer: _____

Living Deceased Year of cancer diagnosis _____

3. Have any of your blood relatives (that is parents, siblings or children) ever been told by a health professional that they have or had any of the following conditions? If your relatives have been told by a health professional that they have or had any of the conditions listed below, please put a check-mark in the box beside the condition. If your relatives have not been told by a health professional that they have or had the condition, please leave the check box blank.

For your convenience, many of the words in the chart have been included in a glossary. Any word in bold type face type will be found in the glossary at the back of this survey.

Please indicate the relationship that applies for each condition. Was it your parents, siblings, or children?

Please enter this information in the chart below.

Condition	Parents	Siblings	Children
<i>Sample Entry</i>	✓		✓
Addison's disease			
Alzheimer's disease			
Amyotrophic Lateral Sclerosis (Lou Gehrig's Disease)			
Anemia <i>If you have anemia, does (or did) it affect your:</i>			
White Blood Cells			
Red Blood Cells			
Platelets			
Don't know			
Aneurysm			
Asthma			
Cerebrovascular accident (CVA)			
Chronic bronchitis			
Chronic obstructive pulmonary disease (COPD or Black Lung Disease)			
Cushing's syndrome			
Diabetes			
Type I (Insulin dependent)	___ age of onset	___ age of onset	___ age of onset
Type II (Non-insulin dependent)	___ age of onset	___ age of onset	___ age of onset
Emphysema			
Epstein Barr (Mononucleosis)			
Fibromyalgia (FMS)			
Heart Disease (including Heart Attack)			
Myocardial Infarction (Heart Attack)			
Arteriosclerosis			
Coronary artery disease (CAD)			
Some other Heart Disease, please specify: _____			
Immune Disease			
Kidney Disease (including kidney stone and infection)			
Protein in Urine			
Albumin in Urine			
Blood in Urine			
Kidney Infection			
Kidney Stones			

Liver Disease Hepatitis			
Other Liver Diseases			
Lou Gehrig's disease			
Lupus/SLE			
Multiple Sclerosis			
Osteoarthritis			
Parkinson's disease			
Prostate Disease Prostatitis (inflammation of the prostate)			
Enlarged prostate			
High PSA level			
Raynaud's syndrome			
Rheumatoid Arthritis			
Scleroderma			
Sjogren's syndrome			
Stroke			
Thyroid disease Goiter			
Grave's disease			
Hashimoto's			
Other, please specify:			
Urinary infection			

Survey Completion Closing Statement

We would like to thank you for taking the time to answer our survey questions. You have completed the C-8 Health Survey. Within the next five days, you will receive a phone call or letter from the C-8 Health Project appointment scheduler to schedule an in-person appointment at the C-8 test site. The scheduler will provide you with the street address, driving directions, and let you know what you should bring the day of your appointment. At the test site, we will verify your study eligibility, review your survey responses, and give you a check for \$150. You must go in-person to the test site in order to complete your study participation. Your in-person visit will allow us to verify your survey responses and ensure that no one else receives your check. Throughout the entire process, your confidentiality will be protected.

Any children or adults with physical or mental difficulties who you have filled out the survey for must go to the test site with you. At the test site, you will be asked to provide proof that you lived, worked, or went to school in any one of the six water district areas for at least one year before December 3rd, 2004. You also will be asked to sign a form. The form gives the C-8 Health Project permission to use your data to find out if there is a link between C-8 and disease in humans. Also, if verification of medical disease is needed, you will be asked to sign a second form that allows your doctor/hospital to provide your medical records to the C-8 Health Project to confirm any disease that you report.

To prove who you are, bring one photo ID plus one other form of ID such as:

- Driver's license.
- Passport.
- Certificate of citizenship.
- Certificate of naturalization.
- Social Security card or birth certificate (original or certified copy)
- State-issued photo ID.
- Government employment ID card.
- Student photo ID card issued by a U.S. college or university.
- Military photo ID.

- Major credit card or bank card with photo.
- Resident of U.S. alien card.

With no photo ID, you will need three (3) items from this list:

For each minor, you will need a birth certificate (original or certified copy). If you are the legal guardian of a minor, you will also need custody papers for proof of guardianship.

AND

To show you were in one of the six water districts for a span of one year before December 3, 2004, show one of these:

- Utility bills (as many as needed to show occupancy for a one-year period).
- Bank statements (as many as needed to show occupancy for a one-year period).
- Major credit card statement (as many as needed to show occupancy for a one-year period).
- Deed to property.
- Lease or rental agreement.
- Previous W-2 or W-4.
- Employment record or pay stub (as many as needed to show occupancy for a one-year period).
- Vehicle title, registration, or insurance card.
- Homeowner's or renter's insurance card.
- Cancelled check showing name and address.
- Voter registration card.
- Real or personal property tax receipts.
- School records (as many as needed to show enrollment for a one-year period).

Thanks again for taking the time to complete the C-8 Health survey. Your willingness to participate in this survey is greatly appreciated.

Thank you!

Please remember to complete the additional pages that follow to register your previous addresses for the past 25 years as well as the additional pages for previous work experience and multiple pregnancies.

ADDITIONAL PAGES FOR WATER USAGE AT PREVIOUS ADDRESSES

PLEASE PROVIDE US WITH THE SAME INFORMATION FOR ALL OF YOUR PREVIOUS ADDRESSES OVER THE LAST 25 YEARS. USING THE ADDITIONAL SHEETS PROVIDED, PLEASE START WITH THE MOST RECENT ADDRESS AND WORK BACKWARDS.

PREVIOUS ADDRESS 1

Please answer all the questions below for this previous address.

STREET ADDRESS: _____ Apartment number: _____

CITY: _____ STATE: _____ Country: _____ ZIP CODE: _____

1. What month and year did you begin living at this previous address? ____ Month ____ Year Don't Know

What month and year did you leave this previous address? ____ Month ____ Year Don't Know

2. What was the main source of water you used at this address **for drinking**?

- Public Water (filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you used bottled water,
2a. In what month and year did you start buying bottled water for drinking? ____ Month ____ Year

3. What was the main source of water you used at this address **for cooking**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you used bottled water,
3a. In what month and year did you start buying bottled water for cooking? ____ Month ____ Year

4. What was the main source of water you use at this address **for showering or bathing**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Other
- I Don't Know

If you used PRIVATE WATER (i.e. well, **cistern**), please answer the following questions:

If you used PUBLIC WATER (i.e. tap water), please answer the following questions:

5a. For your well or cistern, was your **C-8 level** tested?

Yes No I don't know

5b. If yes, what was the C8 level?

____ Enter number Don't remember

5c. When was this test done?

____ Month ____ Year Not sure

6. Which of the following water districts provided your water at this previous residence?

- City of Belpre, OH
- Tappers Plains
- Little Hocking Water Association
- Lubeck Public Service District
- Mason County
- Village of Pomeroy
- Some other water district, please specify: _____
- I don't know/Not sure

PREVIOUS ADDRESS 2

Please answer all the questions below for this previous address.

STREET ADDRESS: _____ Apartment number: _____

CITY: _____ STATE: _____ Country: _____ ZIP CODE: _____

1. What month and year did you begin living at this previous address? ____ Month ____ Year Don't Know

What month and year did you leave this previous address? ____ Month ____ Year Don't Know

2. What was the main source of water you used at this address **for drinking**?

- Public Water (filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you used bottled water,
2a. In what month and year did you start buying bottled water for drinking? ____ Month ____ Year

3. What was the main source of water you used at this address **for cooking**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you used bottled water,
3a. In what month and year did you start buying bottled water for cooking? ____ Month ____ Year

4. What was the main source of water you use at this address **for showering or bathing**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Other
- I Don't Know

If you used PRIVATE WATER (i.e. well, **cistern**), please answer the following questions:

If you used PUBLIC WATER (i.e. tap water), please answer the following questions:

5a. For your well or cistern, was your **C-8 level** tested?
 Yes No I don't know

5b. If yes, what was the C8 level?
____ Enter number Don't remember

5c. When was this test done?
____ Month ____ Year Not sure

6. Which of the following water districts provided your water at this previous residence?

- City of Belpre, OH
- Tappers Plains
- Little Hocking Water Association
- Lubeck Public Service District
- Mason County
- Village of Pomeroy
- Some other water district, please specify: _____
- I don't know/Not sure

PREVIOUS ADDRESS 3

Please answer all the questions below for this previous address.

STREET ADDRESS: _____ Apartment number: _____

CITY: _____ STATE: _____ Country: _____ ZIP CODE: _____

1. What month and year did you begin living at this previous address? ____ Month ____ Year Don't Know

What month and year did you leave this previous address? ____ Month ____ Year Don't Know

2. What was the main source of water you used at this address **for drinking**?

- Public Water (filtered and unfiltered tap water)
 Private Water (well or **cistern**)
 Bottled Water
 I Don't Know

If you used bottled water,
 2a. In what month and year did you start buying bottled water for drinking? ____ Month ____ Year

3. What was the main source of water you used at this address **for cooking**?

- Public Water ((filtered and unfiltered tap water)
 Private Water (well or **cistern**)
 Bottled Water
 I Don't Know

If you used bottled water,
 3a. In what month and year did you start buying bottled water for cooking? ____ Month ____ Year

4. What was the main source of water you use at this address **for showering or bathing**?

- Public Water ((filtered and unfiltered tap water)
 Private Water (well or **cistern**)
 Other
 I Don't Know

If you used PRIVATE WATER
 (i.e. well, **cistern**), please answer the following questions:

5a. For your well or cistern, was your **C-8 level** tested?

Yes No I don't know

5b. If yes, what was the C8 level?

____ Enter number Don't remember

5c. When was this test done?

____ Month ____ Year Not sure

If you used PUBLIC WATER
 (i.e. tap water), please answer the following questions:

6. Which of the following water districts provided your water at this previous residence?

- City of Belpre, OH
 Tappers Plains
 Little Hocking Water Association
 Lubeck Public Service District
 Mason County
 Village of Pomeroy
 Some other water district, please specify: _____
 I don't know/Not sure

PREVIOUS ADDRESS 4

Please answer all the questions below for this previous address.

STREET ADDRESS: _____ Apartment number: _____

CITY: _____ STATE: _____ Country: _____ ZIP CODE: _____

1. What month and year did you begin living at this previous address? ____ Month ____ Year Don't Know

What month and year did you leave this previous address? ____ Month ____ Year Don't Know

2. What was the main source of water you used at this address **for drinking**?

- Public Water (filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you used bottled water,
2a. In what month and year did you start buying bottled water for drinking? ____ Month ____ Year

3. What was the main source of water you used at this address **for cooking**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you used bottled water,
3a. In what month and year did you start buying bottled water for cooking? ____ Month ____ Year

4. What was the main source of water you use at this address **for showering or bathing**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Other
- I Don't Know

If you used PRIVATE WATER (i.e. well, **cistern**), please answer the following questions:

If you used PUBLIC WATER (i.e. tap water), please answer the following questions:

5a. For your well or cistern, was your **C-8 level** tested?
 Yes No I don't know

5b. If yes, what was the C8 level?
____ Enter number Don't remember

5c. When was this test done?
____ Month ____ Year Not sure

6. Which of the following water districts provided your water at this previous residence?

- City of Belpre, OH
- Tappers Plains
- Little Hocking Water Association
- Lubeck Public Service District
- Mason County
- Village of Pomeroy
- Some other water district, please specify: _____
- I don't know/Not sure

PREVIOUS ADDRESS 5

Please answer all the questions below for this previous address.

STREET ADDRESS: _____ Apartment number: _____

CITY: _____ STATE: _____ Country: _____ ZIP CODE: _____

1. What month and year did you begin living at this previous address? ____ Month ____ Year Don't Know

What month and year did you leave this previous address? ____ Month ____ Year Don't Know

2. What was the main source of water you used at this address **for drinking**?

- Public Water (filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you used bottled water,
2a. In what month and year did you start buying bottled water for drinking? ____ Month ____ Year

3. What was the main source of water you used at this address **for cooking**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you used bottled water,
3a. In what month and year did you start buying bottled water for cooking? ____ Month ____ Year

4. What was the main source of water you use at this address **for showering or bathing**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Other
- I Don't Know

If you used PRIVATE WATER (i.e. well, **cistern**), please answer the following questions:

If you used PUBLIC WATER (i.e. tap water), please answer the following questions:

5a. For your well or cistern, was your **C-8 level** tested?
 Yes No I don't know

5b. If yes, what was the C8 level?
____ Enter number Don't remember

5c. When was this test done?
____ Month ____ Year Not sure

6. Which of the following water districts provided your water at this previous residence?

- City of Belpre, OH
- Tappers Plains
- Little Hocking Water Association
- Lubeck Public Service District
- Mason County
- Village of Pomeroy
- Some other water district, please specify: _____
- I don't know/Not sure

PREVIOUS ADDRESS 6

Please answer all the questions below for this previous address.

STREET ADDRESS: _____ Apartment number: _____

CITY: _____ STATE: _____ Country: _____ ZIP CODE: _____

1. What month and year did you begin living at this previous address? ____ Month ____ Year Don't Know

What month and year did you leave this previous address? ____ Month ____ Year Don't Know

2. What was the main source of water you used at this address **for drinking**?

- Public Water (filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you used bottled water,
2a. In what month and year did you start buying bottled water for drinking? ____ Month ____ Year

3. What was the main source of water you used at this address **for cooking**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you used bottled water,
3a. In what month and year did you start buying bottled water for cooking? ____ Month ____ Year

4. What was the main source of water you use at this address **for showering or bathing**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Other
- I Don't Know

If you used PRIVATE WATER (i.e. well, **cistern**), please answer the following questions:

If you used PUBLIC WATER (i.e. tap water), please answer the following questions:

5a. For your well or cistern, was your **C-8 level** tested?
 Yes No I don't know

5b. If yes, what was the C8 level?
____ Enter number Don't remember

5c. When was this test done?
____ Month ____ Year Not sure

6. Which of the following water districts provided your water at this previous residence?

- City of Belpre, OH
- Tappers Plains
- Little Hocking Water Association
- Lubeck Public Service District
- Mason County
- Village of Pomeroy
- Some other water district, please specify: _____
- I don't know/Not sure

PREVIOUS ADDRESS 7

Please answer all the questions below for this previous address.

STREET ADDRESS: _____ Apartment number: _____

CITY: _____ STATE: _____ Country: _____ ZIP CODE: _____

1. What month and year did you begin living at this previous address? ____ Month ____ Year Don't Know

What month and year did you leave this previous address? ____ Month ____ Year Don't Know

2. What was the main source of water you used at this address **for drinking**?

- Public Water (filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you used bottled water,
2a. In what month and year did you start buying bottled water for drinking? ____ Month ____ Year

3. What was the main source of water you used at this address **for cooking**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you used bottled water,
3a. In what month and year did you start buying bottled water for cooking? ____ Month ____ Year

4. What was the main source of water you use at this address **for showering or bathing**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Other
- I Don't Know

If you used PRIVATE WATER (i.e. well, **cistern**), please answer the following questions:

If you used PUBLIC WATER (i.e. tap water), please answer the following questions:

5a. For your well or cistern, was your **C-8 level** tested?

Yes No I don't know

5b. If yes, what was the C8 level?

____ Enter number Don't remember

5c. When was this test done?

____ Month ____ Year Not sure

6. Which of the following water districts provided your water at this previous residence?

- City of Belpre, OH
- Tappers Plains
- Little Hocking Water Association
- Lubeck Public Service District
- Mason County
- Village of Pomeroy
- Some other water district, please specify: _____
- I don't know/Not sure

PREVIOUS ADDRESS 8

Please answer all the questions below for this previous address.

STREET ADDRESS: _____ Apartment number: _____

CITY: _____ STATE: _____ Country: _____ ZIP CODE: _____

1. What month and year did you begin living at this previous address? ____ Month ____ Year Don't Know

What month and year did you leave this previous address? ____ Month ____ Year Don't Know

2. What was the main source of water you used at this address **for drinking**?

- Public Water (filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you used bottled water,
2a. In what month and year did you start buying bottled water for drinking? ____ Month ____ Year

3. What was the main source of water you used at this address **for cooking**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you used bottled water,
3a. In what month and year did you start buying bottled water for cooking? ____ Month ____ Year

4. What was the main source of water you use at this address **for showering or bathing**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Other
- I Don't Know

If you used PRIVATE WATER (i.e. well, **cistern**), please answer the following questions:

If you used PUBLIC WATER (i.e. tap water), please answer the following questions:

5a. For your well or cistern, was your **C-8 level** tested?
 Yes No I don't know

5b. If yes, what was the C8 level?
____ Enter number Don't remember

5c. When was this test done?
____ Month ____ Year Not sure

6. Which of the following water districts provided your water at this previous residence?

- City of Belpre, OH
- Tappers Plains
- Little Hocking Water Association
- Lubeck Public Service District
- Mason County
- Village of Pomeroy
- Some other water district, please specify: _____
- I don't know/Not sure

PREVIOUS ADDRESS 9

Please answer all the questions below for this previous address.

STREET ADDRESS: _____ Apartment number: _____

CITY: _____ STATE: _____ Country: _____ ZIP CODE: _____

1. What month and year did you begin living at this previous address? ____ Month ____ Year Don't Know

What month and year did you leave this previous address? ____ Month ____ Year Don't Know

2. What was the main source of water you used at this address **for drinking**?

- Public Water (filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you used bottled water,
2a. In what month and year did you start buying bottled water for drinking? ____ Month ____ Year

3. What was the main source of water you used at this address **for cooking**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you used bottled water,
3a. In what month and year did you start buying bottled water for cooking? ____ Month ____ Year

4. What was the main source of water you use at this address **for showering or bathing**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Other
- I Don't Know

If you used PRIVATE WATER (i.e. well, **cistern**), please answer the following questions:

If you used PUBLIC WATER (i.e. tap water), please answer the following questions:

5a. For your well or cistern, was your **C-8 level** tested?

Yes No I don't know

5b. If yes, what was the C8 level?

____ Enter number Don't remember

5c. When was this test done?

____ Month ____ Year Not sure

6. Which of the following water districts provided your water at this previous residence?

- City of Belpre, OH
- Tappers Plains
- Little Hocking Water Association
- Lubeck Public Service District
- Mason County
- Village of Pomeroy
- Some other water district, please specify: _____
- I don't know/Not sure

PREVIOUS ADDRESS 10

Please answer all the questions below for this previous address.

STREET ADDRESS: _____ Apartment number: _____

CITY: _____ STATE: _____ Country: _____ ZIP CODE: _____

1. What month and year did you begin living at this previous address? ____ Month ____ Year Don't Know

What month and year did you leave this previous address? ____ Month ____ Year Don't Know

2. What was the main source of water you used at this address **for drinking**?

- Public Water (filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you used bottled water,
2a. In what month and year did you start buying bottled water for drinking? ____ Month ____ Year

3. What was the main source of water you used at this address **for cooking**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Bottled Water
- I Don't Know



If you used bottled water,
3a. In what month and year did you start buying bottled water for cooking? ____ Month ____ Year

4. What was the main source of water you use at this address **for showering or bathing**?

- Public Water ((filtered and unfiltered tap water)
- Private Water (well or **cistern**)
- Other
- I Don't Know

If you used PRIVATE WATER (i.e. well, **cistern**), please answer the following questions:

If you used PUBLIC WATER (i.e. tap water), please answer the following questions:

5a. For your well or cistern, was your **C-8 level** tested?
 Yes No I don't know

5b. If yes, what was the C8 level?
____ Enter number Don't remember

5c. When was this test done?
____ Month ____ Year Not sure

6. Which of the following water districts provided your water at this previous residence?

- City of Belpre, OH
- Tappers Plains
- Little Hocking Water Association
- Lubeck Public Service District
- Mason County
- Village of Pomeroy
- Some other water district, please specify: _____
- I don't know/Not sure

ADDITIONAL PAGES FOR PREVIOUS WORK EXPERIENCE

Complete the following questions for each job/work experience you have held for at least six months.
Repeat questions 1 through 8 until complete work history has been recorded.

PREVIOUS EMPLOYER 1

1. Previous employer or company name: _____

Kind of business: _____ City: _____ State: _____

2. Please enter the date you *started* working at this previous employer:

Started: _____ Month _____ Year

Please enter the date you *stopped* working at this previous employer:

Finished: _____ Month _____ Year

3. What kind of work did you do at this previous employer (for example, manufacturing, automotive, retail, mining, nursing, etc.)? _____

4. What were your most important activities on this job? _____

5. Were you exposed to chemicals or agents at this previous employer?

- Yes
- No
- Don't know/Not sure

5a. If yes, please list the chemicals or agents you were exposed to at this previous employer:

6. What was the source of drinking water at this previous employer? (Check all that apply)

- Public
- Private (well, **cistern**)
- Bottled
- I don't know

6a. If this past place of employment had public water, which of the following water districts provided the water for this employer?

- | | |
|--------------------------------------------------------|------------------------------------------------------------------------|
| <input type="radio"/> City of Belpre, OH | <input type="radio"/> Mason County |
| <input type="radio"/> Tupper Plains | <input type="radio"/> Village of Pomeroy |
| <input type="radio"/> Little Hocking Water Association | <input type="radio"/> Some other water district, please specify: _____ |
| <input type="radio"/> Lubeck Public Service District | <input type="radio"/> I don't know |

7. Thinking about your job with this previous employer, was this job in any of the following places or did it involve working with any of the listed materials? *(Check all that apply)*

- Power Plant
- Refinery
- Metal Refining
- Explosives or Nitrate Manufacturing
- Pharmaceuticals or Chemicals
- Manufacture or Use of Dyes
- Rubber or Plastic Industry
- Dry Cleaning
- Textile Manufacturing
- Photo or Graphic Arts
- Solvents** such as Metal Cleaners/Degreasers
- Typesetting or Printing
- Electronics Manufacturing or Assembly
- Gas Station
- Manufacture of Chemicals
- Fluorocarbons** (used for Teflon, Scotch Guard, GorTex).
- Chlorofluorocarbons** (used in air conditioning units)
- Underground mining
- Coal preparation
- Timber and wood products

7a. If you would like to add any information to the previous question, please do so in the space provided below:

8. What has been your main job over your lifetime? _____

PREVIOUS EMPLOYER 2

1. Previous employer or company name: _____

Kind of business: _____ City: _____ State: _____

2. Please enter the date you *started* working at this previous employer:

Started: _____ Month _____ Year

Please enter the date you *stopped* working at this previous employer:

Finished: _____ Month _____ Year

3. What kind of work did you do at this previous employer (for example, manufacturing, automotive, retail, mining, nursing, etc.)? _____

4. What were your most important activities on this job? _____

5. Were you exposed to chemicals or agents at this previous employer?

- Yes
- No
- Don't know/Not sure

5a. If yes, please list the chemicals or agents you were exposed to at this previous employer:

6. What was the source of drinking water at this previous employer? (Check all that apply)

- Public
- Private (well, **cistern**)
- Bottled
- I don't know

6a. If this past place of employment had public water, which of the following water districts provided the water for this employer?

- | | |
|--------------------------------------------------------|------------------------------------------------------------------------|
| <input type="radio"/> City of Belpre, OH | <input type="radio"/> Mason County |
| <input type="radio"/> Tappers Plains | <input type="radio"/> Village of Pomeroy |
| <input type="radio"/> Little Hocking Water Association | <input type="radio"/> Some other water district, please specify: _____ |
| <input type="radio"/> Lubeck Public Service District | <input type="radio"/> I don't know |

7. Thinking about your job with this previous employer, was this job in any of the following places or did it involve working with any of the listed materials? *(Check all that apply)*

- Power Plant
- Refinery
- Metal Refining
- Explosives or Nitrate Manufacturing
- Pharmaceuticals or Chemicals
- Manufacture or Use of Dyes
- Rubber or Plastic Industry
- Dry Cleaning
- Textile Manufacturing
- Photo or Graphic Arts
- Solvents** such as Metal Cleaners/Degreasers
- Typesetting or Printing
- Electronics Manufacturing or Assembly
- Gas Station
- Manufacture of Chemicals
- Fluorocarbons** (used for Teflon, Scotch Guard, GorTex).
- Chlorofluorocarbons** (used in air conditioning units)
- Underground mining
- Coal preparation
- Timber and wood products

7a. If you would like to add any information to the previous question, please do so in the space provided below:

8. What has been your main job over your lifetime? _____

PREVIOUS EMPLOYER 3

1. Previous employer or company name: _____

Kind of business: _____ City: _____ State: _____

2. Please enter the date you *started* working at this previous employer:

Started: _____ Month _____ Year

Please enter the date you *stopped* working at this previous employer:

Finished: _____ Month _____ Year

3. What kind of work did you do at this previous employer (for example, manufacturing, automotive, retail, mining, nursing, etc.)? _____

4. What were your most important activities on this job? _____

5. Were you exposed to chemicals or agents at this previous employer?

- Yes
- No
- Don't know/Not sure

5a. If yes, please list the chemicals or agents you were exposed to at this previous employer:

6. What was the source of drinking water at this previous employer? (Check all that apply)

- Public
- Private (well, **cistern**)
- Bottled
- I don't know

6a. If this past place of employment had public water, which of the following water districts provided the water for this employer?

- | | |
|--------------------------------------------------------|------------------------------------------------------------------------|
| <input type="radio"/> City of Belpre, OH | <input type="radio"/> Mason County |
| <input type="radio"/> Tupper Plains | <input type="radio"/> Village of Pomeroy |
| <input type="radio"/> Little Hocking Water Association | <input type="radio"/> Some other water district, please specify: _____ |
| <input type="radio"/> Lubeck Public Service District | <input type="radio"/> I don't know |

7. Thinking about your job with this previous employer, was this job in any of the following places or did it involve working with any of the listed materials? *(Check all that apply)*

- Power Plant
- Refinery
- Metal Refining
- Explosives or Nitrate Manufacturing
- Pharmaceuticals or Chemicals
- Manufacture or Use of Dyes
- Rubber or Plastic Industry
- Dry Cleaning
- Textile Manufacturing
- Photo or Graphic Arts
- Solvents** such as Metal Cleaners/Degreasers
- Typesetting or Printing
- Electronics Manufacturing or Assembly
- Gas Station
- Manufacture of Chemicals
- Fluorocarbons** (used for Teflon, Scotch Guard, GorTex).
- Chlorofluorocarbons** (used in air conditioning units)
- Underground mining
- Coal preparation
- Timber and wood products

7a. If you would like to add any information to the previous question, please do so in the space provided below:

8. What has been your main job over your lifetime? _____

PREVIOUS EMPLOYER 4

1. Previous employer or company name: _____

Kind of business: _____ City: _____ State: _____

2. Please enter the date you *started* working at this previous employer:

Started: _____ Month _____ Year

Please enter the date you *stopped* working at this previous employer:

Finished: _____ Month _____ Year

3. What kind of work did you do at this previous employer (for example, manufacturing, automotive, retail, mining, nursing, etc.)? _____

4. What were your most important activities on this job? _____

5. Were you exposed to chemicals or agents at this previous employer?

- Yes No Don't know/Not sure



5a. If yes, please list the chemicals or agents you were exposed to at this previous employer:

6. What was the source of drinking water at this previous employer? (Check all that apply)

- Public
- Private (well, **cistern**)
- Bottled
- I don't know



6a. If this past place of employment had public water, which of the following water districts provided the water for this employer?

<input type="radio"/> City of Belpre, OH	<input type="radio"/> Mason County
<input type="radio"/> Tappers Plains	<input type="radio"/> Village of Pomeroy
<input type="radio"/> Little Hocking Water Association	<input type="radio"/> Some other water district, please specify: _____
<input type="radio"/> Lubeck Public Service District	<input type="radio"/> I don't know

7. Thinking about your job with this previous employer, was this job in any of the following places or did it involve working with any of the listed materials? *(Check all that apply)*

- Power Plant
- Refinery
- Metal Refining
- Explosives or Nitrate Manufacturing
- Pharmaceuticals or Chemicals
- Manufacture or Use of Dyes
- Rubber or Plastic Industry
- Dry Cleaning
- Textile Manufacturing
- Photo or Graphic Arts
- Solvents** such as Metal Cleaners/Degreasers
- Typesetting or Printing
- Electronics Manufacturing or Assembly
- Gas Station
- Manufacture of Chemicals
- Fluorocarbons** (used for Teflon, Scotch Guard, GorTex).
- Chlorofluorocarbons** (used in air conditioning units)
- Underground mining
- Coal preparation
- Timber and wood products

7a. If you would like to add any information to the previous question, please do so in the space provided below:

8. What has been your main job over your lifetime? _____

PREVIOUS EMPLOYER 5

1. Previous employer or company name: _____

Kind of business: _____ City: _____ State: _____

2. Please enter the date you *started* working at this previous employer:

Started: _____ Month _____ Year

Please enter the date you *stopped* working at this previous employer:


Finished: _____ Month _____ Year

3. What kind of work did you do at this previous employer (for example, manufacturing, automotive, retail, mining, nursing, etc.)? _____

4. What were your most important activities on this job? _____


5. Were you exposed to chemicals or agents at this previous employer?

- Yes
- No
- Don't know/Not sure

 5a. If yes, please list the chemicals or agents you were exposed to at this previous employer:

6. What was the source of drinking water at this previous employer? (Check all that apply)

- Public
- Private (well, **cistern**)
- Bottled
- I don't know

 6a. If this past place of employment had public water, which of the following water districts provided the water for this employer?

- | | |
|--------------------------------------------------------|------------------------------------------------------------------------|
| <input type="radio"/> City of Belpre, OH | <input type="radio"/> Mason County |
| <input type="radio"/> Tupper Plains | <input type="radio"/> Village of Pomeroy |
| <input type="radio"/> Little Hocking Water Association | <input type="radio"/> Some other water district, please specify: _____ |
| <input type="radio"/> Lubeck Public Service District | <input type="radio"/> I don't know |

7. Thinking about your job with this previous employer, was this job in any of the following places or did it involve working with any of the listed materials? *(Check all that apply)*

- Power Plant
- Refinery
- Metal Refining
- Explosives or Nitrate Manufacturing
- Pharmaceuticals or Chemicals
- Manufacture or Use of Dyes
- Rubber or Plastic Industry
- Dry Cleaning
- Textile Manufacturing
- Photo or Graphic Arts
- Solvents** such as Metal Cleaners/Degreasers
- Typesetting or Printing
- Electronics Manufacturing or Assembly
- Gas Station
- Manufacture of Chemicals
- Fluorocarbons** (used for Teflon, Scotch Guard, GorTex).
- Chlorofluorocarbons** (used in air conditioning units)
- Underground mining
- Coal preparation
- Timber and wood products

7a. If you would like to add any information to the previous question, please do so in the space provided below:

8. What has been your main job over your lifetime? _____

PREVIOUS EMPLOYER 6

1. Previous employer or company name: _____

Kind of business: _____ City: _____ State: _____

2. Please enter the date you *started* working at this previous employer:

Started: _____ Month _____ Year

Please enter the date you *stopped* working at this previous employer:


Finished: _____ Month _____ Year

3. What kind of work did you do at this previous employer (for example, manufacturing, automotive, retail, mining, nursing, etc.)? _____

4. What were your most important activities on this job? _____


5. Were you exposed to chemicals or agents at this previous employer?

- Yes
- No
- Don't know/Not sure

 5a. If yes, please list the chemicals or agents you were exposed to at this previous employer:

6. What was the source of drinking water at this previous employer? (Check all that apply)

- Public
- Private (well, **cistern**)
- Bottled
- I don't know

 6a. If this past place of employment had public water, which of the following water districts provided the water for this employer?

- | | |
|--------------------------------------------------------|------------------------------------------------------------------------|
| <input type="radio"/> City of Belpre, OH | <input type="radio"/> Mason County |
| <input type="radio"/> Tupper Plains | <input type="radio"/> Village of Pomeroy |
| <input type="radio"/> Little Hocking Water Association | <input type="radio"/> Some other water district, please specify: _____ |
| <input type="radio"/> Lubeck Public Service District | <input type="radio"/> I don't know |

7. Thinking about your job with this previous employer, was this job in any of the following places or did it involve working with any of the listed materials? (*Check all that apply*)

- | | |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------|
| <input type="radio"/> Power Plant | <input type="radio"/> Solvents such as Metal Cleaners/Degreasers |
| <input type="radio"/> Refinery | <input type="radio"/> Typesetting or Printing |
| <input type="radio"/> Metal Refining | <input type="radio"/> Electronics Manufacturing or Assembly |
| <input type="radio"/> Explosives or Nitrate Manufacturing | <input type="radio"/> Gas Station |
| <input type="radio"/> Pharmaceuticals or Chemicals | <input type="radio"/> Manufacture of Chemicals |
| <input type="radio"/> Manufacture or Use of Dyes | <input type="radio"/> Fluorocarbons (used for Teflon, Scotch Guard, GorTex). |
| <input type="radio"/> Rubber or Plastic Industry | <input type="radio"/> Chlorofluorocarbons (used in air conditioning units) |
| <input type="radio"/> Dry Cleaning | <input type="radio"/> Underground mining |
| <input type="radio"/> Textile Manufacturing | <input type="radio"/> Coal preparation |
| <input type="radio"/> Photo or Graphic Arts | <input type="radio"/> Timber and wood products |

7a. If you would like to add any information to the previous question, please do so in the space provided below:

8. What has been your main job over your lifetime? _____

PREVIOUS EMPLOYER 7

1. Previous employer or company name: _____

Kind of business: _____ City: _____ State: _____

2. Please enter the date you *started* working at this previous employer:

Started: ____ Month ____ Year

Please enter the date you *stopped* working at this previous employer:


Finished: ____ Month ____ Year

3. What kind of work did you do at this previous employer (for example, manufacturing, automotive, retail, mining, nursing, etc.)? _____

4. What were your most important activities on this job? _____


5. Were you exposed to chemicals or agents at this previous employer?

- Yes
- No
- Don't know/Not sure

 5a. If yes, please list the chemicals or agents you were exposed to at this previous employer:

6. What was the source of drinking water at this previous employer? (Check all that apply)

- Public
- Private (well, **cistern**)
- Bottled
- I don't know

 6a. If this past place of employment had public water, which of the following water districts provided the water for this employer?

- | | |
|--------------------------------------------------------|------------------------------------------------------------------------|
| <input type="radio"/> City of Belpre, OH | <input type="radio"/> Mason County |
| <input type="radio"/> Tuppens Plains | <input type="radio"/> Village of Pomeroy |
| <input type="radio"/> Little Hocking Water Association | <input type="radio"/> Some other water district, please specify: _____ |
| <input type="radio"/> Lubeck Public Service District | <input type="radio"/> I don't know |

7. Thinking about your job with this previous employer, was this job in any of the following places or did it involve working with any of the listed materials? (*Check all that apply*)

- | | |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------|
| <input type="radio"/> Power Plant | <input type="radio"/> Solvents such as Metal Cleaners/Degreasers |
| <input type="radio"/> Refinery | <input type="radio"/> Typesetting or Printing |
| <input type="radio"/> Metal Refining | <input type="radio"/> Electronics Manufacturing or Assembly |
| <input type="radio"/> Explosives or Nitrate Manufacturing | <input type="radio"/> Gas Station |
| <input type="radio"/> Pharmaceuticals or Chemicals | <input type="radio"/> Manufacture of Chemicals |
| <input type="radio"/> Manufacture or Use of Dyes | <input type="radio"/> Fluorocarbons (used for Teflon, Scotch Guard, GorTex). |
| <input type="radio"/> Rubber or Plastic Industry | <input type="radio"/> Chlorofluorocarbons (used in air conditioning units) |
| <input type="radio"/> Dry Cleaning | <input type="radio"/> Underground mining |
| <input type="radio"/> Textile Manufacturing | <input type="radio"/> Coal preparation |
| <input type="radio"/> Photo or Graphic Arts | <input type="radio"/> Timber and wood products |

7a. If you would like to add any information to the previous question, please do so in the space provided below:

8. What has been your main job over your lifetime? _____

PREVIOUS EMPLOYER 8

1. Previous employer or company name: _____

Kind of business: _____ City: _____ State: _____

2. Please enter the date you *started* working at this previous employer:

Started: _____ Month _____ Year

Please enter the date you *stopped* working at this previous employer:

Finished: _____ Month _____ Year

3. What kind of work did you do at this previous employer (for example, manufacturing, automotive, retail, mining, nursing, etc.)? _____

4. What were your most important activities on this job? _____

5. Were you exposed to chemicals or agents at this previous employer?

Yes No Don't know/Not sure

5a. If yes, please list the chemicals or agents you were exposed to at this previous employer:

6. What was the source of drinking water at this previous employer? (*Check all that apply*)

Public
 Private (well, **cistern**)
 Bottled
 I don't know

6a. If this past place of employment had public water, which of the following water districts provided the water for this employer?

<input type="radio"/> City of Belpre, OH	<input type="radio"/> Mason County
<input type="radio"/> Tuppens Plains	<input type="radio"/> Village of Pomeroy
<input type="radio"/> Little Hocking Water Association	<input type="radio"/> Some other water district, please specify: _____
<input type="radio"/> Lubeck Public Service District	<input type="radio"/> I don't know

7. Thinking about your job with this previous employer, was this job in any of the following places or did it involve working with any of the listed materials? *(Check all that apply)*

- | | |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------|
| <input type="radio"/> Power Plant | <input type="radio"/> Solvents such as Metal Cleaners/Degreasers |
| <input type="radio"/> Refinery | <input type="radio"/> Typesetting or Printing |
| <input type="radio"/> Metal Refining | <input type="radio"/> Electronics Manufacturing or Assembly |
| <input type="radio"/> Explosives or Nitrate Manufacturing | <input type="radio"/> Gas Station |
| <input type="radio"/> Pharmaceuticals or Chemicals | <input type="radio"/> Manufacture of Chemicals |
| <input type="radio"/> Manufacture or Use of Dyes | <input type="radio"/> Fluorocarbons (used for Teflon, Scotch Guard, GorTex). |
| <input type="radio"/> Rubber or Plastic Industry | <input type="radio"/> Chlorofluorocarbons (used in air conditioning units) |
| <input type="radio"/> Dry Cleaning | <input type="radio"/> Underground mining |
| <input type="radio"/> Textile Manufacturing | <input type="radio"/> Coal preparation |
| <input type="radio"/> Photo or Graphic Arts | <input type="radio"/> Timber and wood products |

7a. If you would like to add any information to the previous question, please do so in the space provided below:

8. What has been your main job over your lifetime? _____

PREVIOUS EMPLOYER 9

1. Previous employer or company name: _____

Kind of business: _____ City: _____ State: _____

2. Please enter the date you *started* working at this previous employer:

Started: _____ Month _____ Year

Please enter the date you *stopped* working at this previous employer:


Finished: _____ Month _____ Year

3. What kind of work did you do at this previous employer (for example, manufacturing, automotive, retail, mining, nursing, etc.)? _____

4. What were your most important activities on this job? _____


5. Were you exposed to chemicals or agents at this previous employer?

- Yes
- No
- Don't know/Not sure

 5a. If yes, please list the chemicals or agents you were exposed to at this previous employer:

6. What was the source of drinking water at this previous employer? (Check all that apply)

- Public
- Private (well, **cistern**)
- Bottled
- I don't know

 6a. If this past place of employment had public water, which of the following water districts provided the water for this employer?

- | | |
|--------------------------------------------------------|------------------------------------------------------------------------|
| <input type="radio"/> City of Belpre, OH | <input type="radio"/> Mason County |
| <input type="radio"/> Tupper Plains | <input type="radio"/> Village of Pomeroy |
| <input type="radio"/> Little Hocking Water Association | <input type="radio"/> Some other water district, please specify: _____ |
| <input type="radio"/> Lubeck Public Service District | <input type="radio"/> I don't know |

7. Thinking about your job with this previous employer, was this job in any of the following places or did it involve working with any of the listed materials? *(Check all that apply)*

- Power Plant
- Refinery
- Metal Refining
- Explosives or Nitrate Manufacturing
- Pharmaceuticals or Chemicals
- Manufacture or Use of Dyes
- Rubber or Plastic Industry
- Dry Cleaning
- Textile Manufacturing
- Photo or Graphic Arts
- Solvents** such as Metal Cleaners/Degreasers
- Typesetting or Printing
- Electronics Manufacturing or Assembly
- Gas Station
- Manufacture of Chemicals
- Fluorocarbons** (used for Teflon, Scotch Guard, GorTex).
- Chlorofluorocarbons** (used in air conditioning units)
- Underground mining
- Coal preparation
- Timber and wood products

7a. If you would like to add any information to the previous question, please do so in the space provided below:

8. What has been your main job over your lifetime? _____

PREVIOUS EMPLOYER 10

1. Previous employer or company name: _____

Kind of business: _____ City: _____ State: _____

2. Please enter the date you *started* working at this previous employer:

Started: _____ Month _____ Year

Please enter the date you *stopped* working at this previous employer:


Finished: _____ Month _____ Year

3. What kind of work did you do at this previous employer (for example, manufacturing, automotive, retail, mining, nursing, etc.)? _____

4. What were your most important activities on this job? _____


5. Were you exposed to chemicals or agents at this previous employer?

- Yes
- No
- Don't know/Not sure

 5a. If yes, please list the chemicals or agents you were exposed to at this previous employer:

6. What was the source of drinking water at this previous employer? (Check all that apply)

- Public
- Private (well, **cistern**)
- Bottled
- I don't know

 6a. If this past place of employment had public water, which of the following water districts provided the water for this employer?

- | | |
|--------------------------------------------------------|------------------------------------------------------------------------|
| <input type="radio"/> City of Belpre, OH | <input type="radio"/> Mason County |
| <input type="radio"/> Tupper Plains | <input type="radio"/> Village of Pomeroy |
| <input type="radio"/> Little Hocking Water Association | <input type="radio"/> Some other water district, please specify: _____ |
| <input type="radio"/> Lubeck Public Service District | <input type="radio"/> I don't know |

7. Thinking about your job with this previous employer, was this job in any of the following places or did it involve working with any of the listed materials? *(Check all that apply)*

- | | |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------|
| <input type="radio"/> Power Plant | <input type="radio"/> Solvents such as Metal Cleaners/Degreasers |
| <input type="radio"/> Refinery | <input type="radio"/> Typesetting or Printing |
| <input type="radio"/> Metal Refining | <input type="radio"/> Electronics Manufacturing or Assembly |
| <input type="radio"/> Explosives or Nitrate Manufacturing | <input type="radio"/> Gas Station |
| <input type="radio"/> Pharmaceuticals or Chemicals | <input type="radio"/> Manufacture of Chemicals |
| <input type="radio"/> Manufacture or Use of Dyes | <input type="radio"/> Fluorocarbons (used for Teflon, Scotch Guard, GorTex). |
| <input type="radio"/> Rubber or Plastic Industry | <input type="radio"/> Chlorofluorocarbons (used in air conditioning units) |
| <input type="radio"/> Dry Cleaning | <input type="radio"/> Underground mining |
| <input type="radio"/> Textile Manufacturing | <input type="radio"/> Coal preparation |
| <input type="radio"/> Photo or Graphic Arts | <input type="radio"/> Timber and wood products |

7a. If you would like to add any information to the previous question, please do so in the space provided below:

8. What has been your main job over your lifetime? _____

ADDITIONAL PAGES FOR MULTIPLE BIRTH INFORMATION

Complete the following pages for each pregnancy that has resulted in a multiple birth.

PREGNANCY 1, Multiple Birth <i>Please fill out this chart to answer questions for each child given birth to as a result of this pregnancy.</i>			
How many live births resulted from this pregnancy?	_____ Enter Number		
Did you have a vaginal or Cesarean delivery?	<input type="radio"/> Vaginal <input type="radio"/> Cesarean		
Did the birth occur three or more weeks before the due date?	<input type="radio"/> Yes <input type="radio"/> No		
Did a doctor or nurse say you had pre-eclampsia during this pregnancy?	<input type="radio"/> Yes <input type="radio"/> No		
FOR EACH CHILD:	CHILD 1	CHILD 2	CHILD 3
What was the gender of this child?	<input type="radio"/> Male <input type="radio"/> Female	<input type="radio"/> Male <input type="radio"/> Female	<input type="radio"/> Male <input type="radio"/> Female
Please tell me whether the children from your first pregnancy weigh more or less than 5.5 pounds when born?	<input type="radio"/> More than 5.5 pounds <input type="radio"/> Less than 5.5 pounds	<input type="radio"/> More than 5.5 pounds <input type="radio"/> Less than 5.5 pounds	<input type="radio"/> More than 5.5 pounds <input type="radio"/> Less than 5.5 pounds
Please indicate whether each baby from this pregnancy had any major birth defects, something that required medical treatment?	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
<i>For each child born in this pregnancy with a birth defect, please note what that birth defect was. (Please check all that apply)</i>			
CHILD 1	CHILD 2	CHILD 3	
<input type="radio"/> Congenital heart defect <input type="radio"/> Down's Syndrome <input type="radio"/> Club foot or other foot <input type="radio"/> Marfan Syndrome <input type="radio"/> Sickle Cell Disease <input type="radio"/> Spina Bifida <input type="radio"/> Genital or urinary tract <input type="radio"/> Nose Defect <input type="radio"/> Eye Defect <input type="radio"/> Other Defect, please describe: _____ _____	<input type="radio"/> Congenital heart defect <input type="radio"/> Down's Syndrome <input type="radio"/> Club foot or other foot <input type="radio"/> Marfan Syndrome <input type="radio"/> Sickle Cell Disease <input type="radio"/> Spina Bifida <input type="radio"/> Genital or urinary tract <input type="radio"/> Nose Defect <input type="radio"/> Eye Defect <input type="radio"/> Other Defect, please describe: _____ _____	<input type="radio"/> Congenital heart defect <input type="radio"/> Down's Syndrome <input type="radio"/> Club foot or other foot <input type="radio"/> Marfan Syndrome <input type="radio"/> Sickle Cell Disease <input type="radio"/> Spina Bifida <input type="radio"/> Genital or urinary tract <input type="radio"/> Nose Defect <input type="radio"/> Eye Defect <input type="radio"/> Other Defect, please describe: _____ _____	

PREGNANCY 2, Multiple Birth <i>Please fill out this chart to answer questions for each child given birth to as a result of this pregnancy.</i>			
How many live births resulted from this pregnancy?	_____ Enter Number		
Did you have a vaginal or Cesarean delivery?	<input type="radio"/> Vaginal <input type="radio"/> Cesarean		
Did the birth occur three or more weeks before the due date?	<input type="radio"/> Yes <input type="radio"/> No		
Did a doctor or nurse say you had pre-eclampsia during this pregnancy?	<input type="radio"/> Yes <input type="radio"/> No		
FOR EACH CHILD:	CHILD 1	CHILD 2	CHILD 3
What was the gender of this child?	<input type="radio"/> Male <input type="radio"/> Female	<input type="radio"/> Male <input type="radio"/> Female	<input type="radio"/> Male <input type="radio"/> Female
Please tell me whether the children from your first pregnancy weigh more or less than 5.5 pounds when born?	<input type="radio"/> More than 5.5 pounds <input type="radio"/> Less than 5.5 pounds	<input type="radio"/> More than 5.5 pounds <input type="radio"/> Less than 5.5 pounds	<input type="radio"/> More than 5.5 pounds <input type="radio"/> Less than 5.5 pounds
Please indicate whether each baby from this pregnancy had any major birth defects, something that required medical treatment?	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
<i>For each child born in this pregnancy with a birth defect, please note what that birth defect was. (Please check all that apply)</i>			
CHILD 1	CHILD 2	CHILD 3	
<input type="radio"/> Congenital heart defect <input type="radio"/> Down's Syndrome <input type="radio"/> Club foot or other foot <input type="radio"/> Marfan Syndrome <input type="radio"/> Sickle Cell Disease <input type="radio"/> Spina Bifida <input type="radio"/> Genital or urinary tract <input type="radio"/> Nose Defect <input type="radio"/> Eye Defect <input type="radio"/> Other Defect, please describe: _____ _____ _____	<input type="radio"/> Congenital heart defect <input type="radio"/> Down's Syndrome <input type="radio"/> Club foot or other foot <input type="radio"/> Marfan Syndrome <input type="radio"/> Sickle Cell Disease <input type="radio"/> Spina Bifida <input type="radio"/> Genital or urinary tract <input type="radio"/> Nose Defect <input type="radio"/> Eye Defect <input type="radio"/> Other Defect, please describe: _____ _____ _____	<input type="radio"/> Congenital heart defect <input type="radio"/> Down's Syndrome <input type="radio"/> Club foot or other foot <input type="radio"/> Marfan Syndrome <input type="radio"/> Sickle Cell Disease <input type="radio"/> Spina Bifida <input type="radio"/> Genital or urinary tract <input type="radio"/> Nose Defect <input type="radio"/> Eye Defect <input type="radio"/> Other Defect, please describe: _____ _____ _____	

PREGNANCY 3, Multiple Birth
Please fill out this chart to answer questions for each child given birth to as a result of this pregnancy.

How many live births resulted from this pregnancy?	_____ Enter Number		
Did you have a vaginal or Cesarean delivery?	<input type="radio"/> Vaginal <input type="radio"/> Cesarean		
Did the birth occur three or more weeks before the due date?	<input type="radio"/> Yes <input type="radio"/> No		
Did a doctor or nurse say you had pre-eclampsia during this pregnancy?	<input type="radio"/> Yes <input type="radio"/> No		
FOR EACH CHILD:	CHILD 1	CHILD 2	CHILD 3
What was the gender of this child?	<input type="radio"/> Male <input type="radio"/> Female	<input type="radio"/> Male <input type="radio"/> Female	<input type="radio"/> Male <input type="radio"/> Female
Please tell me whether the children from your first pregnancy weigh more or less than 5.5 pounds when born?	<input type="radio"/> More than 5.5 pounds <input type="radio"/> Less than 5.5 pounds	<input type="radio"/> More than 5.5 pounds <input type="radio"/> Less than 5.5 pounds	<input type="radio"/> More than 5.5 pounds <input type="radio"/> Less than 5.5 pounds
Please indicate whether each baby from this pregnancy had any major birth defects, something that required medical treatment?	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No

For each child born in this pregnancy with a birth defect, please note what that birth defect was. (Please check all that apply)

CHILD 1	CHILD 2	CHILD 3
<input type="radio"/> Congenital heart defect <input type="radio"/> Down's Syndrome <input type="radio"/> Club foot or other foot <input type="radio"/> Marfan Syndrome <input type="radio"/> Sickle Cell Disease <input type="radio"/> Spina Bifida <input type="radio"/> Genital or urinary tract <input type="radio"/> Nose Defect <input type="radio"/> Eye Defect <input type="radio"/> Other Defect, please describe: _____ _____ _____	<input type="radio"/> Congenital heart defect <input type="radio"/> Down's Syndrome <input type="radio"/> Club foot or other foot <input type="radio"/> Marfan Syndrome <input type="radio"/> Sickle Cell Disease <input type="radio"/> Spina Bifida <input type="radio"/> Genital or urinary tract <input type="radio"/> Nose Defect <input type="radio"/> Eye Defect <input type="radio"/> Other Defect, please describe: _____ _____ _____	<input type="radio"/> Congenital heart defect <input type="radio"/> Down's Syndrome <input type="radio"/> Club foot or other foot <input type="radio"/> Marfan Syndrome <input type="radio"/> Sickle Cell Disease <input type="radio"/> Spina Bifida <input type="radio"/> Genital or urinary tract <input type="radio"/> Nose Defect <input type="radio"/> Eye Defect <input type="radio"/> Other Defect, please describe: _____ _____ _____

C-8 Health Survey Glossary of Terms

Acquired disability: one that an individual was not born with or that is not of genetic/hereditary origin. An acquired disability occurs through an accident, exposure to toxins, or some other misfortune.

Addison's disease: an endocrine or hormonal disorder that occurs when the adrenal glands do not produce enough of the hormone cortisol and, in some cases, the hormone aldosterone. The disease is also called adrenal insufficiency, or hypocortisolism. The disease is characterized by weight loss, muscle weakness, fatigue, low blood pressure, and sometimes darkening of the skin in both exposed and nonexposed parts of the body.

Albumin: the protein of the highest concentration in plasma. Albumin transports many small molecules in the blood (for example, bilirubin, calcium, progesterone, and drugs).

Alzheimer's Disease: illness associated with memory loss.

Anemia: refers to very low iron levels.

Aneurysm: a bulge in a blood vessel, similar to the bulge on an over-inflated inner tube or thin balloon. Aneurysms are dangerous since they could burst. A brain aneurysm, also called a cerebral or intracranial aneurysm, is a weak bulge in the blood vessel in the brain. Aneurysms can occur in any blood vessel in the body, not just the brain. They tend to form where the artery divides or branches off. The aorta, the main artery leading away from the heart, can sometimes develop an aneurysm. Aortic aneurysms usually occur in the abdomen below the kidneys (abdominal aneurysm), but may occur in the chest cavity (thoracic--tho-RAS'ik--aneurysm). Aneurysms may also be due to an inherited disease such as Marfan syndrome.

Arteriosclerosis: a disease of the blood vessels characterized by narrowing and hardening of the arteries that supply the legs and feet. This causes a decrease in blood flow that can injure nerves and other tissues.

C-8: another name for the chemical, ammonium perfluorooctanoate, which is used to manufacture Teflon.

C-8 level: typically provided in parts per billion.

Cerebrovascular Accident (CVA): another name for a stroke. It occurs when the blood supply to part of the brain is suddenly interrupted.

Chlorofluorocarbons: a type of fluorocarbon. *See also, fluorocarbons.*

Chronic bronchitis: an inflammation, or irritation, of the bronchial tubes or airways in your lungs that air passes through. The irritation causes thick mucus to build up in the tubes making it hard for air to get through. Symptoms of chronic bronchitis include a cough that produces mucus, trouble breathing and a feeling of tightness in your chest. Chronic bronchitis is typically caused by smoking, but people who have been exposed for a long time to other things that irritate their lungs, such as chemical fumes, dust and other substances, can also get chronic bronchitis.

Chronic obstructive pulmonary disease (COPD): a group of lung diseases involving limited airflow and varying degrees of air sac enlargement, airway inflammation, and lung tissue destruction. Emphysema and chronic bronchitis are the most common forms of COPD. The most common cause of these diseases is smoking. Working in a polluted environment can also put one at risk.

Cistern: a tank or storage (usually underground) used for storing rain water or hauled water. Cisterns are usually used as a supplement to other water sources and are useful when the regular source of water becomes low during dry periods.

Congenital heart defect: Congenital means present at birth.

Coronary artery disease (CAD): occurs when the coronary arteries (the arteries that supply blood to the heart muscle) become hardened and narrowed. The hardening is due to the buildup of plaque on the inner walls or lining of the arteries (atherosclerosis). The plaque narrows the coronary arteries, reducing blood flow to the heart.

This decreases the oxygen supply to the heart muscle. This is the most common type of heart disease and a leading cause of death.

Cushing's syndrome: a hormonal disorder caused by prolonged exposure of the body's tissues to high levels of the hormone cortisol. Sometimes called "hypercortisolism," it is relatively rare and most commonly affects adults aged 20 to 50. An estimated 10 to 15 of every million people are affected each year. Symptoms include upper body obesity, rounded face, increased fat around the neck, and thinning arms and legs. Children tend to be obese with slowed growth rates. Other symptoms are fragile and thin skin that bruises easily and heals poorly, purplish pink stretch marks on the abdomen, thighs, buttocks, arms and breasts, weakened bones, severe fatigue, weak muscles, high blood pressure and high blood sugar, irritability, anxiety and depression. Women usually have excess hair growth on their faces, necks, chests, abdomens, and thighs. Their menstrual periods may become irregular or stop. Men have decreased fertility with diminished or absent desire for sex. Cushing's syndrome occurs when the body's tissues are exposed to excessive levels of cortisol for long periods of time. Many people suffer the symptoms of Cushing's syndrome because they take glucocorticoid hormones such as prednisone for asthma, rheumatoid arthritis, lupus and other inflammatory diseases, or for immunosuppression after transplantation.

Dilation and curettage (D&C): a surgical procedure used to locate and treat the cause of sudden, heavy bleeding. It is done by passing a small instrument called a curette through the vagina into the uterus and scraping the lining of the uterus (endometrium).

Dilation and evacuation (D&E): a surgical procedure done in the second 12 weeks (second trimester) of pregnancy. It usually includes a combination of vacuum aspiration, dilation and curettage (D&C), and the use of surgical instruments (such as forceps).

Emphysema: most commonly caused by cigarette smoking. It is a condition in which the walls between the air sacs within the lung lose their ability to stretch and recoil. This causes the air sacs to weaken and break. Because the lung tissue loses its elasticity, air becomes trapped in the air sacs and does not allow the exchange of oxygen and carbon dioxide. Also, the support of the airways is lost, allowing for airflow obstruction. Symptoms include shortness of breath, cough and a limited exercise tolerance. Emphysema and chronic bronchitis frequently co-exist together to comprise chronic obstructive pulmonary disease (COPD). COPD does not include other obstructive lung diseases such as asthma.

Endometriosis: a condition where tissue similar to the lining of the uterus (the endometrial stroma and glands, which should only be located inside the uterus) is found elsewhere in the body. The most common symptom is pelvic pain

Epstein Barr (Mononucleosis): a common human virus that affects 95% of the population. Being infected with Epstein Barr can lead to Mononucleosis. Symptoms of infectious mononucleosis are fever, sore throat, and swollen lymph glands. Sometimes, a swollen spleen or liver may develop.

Fluorocarbons: gases that rarely occur naturally but are manufactured for refrigeration and other uses. The three main kinds are CFCs (chlorofluorocarbons), HCFCs (hydrochlorofluorocarbons), and HFCs (hydrofluorocarbons).

FMS (fibromyalgia syndrome): a widespread musculoskeletal pain and fatigue disorder for which the cause is still unknown. Sufferers are mainly women and experience pain in the muscles, ligaments, and tendons (soft tissues). Sufferers ache all over and symptoms, and many feel as if they have a bad case of the flu.

Intermittently: refers to using something (such as tobacco products) on and off as opposed to consistently.

Laid off: refers to somebody who has been asked to leave/forced to resign from their job.

Lupus/SLE: a type of autoimmune disease. The most common type is SLE or Systemic lupus erythematosus. It causes problems with circulation, motor control and extreme fatigue.

Molar Pregnancy: In a molar pregnancy, the early placenta develops into a mass of cysts that resemble a bunch of white grapes. The embryo either does not form at all or is malformed and cannot survive. There are two types of molar pregnancy, complete and partial. With a complete mole, there is no embryo and no normal placental tissue. With a partial mole, there may be some normal placenta and the embryo, which is abnormal, begins to develop.

Multiple Sclerosis: a type of autoimmune disease that affects the central nervous system. It is a chronic and unpredictable neurological disease. Symptoms vary but may include loss of muscle coordination, slurred speech, pins and needles, difficulty walking and loss of bladder and bowel control.

Myocardial Infarction: technical term for a heart attack which occurs when an area of heart muscle dies or is permanently damaged because of an inadequate supply of oxygen to that area.

Oral clefts: Most commonly a cleft lip or cleft pallet. They result when tissues of the developing mouth fail to meet and fuse.

Osteoarthritis: also known as degenerative arthritis.

Overseas: refers to locations outside the US, such as countries in Asia, Europe, or in the Middle East.

Pre-eclampsia: a disorder that occurs only during pregnancy and immediately afterwards (postpartum) and affects both the mother and the unborn baby. It is a rapidly progressive condition characterized by high blood pressure and the presence of protein in the urine. Swelling, sudden weight gain, headaches and changes in vision are major symptoms.

Role: the primary job you perform or you performed (for example, while serving in the military).

Scleroderma: also known as systemic sclerosis.

Solvents: used to dissolve other similar substances. For instance, water is a solvent that dissolves many things, but it can't dissolve oily/greasy substances since it very different from them. Combinations of solvents often are used to make products, such as spray paints that dry quickly and don't clog the spray nozzle, inks that don't smudge; outdoor paints that look good and last a long time; and strong cleaners that are good for tough jobs.

Spina bifida (SB): a neural tube defect (a disorder involving incomplete development of the brain, spinal cord, and/or their protective coverings) caused by the failure of the fetus's spine to close properly during the first month of pregnancy. Infants born with SB sometimes have an open lesion on their spine where significant damage to the nerves and spinal cord has occurred. Although the spinal opening can be surgically repaired shortly after birth, the nerve damage is permanent, resulting in varying degrees of paralysis of the lower limbs.

Uterine fibroids: benign tumors of muscle and connective tissue that develop within, or are attached to, the uterine wall.

C-8 Community Follow-up Study Computer Assisted Telephone Interview (CATI) Baseline Questionnaire (Final)

***NOTE:** This is the final version of the baseline questionnaire as of 5/20/08. There may be minor formatting or wording changes after QA/QC tests and web survey design. This version will be submitted to IRB for modification approval.

*Web Survey Design Note: Allow R to make comments for each question.

PART II INTERVIEWING STUDY SUBJECT

Section A. <u>Physical Activity</u>	
I'd like to begin by asking you some questions about any major change in your level of physical activity in the last 10 years.	
<p>A1. Overall, has your level of physical activity increased, decreased, or stayed the same in the last 10 years?</p> <p>PROMPT: Think about all your physical activities in the past 10 years. Has there been any major change? There might be some ups and downs. But, overall, has your level of physical activity increased, decreased, or stayed about the same?</p>	<p>INCREASED 1 DECREASED 2 ABOUT THE SAMESKIP TO A3 3 REFUSEDSKIP TO A3 7 DON'T KNOWSKIP TO A3 8</p>
<p>A2. Would you please tell me why your level of physical activity has <increased/decreased> in the last 10 years?</p>	<p>REASONS: _____</p>
<p>A3. Not including exercise , what is your current usual walking pace when you do your daily activities? Would you say....</p>	<p>Slowly 1 Briskly - Always in a hurry, or 2 Normally – between slow and brisk 3 UNABLE TO WALK 4 REFUSED 97 DON'T KNOW 98</p>

<p>Section B. Caffeine Consumption</p> <p>The next few questions are about your caffeine consumption.</p>	
<p>B1. I am going to read you a list of beverages. Please tell me, if you consumed any of the following in the past year...</p> <p>CHECK ALL THAT APPLY</p> <p>FOR EACH ITEM CHOSEN, ASK B1A</p>	<p>Caffeinated coffee, 1 Caffeinated soft drinks, or 2 caffeinated tea, 3 NONE OF THE ABOVESKIP TO NXT SCT 4 REFUSEDSKIP TO NXT SCT 97 DON'T KNOWSKIP TO NXT SCT 98</p>
<p>B1A. On average, during the past year, how many <i>cups/cans</i> of <item chosen in B1> did you usually drink?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL THE CAFFEINATED PRODCUTS IDENTIFIED IN B1</p> <p>*NOTE: THIS WILL BE A TABLE IN WEB SURVEY.</p>	<p>_____ CUPS/CANS PER</p> <p><input type="checkbox"/> DAY <input type="checkbox"/> WEEK <input type="checkbox"/> MONTH <input type="checkbox"/> YEAR</p> <p>DON'T DRINK 95 REFUSED 97 DON'T KNOW 98</p>
<p>Section C. Occupational History</p> <p>Now I am going to ask you some questions about your jobs.</p>	
<p>C1. Are you currently working for pay?</p>	<p>YESGO TO C3 1 NO 2 REFUSED 7 DON'T KNOW 8</p>
<p>C2. Which of the following best describes your current situation?</p> <p>INTERVIEWER: READ THE CATEGORIES (CHECK ONE)</p>	<p>Retired 1 Unemployed 2 Disabled 3 Student 4 Homemaker 5 OTHER (SPECIFY) 6 REFUSED 97 DON'T KNOW 98</p> <p>SPECIFY OTHER: _____</p>

<p>C3. What occupation or job have you worked at for the longest time over your lifetime? For example, manager, engineer, nurse, construction worker, painter, cashier...</p> <p>PROMPT: What kind of work did/do you do?</p>	<p>RECORD OCCUPATION: _____</p> <p>NEVER WORKED FOR PAY .SKIP TO NXT SCT ...95 REFUSED97 DON'T KNOW98</p> <p>* NOTE: When designing the web survey, we need to be careful about how R may respond to the presentation and wording of the questions. Kyle had some concerns about some homemakers who have never worked for pay may have negative reaction to the term "NEVER WORKED".</p>
<p>C4. What kind of industry or business <i>was/is</i> this? For example, manufacturing company, retail shoe store...</p> <p>PROMPT: What did/does the company or your employer do?</p> <p>INTERVIEWER: DO NOT RECORD A COMPANY NAME</p>	<p>SPECIFY: _____</p> <p>REFUSED7 DON'T KNOW8</p>
<p>C5. What kind of work <i>were/are</i> you responsible for doing at your longest held job? For example, farming work, office clerical work, computer programming...</p> <p>PROMPT: We are interested in a bit more detail about the work that you [did/do] for your job.</p>	<p>SPECIFY: _____</p> <p>REFUSED7 DON'T KNOW8</p>
<p>C6. Are you currently working in this job?</p> <p>ONLY DISPLAY IF C1=YES</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p>

<p>C7. How many years <i>did/have</i> you work/worked at this job?</p>	<p>_____ YEARS [ALLOW 2 DECIMAL POINTS]</p> <p>REFUSED7 DON'T KNOW8</p>
<p>C8. Have you ever worked, or do you currently work, at DuPont's Washington Works facility?</p>	<p>YES1 NOSKIP TO NXT SCT2 REFUSEDSKIP TO NXT SCT7 DON'T KNOWSKIP TO NXT SCT8</p>
<p>C9. How many years have you worked (or did you work) at DuPont's Washington Works facility?</p>	<p>_____ YEARS [ALLOW 2 DECIMAL POINTS]</p> <p>REFUSED7 DON'T KNOW8</p>
<p>C10. Have you ever worked, or do you currently work, in the Teflon Division at DuPont's Washington Works facility?</p>	<p>YES1 NOSKIP TO C122 REFUSEDSKIP TO C127 DON'T KNOWSKIP TO C128</p>
<p>C11. How many years did you (have you) work(ed) in the Teflon Division at DuPont's Washington Works facility?</p>	<p>_____ YEARS [ALLOW 2 DECIMAL POINTS]</p> <p>REFUSED7 DON'T KNOW8</p>
<p>C12. Have you been mainly (longest time) a salaried or hourly employee at DuPont?</p>	<p>SALARIED1 HOURLY2 REFUSED7 DON'T KNOW8</p>

<p>C13. What has been your main job at DuPont's Washington Works facility?</p> <p>PROMPT: What kind of work <i>were/are</i> you doing? What were your responsibilities? For example, Plant Operator, Chemist, Engineer, Clerk, Utility Maintenance, Lab Technician ...</p> <p>INTERVIEWER: IF R'S ANSWER IS "SUPERVISOR OR MANAGER", ASK "in what area, what division?"</p>	<p>SPECIFY: _____</p> <p>REFUSED7</p> <p>DON'T KNOW8</p>
<p>Section D. Smoking History</p> <p>Next I'd like to ask you some questions about your smoking history. It's important that I obtain a complete smoking history which includes cigarettes, cigars, pipes, chewing tobacco, and snuff.</p>	
<p>D1. Have you ever smoked a total of 100 or more cigarettes over your life time?</p>	<p>YES1</p> <p>NOSKIP TO D82</p> <p>REFUSEDSKIP TO D87</p> <p>DON'T KNOWSKIP TO D88</p>
<p>D2. Do you smoke cigarettes now?</p>	<p>YES1</p> <p>NOSKIP TO D52</p> <p>REFUSEDSKIP TO D57</p> <p>DON'T KNOWSKIP TO D58</p>
<p>D3. On average, over all the years you have smoked, how many cigarettes a day did you smoke?</p>	<p>_____ CIGARETTES/DAY</p> <p>REFUSED7</p> <p>DON'T KNOW8</p>
<p>D4. How many years have you smoked, excluding any times you may have quit?</p> <p>SKIP TO D8</p>	<p>_____ YEARS [ALLOW 2 DECIMAL POINTS]</p> <p>REFUSED7</p> <p>DON'T KNOW8</p> <p>SKIP TO D8</p>

<p>D5. How old were you the last time you quit smoking cigarettes?</p>	<p>_____ YEARS OLD</p> <p>REFUSED7 DON'T KNOW8</p>
<p>D6. On average, when you were smoking, about how many cigarettes a day did you smoke?</p>	<p>_____ CIGARETTES</p> <p>REFUSED7 DON'T KNOW8</p>
<p>D7. How many years did you smoke, excluding any times you may have quit?</p>	<p>_____ YEARS [ALLOW 2 DECIMAL POINTS]</p> <p>REFUSED7 DON'T KNOW8</p>
<p>D8. Have you ever used any of the following tobacco products regularly, snuff, chewing tobacco, pipe, or cigar?</p> <p>INTERVIEWER: CHECK ALL THAT APPLY</p> <p>PROMPT: By regularly we mean at least once a day for 6 months or more.</p>	<p>YES, SNUFF1 YES, CHEWING TOBACCO1 YES, PIPE1 YES, CIGAR1 DO NOT USE ANYSKIP TO D102 REFUSEDSKIP TO D107 DON'T KNOWSKIP TO D108</p>
<p>D9. IF YES TO D8, How many years have you used [OTHER TOBACCO PRODUCT IN D8] regularly?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL THE TOBACCO PRODCUTS IDENTIFIED IN D8</p>	<p>_____ YEARS [ALLOW 2 DECIMAL POINTS]</p> <p>REFUSED7 DON'T KNOW8</p>

<p>D9A. Do you currently use [OTHER TOBACCO PRODUCT IN D8] regularly?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL THE TOBACCO PRODCUTS IDENTIFIED IN D8</p> <p>*NOTE: FOR WEB DESIGN, THIS (D8, D9, D9A) WILL BE A TABLE.</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p>
<p>D10. Have you ever lived for more than 1 year with someone who smoked on a daily basis inside the house?</p>	<p>YES1 NOSKIP TO NXT SCT2 REFUSEDSKIP TO NXT SCT7 DON'T KNOWSKIP TO NXT SCT8</p>
<p>D11. For how many years?</p> <p>INTERVIEWER: READ OPTIONS AS NEEDED</p>	<p>1-3 Years1 4-6 Years.....2 7-9 Years3 10-12 Years4 13-15 Years5 16 or more years6 REFUSED7 DON'T KNOW8</p>
<p>D12. How many people, <not including yourself>, usually smoked inside the house?</p> <p>INTERVIEWER: READ THE CATEGORIES</p> <p>CATI INSTRUCTIONS: IF D1 = YES, INSERT THE WORDING <not including yourself> IN D12.</p>	<p>One Person,.....1 Two Persons or ,2 More than two Persons? ..3 REFUSED7 DON'T KNOW8</p>
<p>Section E. <u>Alcohol History</u></p> <p>Next I'd like to ask you some questions about the alcoholic beverages that you may have drunk. Please include beverages like beer, wine, or liquor including gin, whiskey, rum or mixed drinks.</p>	
<p>E1. Have you ever consumed alcoholic beverages regularly? By regularly we mean four or more times per month.</p>	<p>YES1 NOSKIP TO NXT SCT2 REFUSEDSKIP TO NXT SCT7 DON'T KNOWSKIP TO NXT SCT8</p>

<p>E2. At what age did you start drinking alcoholic beverages regularly?</p> <p>PROMPT: By regularly we mean four or more times per month.</p>	<p>_____ YEARS OLD</p> <p>REFUSED7 DON'T KNOW8</p>
<p>E3. Do you drink alcoholic beverages now?</p>	<p>YES1 NOSKIP TO E72 REFUSEDSKIP TO E77 DON'T KNOWSKIP TO E78</p>
<p>E4. On average, how often do you drink alcoholic beverages?</p> <p>INTERVIEWER: READ CATEGORIES AS NEEDED</p>	<p>Almost every day.....1 2 to 4 times a week.....2 1 time a week3 1 to 3 times a month4 Less than once a month5 REFUSED7 DON'T KNOW8</p>
<p>E5. When you drink, about how many drinks do you usually have? One drink is 1 can of beer, 1 glass of wine, 1 can or bottle of wine cooler, or a beverage containing 1 shot of liquor.</p>	<p>_____ DRINKS [ALLOW 2 DECIMAL POINTS]</p> <p>REFUSED7 DON'T KNOW8</p>
<p>E6. Is there a time in the past that you drank significantly more than you usually drink now?</p> <p>SKIP TO NEXT SECTION</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p> <p>SKIP TO NEXT SECTION</p>

<p>E7. How old were you when you stopped drinking alcoholic beverages?</p>	<p>_____ YEARS OLD</p> <p>REFUSED7 DON'T KNOW8</p>
<p>E8. On average, how often did you drink alcoholic beverages?</p> <p>INTERVIEWER: READ CATEGORIES AS NEEDED</p>	<p>Almost every day.....1 2 to 4 times a week.....2 1 time a week3 1 to 3 times a month4 Less than once a month ...5 REFUSED7 DON'T KNOW8</p>
<p>E9. When you drank, about how many drinks did you usually have? One drink is 1 can of beer, 1 glass of wine, 1 can or bottle of wine cooler, or a beverage containing 1 shot of liquor.</p>	<p>_____ DRINKS [ALLOW 2 DECIMAL POINTS]</p> <p>REFUSED7 DON'T KNOW8</p>
<p>Section F. <u>Medical History</u></p> <p>Now I'm going to ask you some questions about you and your medical history.</p>	
<p>F1. How tall are you, to the nearest inch, without shoes?</p> <p>PROMPT: IF R SAID DON'T KNOW, Just give me your best guess.</p>	<p>_____ FEET _____ INCHES</p> <p>REFUSED7 DON'T KNOW8</p>
<p>F2. How much do you weigh now, to the nearest pound, without shoes?</p> <p>PROMPT: IF R SAID DON'T KNOW, Just give me your best guess.</p>	<p>_____ POUNDS</p> <p>REFUSED7 DON'T KNOW8</p>

<p>F3. What was the most you ever weighed?</p> <p>PROMPT: IF R SAID DON'T KNOW, Please just give me your best guess.</p>	<p>_____ POUNDS</p> <p>REFUSED7 DON'T KNOW8</p>
<p>F4. How much did you weigh at age 40?</p> <p>PROMPT: IF R SAID DON'T KNOW, Please just give me your best guess.</p> <p>CATI INSTRUCTIONS: CHECK SUBJECT'S AGE. ONLY PROMPT THE QUESTION IF R'S AGE > 45.</p>	<p>_____ POUNDS</p> <p>REFUSED7 DON'T KNOW8</p>
<p>F5. MALE: Have you ever been told by a doctor or other health professional that you had high blood pressure (also called hypertension)?</p> <p>FEMALE: Other than during pregnancy, have you ever been told by a doctor or other health professional that you had high blood pressure (also called hypertension)?</p> <p>CATI INSTRUCTIONS: CHECK SUBJECT'S SEX AND PROMPT SCRIPTS FOR MALE OR FEMALE</p>	<p>YES1 NOSKIP TO F62 REFUSEDSKIP TO F67 DON'T KNOWSKIP TO F68</p>
<p>F5A. How old were you when you were first told this?</p>	<p>_____ YEARS OLD</p> <p>REFUSED7 DON'T KNOW8</p>
<p>F5B. Are you currently taking any prescription medication for blood pressure?</p> <p>CATI INSTRUCTIONS: IF YES, FLAG FOR MEDICAL RECORDS REQUEST.</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p>

<p>F6. Have you ever been told by a doctor or other health professional that you had high cholesterol?</p> <p>PROMPT: IF R STATES NOT SURE BUT THEIR DOCTOR HAS TOLD THEM TO LOWER THEIR CHOLESTEROL, CODE YES.</p>	<p>YES1 NOSKIP TO F72 REFUSEDSKIP TO F77 DON'T KNOWSKIP TO F78</p>
<p>F6A. How old were you when you were first told this?</p>	<p>_____ YEARS OLD</p> <p>REFUSED7 DON'T KNOW8</p>
<p>F6B. Are you currently taking any prescription medication for high cholesterol?</p> <p>CATI INSTRUCTIONS: IF YES, FLAG FOR MEDICAL RECORDS REQUEST.</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p>
<p>F7. Have you ever been told by a doctor or other health professional that you had any kind of heart condition or heart disease?</p> <p>CATI INSTRUCTIONS: IF YES, FLAG FOR MEDICAL RECORDS REQUEST.</p>	<p>YES1 NOSKIP TO F82 REFUSEDSKIP TO F87 DON'T KNOWSKIP TO F88</p>
<p>F7A. Was this...</p> <p>INTERVIEWER: READ CATEGORIES CHECK ALL THAT APPLY</p>	<p>Angina1 Arrhythmia.....2 Valve Disease3 Heart Attack.....4 Or something else? (SPECIFY)5 REFUSEDSKIP TO F87 DON'T KNOWSKIP TO F88</p> <p>SPECIFY OTHER: _____</p>

<p>F7B. How old were you when you were first treated for [CONDITION IDENTIFIED IN F7A]?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL CONDITIONS IDENTIFIED IN F7A.</p>	<p>_____ YEARS OLD</p> <p>REFUSED7 DON'T KNOW8</p>
<p>F7C. Were you ever hospitalized for treatment of [CONDITION IDENTIFIED IN F7A]?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL CONDITIONS IDENTIFIED IN F7A.</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p>
<p>F7D. Are you currently being treated for [CONDITION IDENTIFIED IN F7A]?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL CONDITIONS IDENTIFIED IN F7A.</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p>
<p>F8. Have you ever been told by a doctor or other health professional that you had a stroke (also called cerebrovascular accident) or ministrokes (also called Transient Ischemic Attack or TIA)?</p> <p>CATI INSTRUCTIONS: IF YES, FLAG FOR MEDICAL RECORDS REQUEST.</p>	<p>YES1 NOSKIP TO F92 REFUSEDSKIP TO F97 DON'T KNOWSKIP TO F98</p>
<p>F8A. How old were you when you were first treated for stroke?</p>	<p>_____ YEARS OLD</p> <p>REFUSED7 DON'T KNOW8</p>

<p>F8B. Were you ever hospitalized for treatment of your stroke?</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p>
<p>F8C. Are you currently taking any prescription medication as a result of your stroke?</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p>
<p>F9. MALE: Have you ever been told by a doctor or health professional that you have diabetes or sugar diabetes?</p> <p>FEMALE: Other than during pregnancy, have you ever been told by a doctor or health professional that you have diabetes or sugar diabetes?</p> <p>CATI INSTRUCTIONS: CHECK SUBJECT'S SEX AND PROMPT SCRIPTS FOR MALE OR FEMALE</p> <p>CATI INSTRUCTIONS: IF YES, FLAG FOR MEDICAL RECORDS REQUEST.</p>	<p>YES1 NOSKIP TO F10.....2 REFUSEDSKIP TO F10.....7 DON'T KNOWSKIP TO F10.....8</p>
<p>F9A. Was this Type I diabetes, also called juvenile onset diabetes, or Type II, also called adult onset diabetes?</p>	<p>TYPE I (JUVENILE ONSET)1 TYPE II (ADULT ONSET)2 REFUSED7 DON'T KNOW8</p>
<p>F9B. How old were you when a doctor first told you that you had diabetes?</p>	<p>_____ YEARS OLD</p> <p>REFUSED7 DON'T KNOW8</p>

<p>F9C. Are you currently taking any prescription medication for diabetes?</p> <p>PROMPT: Are you taking Insulin injections, Oral hypoglycemic medication (usually pills) or something else?</p> <p>INTERVIEWER: CHECK ALL THAT APPLY</p> <p>*NOTE: KYLE DOES NOT WANT TO COLLECT SPECIFIC DRUG NAMES – JUST THE TYPE OF MEDICATIONS.</p>	<p>YES-Insulin injections1 YES- Oral hypoglycemic medication.....2 OTHER (SPECIFY)3 NO4 REFUSED7 DON'T KNOW8</p> <p>SPECIFY OTHER: _____</p>
<p>F10. Have you ever been told by a doctor or other health professional that you had emphysema, chronic bronchitis, or chronic obstructive pulmonary disease (COPD)?</p> <p>CATI INSTRUCTIONS: IF YES, FLAG FOR MEDICAL RECORDS REQUEST.</p>	<p>YES1 NOSKIP TO F11.....2 REFUSEDSKIP TO F11.....7 DON'T KNOWSKIP TO F11.....8</p>
<p>F10A. How old were you when you were first told this?</p>	<p>_____ YEARS OLD</p> <p>REFUSED7 DON'T KNOW8</p>
<p>F10B. Are you currently taking any prescription medication for this condition?</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p>
<p>F11. Have you ever been told by a doctor or other health professional that you had asthma?</p>	<p>YES1 NOSKIP TO F12.....2 REFUSEDSKIP TO F12.....7 DON'T KNOWSKIP TO F12.....8</p>

<p>F11A. How old were you when you were first told this?</p>	<p>_____ YEARS OLD</p> <p>REFUSED7 DON'T KNOW8</p>
<p>F11B. Do you still have asthma?</p>	<p>YESSKIP TO F11D.....1 NO2 REFUSEDSKIP TO F11D.....7 DON'T KNOWSKIP TO F11D.....8</p>
<p>F11C. How old were you when you no longer had asthma?</p>	<p>_____ YEARS OLD</p> <p>REFUSED7 DON'T KNOW8</p> <p>SKIP TO F12</p>
<p>F11D. Are you currently taking any prescription medication for asthma?</p> <p>CATI INSTRUCTIONS: IF YES, FLAG FOR MEDICAL RECORDS REQUEST.</p>	<p>YES1 NOSKIP TO F12.....2 REFUSEDSKIP TO F12.....7 DON'T KNOWSKIP TO F12.....8</p>

<p>F11E. Are you taking oral steroids such as, Prednisone, Decdron or Medrol, inhaled steroids, inhaled bronchodilators or something else?</p> <p>CHECK ALL THAT APPLY</p> <p>PROMPT: IF R IS NOT SURE ABOUT INHALED STEROIDS OR INHALED BRONCHODILATORS, READ THE FOLLOWING EXAMPLES: (BRAND NAMES IN PARENTHESES)</p> <p>Inhaled bronchodilators such as...</p> <ul style="list-style-type: none"> • Accu-Hale • Maxair (pirbuterol) • Primatene (epinephrine) • Proventil (salbutamol = albuterol) • Serevent (salmeterol) • Ventolin (salbutamol = albuterol) • Xopenex (levalbuterol) <p>Inhaled steroids such as...</p> <ul style="list-style-type: none"> • Budesonide (Pulmicort®) • Fluticasone (Flovent®, Advair®) • Ciclesonide (Alvesco®) 	<p>ORAL STEROIDS1 (E.G. PREDNISONE, DECDRON, MEDROL)</p> <p>INHALED STEROIDS2</p> <p>INHALED BRONCHODILATOR3</p> <p>SOMETHING ELSE (SPECIFY)4</p> <p>REFUSED7</p> <p>DON'T KNOW8</p> <p>SPECIFY OTHER: _____</p> <p>*NOTE: KYLE DOES NOT WANT TO COLLECT SPECIFIC DRUG NAMES – JUST THE TYPE OF MEDICATIONS.</p>
<p>F12. Have you ever been told by a doctor or other health professional that you had thyroid disease?</p>	<p>YES1</p> <p>NOSKIP TO F132</p> <p>REFUSEDSKIP TO F137</p> <p>DON'T KNOWSKIP TO F138</p>
<p>F12A. Was this...?</p> <p>INTERVIEWER: READ CATEGORIES</p> <p>CHECK ALL THAT APPLY</p>	<p>Goiter1</p> <p>Graves' Disease2</p> <p>Hashimoto's Disease3</p> <p>Hyperthyroidism4</p> <p>Hypothyroidism5</p> <p>or Something Else? (SPECIFY)6</p> <p>REFUSED7</p> <p>DON'T KNOW8</p> <p>SPECIFY OTHER: _____</p>

<p>F12B. How old were you when you were first told this?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL DISEASES IDENTIFIED IN F12A.</p>	<p>_____ YEARS OLD</p> <p>REFUSED7 DON'T KNOW8</p>
<p>F12C. Are you currently taking any prescription medication for thyroid disease?</p> <p>CATI INSTRUCTIONS: IF YES, FLAG FOR MEDICAL RECORDS REQUEST.</p>	<p>YES1 NOSKIP TO F13.....2 REFUSEDSKIP TO F13.....7 DON'T KNOWSKIP TO F13.....8</p>
<p>F12D. Would you please tell me the name of the medication?</p> <p>PROMPT: [IF R CANNOT REMEMBER] Would you please check your medication bottle? I can wait. Thanks.</p>	<p>Name of Medication: _____</p> <p>REFUSED7 DON'T KNOW8</p>
<p>F13. Have you ever been told by a doctor or other health professional that you have any kidney disease such as kidney infection, kidney stones, chronic kidney disease, or kidney failure? Please do not include bladder infections or incontinence.</p> <p>CATI INSTRUCTIONS: IF YES, FLAG FOR MEDICAL RECORDS REQUEST.</p>	<p>YES,.....1 NO,SKIP TO F14.....2 REFUSEDSKIP TO F14.....7 DON'T KNOWSKIP TO F14.....8</p>
<p>F13A. Was this...?</p> <p>INTERVIEWER: DO NOT INCLUDE BLADDER INFECTIONS OR INCONTINENCE.</p> <p>CHECK ALL THAT APPLY</p>	<p>Kidney Infection1 Kidney Stones.....2 Chronic kidney disease, not including kidney failure.....3 Kidney failure (ON DIALYSIS OR HAD TRANSPLANT).....4 or Other Kidney Disease (SPECIFY)5 REFUSEDSKIP TO F14.....7 DON'T KNOWSKIP TO F14.....8</p> <p>SPECIFY OTHER: _____</p>

<p>F13B. How old were you when you were first told that you had [KIDNEY DISEASE IN F13A]?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL THE KIDNEY DISEASES IDENTIFIED IN F13A.</p>	<p>_____ YEARS OLD</p> <p>REFUSED7 DON'T KNOW8</p>
<p>F13C. Are you currently being treated for [KIDNEY DISEASE IN F13A]?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL THE KIDNEY DISEASES IDENTIFIED IN F13A.</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p>
<p>F14. Have you ever been told by a doctor or other health professional that you had any kind of liver condition such as Hepatitis, Cirrhosis, Fatty Liver, Enlarged Liver, or other liver condition?</p> <p>CATI INSTRUCTIONS: IF YES, FLAG FOR MEDICAL RECORDS REQUEST.</p>	<p>YES,.....1 NO,SKIP TO F15.....2 REFUSEDSKIP TO F15.....7 DON'T KNOWSKIP TO F15.....8</p>
<p>F14A. Was this...?</p> <p>CHECK ALL THAT APPLY</p>	<p>Hepatitis.....1 Cirrhosis2 Fatty Liver3 Enlarged Liver4 or Other liver condition? (SPECIFY)5 REFUSEDSKIP TO F15.....7 DON'T KNOWSKIP TO F15.....8</p> <p>SPECIFY OTHER: _____</p>
<p>F14B. How old were you when you were first told that you had [LIVER CONDITION IN F14A]?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL THE LIVER CONDITIONS IDENTIFIED IN F14A.</p>	<p>_____ YEARS OLD</p> <p>REFUSED7 DON'T KNOW8</p>

<p>F14C. Are you currently being treated for [LIVER CONDITIONS IN F14A]?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL THE LIVER CONDITIONS IDENTIFIED IN F14A.</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p>
<p>F15. Have you ever been told by a doctor or other health professional that you have some form of arthritis or rheumatoid arthritis?</p>	<p>YES1 NOSKIP TO F162 REFUSEDSKIP TO F167 DON'T KNOWSKIP TO F168</p>
<p>F15A. Was this...?</p> <p>INTERVIEWER: READ CATEGORIES [SELECT ONLY 1 RESPONSE]</p>	<p>Osteoarthritis or1 Rheumatoid arthritis2 REFUSED7 DON'T KNOW8</p>
<p>F15B. How old were you when you were first told this?</p>	<p>_____ YEARS OLD</p> <p>REFUSED7 DON'T KNOW8</p>
<p>F15C. Are you currently taking any prescription medication for your <Osteoarthritis/Rheumatoid arthritis>?</p> <p>CATI INSTRUCTIONS: IF YES TO RHEUMATOID ARTHRITIS AND PRESCRIPTION MEDICATION, FLAG FOR MEDICAL RECORDS REQUEST.</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p>
<p>F16. Are you now limited in any way in any of your usual activities because of joint symptoms or arthritis?</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p>

<p>F17. Have you ever been told by a doctor or other health professional that you have lupus, Scleroderma, Multiple Sclerosis, Myasthenia gravis, Sjögren's syndrome, Vasculitis, Addison's disease, or other autoimmune disease?</p> <p>CATI INSTRUCTIONS: IF YES, FLAG FOR MEDICAL RECORDS REQUEST.</p>	<p>YES1 NOSKIP TO F182 REFUSEDSKIP TO F187 DON'T KNOWSKIP TO F188</p>
<p>F17A. Was this...?</p> <p>INTERVIEWER: READ CATEGORIES</p> <p>CHECK ALL THAT APPLY</p>	<p>Lupus,1 Scleroderma,2 Multiple Sclerosis (MS),3 Myasthenia gravis.....4 Sjögren's syndrome5 Vasculitis6 Addison's disease.....7 Or Something Else? (SPECIFY)8 REFUSEDSKIP TO F18.....97 DON'T KNOWSKIP TO F18.....98</p> <p>SPECIFY OTHER: _____</p>
<p>F17B. How old were you when you were first told that you had [AUTOIMMUNE DISEASE IN F17A]?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL THE AUTOIMMUNE DISEASES IDENTIFIED IN F17A.</p>	<p>_____ YEARS OLD</p> <p>REFUSED7 DON'T KNOW8</p>
<p>F17C. Are you currently being treated for [CONDITIONS IN F17A]?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL THE AUTOIMMUNE DISEASES IDENTIFIED IN F17A.</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p>

<p>F18. Have you ever been told by a doctor or other health professional that you have inflammatory bowel disease such as ulcerative colitis or Crohn's disease? This does not include irritable bowel syndrome.</p> <p>CATI INSTRUCTIONS: IF YES, FLAG FOR MEDICAL RECORDS REQUEST.</p>	<p>YES1 NOSKIP TO F192 REFUSEDSKIP TO F197 DON'T KNOWSKIP TO F198</p>
<p>F18A. Was this...?</p> <p>INTERVIEWER: READ CATEGORIES</p> <p>CHECK ALL THAT APPLY</p>	<p>Ulcerative Colitis,.....1 Crohn's Disease,.....2 Or Something Else? (SPECIFY)3 REFUSEDSKIP TO F197 DON'T KNOWSKIP TO F198</p> <p>SPECIFY OTHER: _____</p>
<p>F18B. How old were you when you were first told that you had [DISEASE IN F18A]?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL THE DISEASES IDENTIFIED IN F18A.</p>	<p>_____ YEARS OLD</p> <p>REFUSED7 DON'T KNOW8</p>
<p>F18C. Are you currently being treated for [CONDITIONS IN F18A]?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL THE DISEASES IDENTIFIED IN F18A.</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p>
<p>F19. Have you ever been told by a doctor or other health professional that you have any neurological disease such as Parkinson's disease, Epilepsy, Essential tremor, Alzheimer's disease, ALS or Lou Gehrig's Disease?</p> <p>CATI INSTRUCTIONS: IF YES, FLAG FOR MEDICAL RECORDS REQUEST.</p>	<p>YES1 NOSKIP TO F202 REFUSEDSKIP TO F207 DON'T KNOWSKIP TO F208</p>

<p>F19A. Was this...?</p> <p>INTERVIEWER: READ CATEGORIES</p> <p>CHECK ALL THAT APPLY</p>	<p>Parkinson's disease,1</p> <p>Epilepsy,2</p> <p>Essential tremor (ET)3</p> <p>Alzheimer's disease, or4</p> <p>ALS or Lou Gehrig's Disease5</p> <p>Or Something Else? (SPECIFY)6</p> <p>REFUSEDSKIP TO F207</p> <p>DON'T KNOWSKIP TO F208</p> <p>SPECIFY OTHER: _____</p>
<p>F19B. How old were you when you were first told that you had [DISEASE IN F19A]?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL THE DISEASES IDENTIFIED IN F19A.</p>	<p>_____ YEARS OLD</p> <p>REFUSED7</p> <p>DON'T KNOW8</p>
<p>F19C. Are you currently taking any prescription medication for [DISEASE IN F19A]?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL THE DISEASES IDENTIFIED IN F19A.</p>	<p>YES1</p> <p>NO2</p> <p>REFUSED7</p> <p>DON'T KNOW8</p>
<p>F20. Have you ever been told by a doctor or other health professional that you had cancer or a malignancy of any kind?</p> <p>CATI INSTRUCTIONS: IF YES, FLAG FOR MEDICAL RECORDS REQUEST.</p>	<p>YES1</p> <p>NOSKIP TO F212</p> <p>REFUSEDSKIP TO F217</p> <p>DON'T KNOWSKIP TO F218</p>

<p>F20A. What kind of cancer was it?</p> <p>INTERVIEWER: READ CATEGORIES AS NEEDED; CHECK ALL THAT APPLY</p>	<table> <tr><td>Appendix</td><td>1</td></tr> <tr><td>Bladder</td><td>2</td></tr> <tr><td>Blood</td><td>3</td></tr> <tr><td>Bone.....</td><td>4</td></tr> <tr><td>Brain</td><td>5</td></tr> <tr><td>Breast.....</td><td>6</td></tr> <tr><td>Carcinoid</td><td>7</td></tr> <tr><td>Cervix</td><td>8</td></tr> <tr><td>Colon</td><td>9</td></tr> <tr><td>Esophagus.....</td><td>10</td></tr> <tr><td>Gallbladder</td><td>11</td></tr> <tr><td>Kidney</td><td>12</td></tr> <tr><td>Larynx-windpipe</td><td>13</td></tr> <tr><td>Leukemia</td><td>14</td></tr> <tr><td>Liver</td><td>15</td></tr> <tr><td>Lung.....</td><td>16</td></tr> <tr><td>Lymphoma.....</td><td>17</td></tr> <tr><td>Mouth/tongue/lip</td><td>18</td></tr> <tr><td>Ovary</td><td>19</td></tr> <tr><td>Pancreas.....</td><td>20</td></tr> <tr><td>Prostate</td><td>21</td></tr> <tr><td>Rectum.....</td><td>22</td></tr> <tr><td>Skin - Melanoma</td><td>23</td></tr> <tr><td>Skin - Non-Melanoma</td><td>24</td></tr> <tr><td>Skin - Don't know what kind</td><td>25</td></tr> <tr><td>Small Intestine</td><td>26</td></tr> <tr><td>Soft tissue (muscle or fat)</td><td>27</td></tr> <tr><td>Stomach</td><td>28</td></tr> <tr><td>Testis.....</td><td>29</td></tr> <tr><td>Throat- pharynx</td><td>30</td></tr> <tr><td>Thyroid</td><td>31</td></tr> <tr><td>Uterus</td><td>32</td></tr> <tr><td>OTHER (SPECIFY)</td><td>33</td></tr> <tr><td>REFUSED</td><td>SKIP TO F2197</td></tr> <tr><td>DON'T KNOW</td><td>SKIP TO F2198</td></tr> <tr><td colspan="2">SPECIFY OTHER: _____</td></tr> </table>	Appendix	1	Bladder	2	Blood	3	Bone.....	4	Brain	5	Breast.....	6	Carcinoid	7	Cervix	8	Colon	9	Esophagus.....	10	Gallbladder	11	Kidney	12	Larynx-windpipe	13	Leukemia	14	Liver	15	Lung.....	16	Lymphoma.....	17	Mouth/tongue/lip	18	Ovary	19	Pancreas.....	20	Prostate	21	Rectum.....	22	Skin - Melanoma	23	Skin - Non-Melanoma	24	Skin - Don't know what kind	25	Small Intestine	26	Soft tissue (muscle or fat)	27	Stomach	28	Testis.....	29	Throat- pharynx	30	Thyroid	31	Uterus	32	OTHER (SPECIFY)	33	REFUSED	SKIP TO F2197	DON'T KNOW	SKIP TO F2198	SPECIFY OTHER: _____	
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<p>F20B. How old were you when you were first diagnosed with [CANCER IDENTIFIED IN F20A]?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL THE CANCERS IDENTIFIED IN F20A. START WITH THE FIRST CANCER.</p>	<p>_____ YEARS OLD</p> <p>REFUSED7</p> <p>DON'T KNOW8</p>
<p>F20C. Were you hospitalized for treatment of [CANCER IDENTIFIED IN F20A]?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL CANCERS IDENTIFIED IN F20A. START WITH THE FIRST CANCER.</p>	<p>YES1</p> <p>NO2</p> <p>REFUSED7</p> <p>DON'T KNOW8</p>
<p>F20D. Are you currently being treated for [CONDITIONS IN F20A]?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL CANCERS IDENTIFIED IN F20A.</p>	<p>YES1</p> <p>NO2</p> <p>REFUSED7</p> <p>DON'T KNOW8</p>
<p>F21. Have you ever taken a prescription anti-depressant on a regular basis? By regular basis we mean at least once a week for six months or more.</p> <p>PROMPT: Anti-depressant such as Prozac, Zoloft, Paxil, Effector, Serzone, Elavil, Lexapro, Celexa</p>	<p>YES1</p> <p>NOSKIP TO F22.....2</p> <p>REFUSEDSKIP TO F22.....7</p> <p>DON'T KNOWSKIP TO F22.....8</p>
<p>F21A. Are you currently taking any prescription anti-depressant?</p>	<p>YES1</p> <p>NO2</p> <p>REFUSED7</p> <p>DON'T KNOW8</p>

<p>F22. Have you ever taken any of the following medications on a regular basis? By regular basis we mean at least once a week for six months or more.</p> <p>INTERVIEWER: READ CATEGORIES; CHECK ALL THAT APPLY</p> <p>CHANGE THIS FORMAT TO A CHART, AND READ THE ANSWER OPTIONS AND PAUSE FOR A “YES” OR “NO” ANSWER.</p>	<p>Acetaminophen, such as Tylenol..... 1 Ibuprofen, such as Advil, Motrin, or Nuprin 2 Celebrex or Vioxx (COX-2 inhibitors) 3 Other anti-inflammatory analgesics, such as Aleve, Naprosyn, Relafen, Ketoprofen, or Anaprox 4 “Baby” or low dose aspirin..... 5 Regular aspirin or aspirin-containing products, 325mg per tablet or more 6 NONESKIP TO NXT SCT 7 REFUSEDSKIP TO NXT SCT97 DON’T KNOWSKIP TO NXT SCT98</p>
<p>F22A. During the past year, did you use [MEDICATION IDENTIFIED IN F22] on a regular basis? By regular basis we mean at least once a week for six months or more.</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL THE MEDICATIONS IDENTIFIED IN F22.</p> <p>*THIS WILL BE A TABLE FOR WEB SURVEY.</p>	<p>YES1 NOSKIP TO NXT SECT ...2 REFUSEDSKIP TO NXT SECT ...7 DON’T KNOWSKIP TO NXT SECT ...8</p>
<p>F22B. When you were taking [MEDICATION IDENTIFIED IN F22] in the past year, how many days per week did you take it?</p> <p>INTERVIEWER: READ CATEGORIES AS NEEDED</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL THE MEDICATIONS IDENTIFIED IN F22. START WITH THE FIRST MEDICATION.</p>	<p>1 Day per week1 2 - 3 Days per week2 4 - 5 Days per week3 More than 5 days per week.....4 REFUSED7 DON’T KNOW8</p>

<p>F22C. When you were taking [MEDICATION IDENTIFIED IN F22] in the past year, how many tablets per day did you take?</p> <p>PROMPT: On average, for each day that you took [medication identified in F22], how many total tablets did you take? For example, if you took it twice a day and 2 tablets each time, then you had 4 tablets per day.</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR ALL THE MEDICATIONS IDENTIFIED IN F22. START WITH THE FIRST MEDICATION.</p>	<p># of Tablets per Day: _____</p> <p>REFUSED97</p> <p>DON'T KNOW98</p>
<p>Section G. <u>Reproductive History</u></p> <p>CATI INSTRUCTIONS: CHECK SUBJECT'S SEX, ONLY PROMPT FOR FEMALE RESPONDENT.</p> <p>The next few questions ask about your reproductive history.</p>	
<p>G1. Do you still have menstrual periods?</p>	<p>YESSKIP TO G41</p> <p>NO2</p> <p>NEVER HAD PERIOD...SKIP TO G43</p> <p>REFUSED7</p> <p>DON'T KNOW8</p>
<p>G2. How old were you when your menstrual periods stopped?</p>	<p>_____ YEARS OLD</p> <p>REFUSED97</p> <p>DON'T KNOW98</p>
<p>G3. Did your menstrual periods stop naturally, due to surgery or something else?</p>	<p>NATURALLY1</p> <p>SURGERY2</p> <p>SOMETHING ELSE (SPECIFY)3</p> <p>REFUSED7</p> <p>DON'T KNOW8</p> <p>SPECIFY OTHER: _____</p>

<p>G4. Have you ever used female hormones, other than oral contraceptives, for relief of menopausal symptoms or prevention of disease such as bone loss?</p> <p>PROMPT: For example, pills such as Premarin, Estrace, Provera, Prempro, or a patch.</p>	<p>YES1 NOSKIP TO G52 REFUSEDSKIP TO G57 DON'T KNOWSKIP TO G58</p>
<p>G4A. How old were you when you started taking female hormones - other than oral contraceptives?</p>	<p>_____ YEARS OLD</p> <p>REFUSED97 DON'T KNOW98</p>
<p>G4B. How many years in total, have you used female hormones - other than oral contraceptives?</p>	<p>_____ YEARS TOTAL</p> <p>REFUSED97 DON'T KNOW98</p>
<p>G4C. Are you currently taking female hormones - other than oral contraceptives?</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p>
<p>G5. Have you ever been pregnant? Please include current pregnancy, live births, stillbirths, miscarriages, abortions, and tubal, molar or ectopic pregnancies.</p>	<p>YES1 NOSKIP TO NXT SCT ..2 REFUSEDSKIP TO NXT SCT ..7 DON'T KNOWSKIP TO NXT SCT ..8</p>
<p>G5A. Are you currently pregnant?</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p>

<p>G6. [Not counting your current pregnancy, how/How] many times have you been pregnant in your life? Please include live births, stillbirths, miscarriages, abortions, and tubal, molar or ectopic pregnancies.</p> <p>CATI INSTRUCTIONS: IF G5A = YES, DISPLAY THE WORDING IN THE [] BEFORE THE QUESTION.</p>	<p>_____ # of TIMES PREGNANT</p> <p>IF 0, GO TO NEXT SECTION.</p>
<p>G7. Now we would like to get a bit of information about <your pregnancy/each of your pregnancies>. Please tell us when <the/each> pregnancy ended and the outcome of <the/each> pregnancy.</p> <p>CATI INSTRUCTIONS: DISPLAY THE CORRECT WORDING ACCORDING TO THE NUMBER OF PREGNANCIES REPORTED BY PARTICIPANT [1 OR MORE THAN 1].</p>	
<p>G7A.</p> <p>CATI INSTRUCTIONS: IF MORE THAN 1 PREGNANCY: Let's start with the most recent pregnancy.</p> <p>Would you please tell me the month and year that the <previous> pregnancy ended?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR EACH PREGNANCY IDENTIFIED IN G6.</p>	<p>RECORD</p> <p>_____ MONTH</p> <p>_____ YEAR</p> <p>REFUSED97/9997</p> <p>DON'T KNOW98/9998</p>
<p>G7B. What was the outcome of the pregnancy?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR EACH PREGNANCY IDENTIFIED IN G6.</p>	<p>LIVE BIRTH OF SINGLE CHILD 1</p> <p>LIVE BIRTH OF MULTIPLE CHILDREN 2</p> <p>MISCARRIAGE 3</p> <p>STILLBIRTH..... 4</p> <p>TERMINATION/ABORTION 5</p> <p>REFUSED 7</p> <p>DON'T KNOW 8</p> <p>CATI INSTRUCTIONS: IF MISCARRIAGE OR STILLBIRTH GO TO G7C, ALL ELSE GO TO G7A FOR NEXT PREGNANCY.</p> <p>IF REACH THE LAST PREGNANCY, GO TO G8 (IF LIVE BIRTH REPORTED) OR NEXT SECTION.</p>

<p>G7C. [I'm sorry to hear of your loss.] How many weeks pregnant were you when the <miscarriage/stillbirth> happened?</p> <p>PROMPT: IF WOMAN IS NOT SURE ABOUT WHEN SHE MISCARRIED, ASK: When did you first notice signs or symptoms of a miscarriage or when were you told by a doctor?</p> <p>CATI INSTRUCTIONS: REPEAT THIS QUESTION FOR EACH PREGNANCY IDENTIFIED IN G6.</p> <p>DISPLAY THE SENTENCE IN THE [] BEFORE THE QUESTION ONLY IF THE MISCARRIAGE OR STILLBIRTH IS WITHIN 12 MONTH OF CURRENT DATE.</p>	<p>_____ WEEKS</p> <p>REFUSED97 DON'T KNOW98</p>
<p>CATI WILL REPEAT G7A – G7C FOR EACH PREGNANCY. IF REACH THE END OF PREGNANCY, GO TO G8 OR NEXT SECTION. GO TO G8 ONLY IF LIVE BIRTH WAS REPORTED.</p>	
<p>G8. We need to know if there was any serious problem with your live born <child/children>. Did <any of> your <children/child> die within the first month of life?</p> <p>PROMPT: I am sorry if this question upset you.</p> <p>CATI INSTRUCTIONS: DISPLAY THE WORDING <children/child> ACCORDING TO THE NUMBER OF LIVE BIRTHS REPORTED BY PARTICIPANT.</p>	<p>YES1 NO2 REFUSED7 DON'T KNOW8</p>
<p>G9. Did <any of> your <children/child> have major birth defects?</p>	<p>YES1 NOSKIP TO NXT SCT ..2 REFUSEDSKIP TO NXT SCT ..7 DON'T KNOWSKIP TO NXT SCT ..8</p>

<p>G9A. What kind of birth defect was it? If more than one child had birth defects, please specify the birth defect for each child.</p> <p>PROMPT: I know this may be difficult for you. Thank you for providing the information.</p> <p>INTERVIEWER INSTRUCTIONS: IF R HAD MORE THAN 1 LIVE BIRTH, PROBE TO SEE IF ONLY 1 CHILD OR MORE THAN 1 CHILD HAD BIRTH DEFECTS AND RECORD THE INFORMATION [FOR EXAMPLE, ONE HAD HEART DEFECT AND ONE WITH NEURAL TUBE DEFECTS].</p>	<p>SPECIFY BIRTH DEFECTS: _____</p> <p>REFUSED7</p> <p>DON'T KNOW8</p>
<p>Section H. Demographics</p> <p>We are almost done. You've been very helpful. The final few questions are about general demographic information. These are for statistical purposes only.</p>	
<p>H1. Are you Hispanic or Latino?</p>	<p>YES1</p> <p>NO2</p> <p>REFUSED7</p> <p>DON'T KNOW8</p>
<p>H2. Which of the following groups best describes your racial heritage? Are you...?</p> <p>USE OTHER IF NOT JUST ONE CATEGORY, AND SPECIFY.</p>	<p>White,1</p> <p>Black or African-American,2</p> <p>Asian or Pacific Islander,3</p> <p>American Indian or Alaskan Native,4</p> <p>Other (SPECIFY)5</p> <p>REFUSED7</p> <p>DON'T KNOW8</p> <p>SPECIFY OTHER: _____</p>

<p>H3. What is the highest level of education you have completed?</p>	<p>LESS THAN A HIGH SCHOOL DIPLOMA 1 HIGH SCHOOL DIPLOMA OR GED.....2 SOME COLLEGE, ASSOCIATES DEGREE OR OTHER POST-SECONDARY EDUCATION.....3 BACHELOR'S DEGREE (4 YEARS OF COLLEGE) OR HIGHER4 REFUSED7 DON'T KNOW8</p>
<p>H4. What is the approximate total yearly income of your household? Please stop me when I get to the category that best describes your household.</p> <p>INTERVIEWER: READ CATEGORIES AS NEEDED</p>	<p>LESS THAN \$10,000 1 \$10,001 - \$20,000 2 \$20,001 - \$30,000 3 \$30,001 - \$40,000 4 \$40,001 - \$50,000 5 \$50,001 - \$60,000 6 \$60,001 - \$70,000 7 Over \$70,000..... 8 REFUSED97 DON'T KNOW98</p>
<p>H5. What is your present marital status? Please stop me when I get to the category that best describes you.</p> <p>INTERVIEWER: READ CATEGORIES</p>	<p>Married 1 Widowed.....2 Separated3 Divorced4 Never married5 REFUSED7 DON'T KNOW8</p>
<p><u>CLOSING</u></p> <p>Thank you very much for answering our questions Mr. / Ms. (<i>INSERT RESPONDENT'S NAME</i>). You have been very helpful. The questions we've asked covered a wide variety of topics because we don't know for sure if there is any relationship between exposure to C-8 and diseases. You shouldn't consider any of the topics covered in this interview to be directly related to the exposure of C-8. The information you and other participants provide will be used to help the C-8 Science Panel determine whether exposure to C-8 has a probable link to disease.</p> <p><u>CATI INSTRUCTIONS:</u> CHECK THE FLAG FOR MEDICAL RECORD (MR) REQUEST. IF MR = YES, GO TO CLOSING A; IF MR = NO, GO TO CLOSING B.</p>	

CLOSING A

Within the next couple weeks, you will receive a Thank You letter from Dr. Kyle Steenland and a \$40 VISA gift card as a token of our appreciation. We will also include a simple authorization form for you to sign so we can get more details about some of the medical conditions that you shared with us in this interview. Our next interview with you will be in 2010. We'll send you a reminder prior to the interview. If you have any questions about the study after today's interview or if you plan to change your contact information, please call us toll-free 1-877-810-9530, extension 512. You may also send us e-mail, at c8community@battelle.org. Thanks again for your participation. Goodbye.

CLOSING B

Within the next couple weeks, you will receive a Thank You letter from Dr. Kyle Steenland and a \$40 VISA gift card as a token of our appreciation. Our next interview with you will be in 2010. We'll send you a reminder prior to the interview. If you have any questions about the study after today's interview or if you plan to change your contact information, please call us toll-free 1-877-810-9530, extension 512. You may also send us e-mail, at c8community@battelle.org. Thanks again for your participation. Goodbye.

Section IR: Post Interview - Interviewer Remarks

IR1. RESPONDENT'S COOPERATION WAS...?	VERY GOOD	1
	GOOD.....	2
	FAIR	3
	POOR	4
IR2. THE OVERALL QUALITY OF THIS INTERVIEW WAS...?	HIGH QUALITY	SKIP TO IR6.....1
	GENERALLY RELIABLE	SKIP TO IR6.....2
	QUESTIONABLE.....	3
	UNSATISFACTORY.....	4

<p>IR3. WHAT WERE THE REASONS FOR QUESTIONABLE OR UNSATISFACTORY QUALITY OF INFORMATION?</p> <p>CHECK ALL THAT APPLY BECAUSE THE RESPONDENT...</p> <p>COULD NOT REMEMBER MOST OF THE INFORMATION01 DID NOT KNOW ENOUGH INFORMATION REGARDING THE TOPICS.....02 HAD TROUBLE UNDERSTANDING MOST QUESTIONS03 DID NOT WANT TO BE MORE SPECIFIC04 SOUNDED UPSET, DEPRESSED OR ANGRY05 HAD POOR HEARING OR SPEECH.....06 SOUNDED CONFUSED OR DISTRACTED BY FREQUENT INTERRUPTIONS07 SOUNDED INHIBITED BY OTHERS AROUND HIM/HER08 SOUNDED EMBARRASSED BY THE SUBJECT MATTER09 SOUNDED EMOTIONALLY UNSTABLE10 SOUNDED PHYSICALLY ILL11 OTHER (SPECIFY)12</p> <p>CATI: IF IR3=12, GO TO IR4; ELSE GO TO IR5.</p>	
IR4. SPECIFY OTHER REASONS:	
IR5. WHICH SECTION WAS THE MOST PROBLEMATIC?	A. PHYSICAL ACTIVITY 01 B. CAFFEINE CONSUMPTION 02 C. OCCUPATIONAL HISTORY 03 D. SMOKING HISTORY 04 E. ALCOHOL HISTORY 05 F. MEDICAL HISTORY 06 G. REPRODUCTIVE HISTORY (FEMALE ONLY).... 07 H. DEMOGRAPHICS..... 08
IR6. DO YOU HAVE ANY ADDITIONAL COMMENTS THAT MAY AFFECT THE INTERPRETATION OF THE RESPONDENT'S ANSWERS?	YES 1 NO SKIP TO IR8 2
IR7. PLEASE SPECIFY:	
IR8. INTERVIEW COMPLETED SELECT CONTINUE TO EXIT THE CATI	CATI INTERVIEW COMPLETE FLAG