



5/2/2018

Participant Jones
123 Main Street
San Jose, CA

Dear Participant;

Thank you very much for taking part in the Asian and Pacific Islander Community Exposures II (ACE II) Project in 2017. As part of this project, we are measuring the levels of 36 chemicals in blood and urine.

Your participation in this important project is helping us learn more about the presence of chemicals in people of Vietnamese heritage in the San Jose area. This project can provide us information about how our community is exposed to these harmful chemicals and help us understand how to reduce these exposures.

Your laboratory tests have been completed and your results are enclosed. This mailing includes results for 36 chemicals we measured in your blood and urine. If you agreed to donate your samples for further analysis, and we decide to analyze your blood or urine samples for additional chemicals in the future, you will receive your remaining test results at a later date, after laboratory analyses are completed.

This mailing includes:

Part 1: Mercury in blood and urine. This section includes a summary of your results and information about mercury.

Part 2: Arsenic in urine. This section includes a summary of your results and information about arsenic.

Part 3: Lead in blood. This section includes a summary of your results and information about lead.

Part 4: Cadmium in blood and urine. This section includes a summary of your results and information about cadmium.

Part 5: Perfluoroalkyl and polyfluoroalkyl substances (PFASs) in blood. This section includes a summary of your results, a list of the PFASs that we looked for, and information about these chemicals.

You can compare your results to:

- Results for other participants who participated in the ACE II Project in 2017.
- Results from a study of the general US population.
- Levels of concern. If you had a result above a level of concern, you should already have heard from us about this. If needed, we provided advice on ways to reduce your exposure to protect your health. For the chemicals in this packet, levels of concern have been set for mercury, cadmium, arsenic, and lead. There is not enough scientific information available to set levels of concern for PFASs.

Thank you again for your participation in this project – you are helping us lay the foundation to measure chemicals in people throughout California. Ultimately, information from biomonitoring studies, combined with other research, can be used to learn how chemicals may affect our health and to support efforts to prevent exposure to harmful substances.

If you have any questions, please feel free to call us at our toll-free number: 1-866-470-6116. You can leave a message in English or Vietnamese, and we will call you back as soon as possible.

Sincerely,

Nerissa Wu, PhD
ACE II Project Director
Biomonitoring California

Frequently Asked Questions about the Asian/Pacific Islander Community Exposures Project (ACE)

What can I learn from the ACE Project about chemicals in my body?

As a participant in the ACE Project, you are receiving in this packet the levels of XX chemicals our laboratory tested for in your blood and/or urine. We also provide information on ways you might have been exposed to these chemicals. Many of the chemicals we test for are widespread in the environment and consumer products, and it is difficult to avoid exposure to them. For each chemical in this packet, we also provide information about actions you could take to help reduce your exposures.

For most of the chemicals that we biomonitor, there is not enough scientific information available to know how much can be in anyone's body without causing harm. Therefore, we cannot tell you whether the chemical levels measured in your body might affect your health.

Can I compare my results to others?

You can compare your chemical levels to the other participants in this phase of the ACE Project. We collected 96 blood samples and 100 urine samples from participants. You can also compare your results to those from a national study of adults in the U.S. Some chemicals may be higher in ACE participants than in people from the rest of the country, while others might be lower. Comparing your results to those of other people cannot tell you what level of any chemical might be a health concern.

How does my participation make a difference?

The ACE Project will help us learn more about chemical levels in Chinese people in the San Francisco Bay area. It will also help us design studies that focus on other Asian and Pacific Islander populations in California. We hope this information will give policymakers an idea about how Asians and Pacific Islanders are exposed to these chemicals, and at what levels. Information from the ACE Project, combined with other research, can be used to learn more about how chemicals may affect health. Biomonitoring studies can also support government efforts to reduce exposure to harmful chemicals.

Can the amount of a chemical in my body change over time?

Yes. The amount of a chemical in your body depends on many factors, including how much and how often you have had contact with that chemical, and how long it takes for your body to remove it.

What is the Asian/Pacific Islander Community Exposures (ACE) Project?

APA Family Support Services and Biomonitoring California conducted the ACE Project to learn about levels of mercury, cadmium, arsenic, lead, and perfluoroalkyl and polyfluoroalkyl substances (PFASs) in Chinese people living in the San Francisco Bay area. We chose these chemicals based on many factors, including whether: (1) they are commonly found in the environment or consumer products, and (2) there are known or suspected health concerns about them.

Participants were selected because they were adults of Chinese heritage who had lived in the San Francisco Bay area for at least one year.

100 participants completed questionnaires and donated blood and urine samples for this phase of the ACE Project. The next phase of the ACE Project will focus on adults of Vietnamese heritage in the San Jose area.

Your Lab Result for Mercury in Blood

We tested your blood for mercury. Mercury is a metal that is found in nature. It is released into the environment when coal is burned, by some industries, and from past use in gold mines. Mercury builds up in certain types of fish.

Your blood mercury result	Lowest result found in the ACE II Project	Highest result found in the ACE II Project	Number of ACE II participants with mercury found in their blood	Middle level in the U.S.	95th percentile in the U.S.	Level of concern*
7.1	0.21	17.8	All 99	0.74	4.7	5.8 and above

Results for mercury in blood are reported in micrograms per liter ($\mu\text{g/L}$).

Did you find mercury in my blood?

Yes. Your blood mercury result was 7.1 $\mu\text{g/L}$.

What can I compare my result to?

You can use the table above to compare your blood mercury result to:

- **Other participants in the ACE II Project.** We found mercury in all 99 participants who had their blood tested. The results ranged from 0.21 to 17.8 $\mu\text{g/L}$.
- **Middle level in the U.S.** Half the adults tested in the U.S. had a result below 0.74 $\mu\text{g/L}$, and half had a result above this level.
- **95th percentile in the U.S.** 95% of adults tested in the U.S. had a result below 4.7 $\mu\text{g/L}$, and 5% had a result above this level.
The U.S. middle level and 95th percentile do not tell us anything about what level of mercury in blood might be a health concern. We are providing this information so that you can compare your result to those of other U.S. adults.
- **Level of concern.** Your blood mercury result was above the level of concern. You should already have heard from us and received advice on ways to reduce your exposure.

The next page shows your result for mercury in urine, followed by a page that explains more about mercury.

*This is the level of concern for women of child-bearing age (18-49 years old).

Your Lab Result for Mercury in Urine

We tested your urine for mercury. Mercury is a metal that is found in nature. It is released into the environment when coal is burned, by some industries, and from past use in gold mines. Mercury builds up in certain types of fish.

Your urine mercury result	Lowest result found in the ACE II Project	Highest result found in the ACE II Project	Number of ACE II participants with mercury found in their urine	Middle level in the U.S.	95th percentile in the U.S.	Level of concern
0.45	0.09	40.5	97 of 100	0.24	1.8	20 and above

Results for mercury in urine are reported in micrograms per liter (µg/L).

Did you find mercury in my urine?

Yes. Your urine mercury result was 0.45 µg/L.

What can I compare my result to?

You can use the table above to compare your urine mercury result to:

- **Other participants in the ACE II Project.** We found mercury in 97 of the 100 ACE II participants who had their urine tested. The results ranged from 0.09 to 40.5 µg/L.
 - **Middle level in the U.S.** Half the adults tested in the U.S. had a result below 0.24 µg/L, and half had a result above this level.
 - **95th percentile in the U.S.** 95% of adults tested in the U.S. had a result below 1.8 µg/L, and 5% had a result above this level.
- The U.S. middle level and 95th percentile do not tell us anything about what level of mercury in urine might be a health concern. We are providing this information so that you can compare your result to those of other U.S. adults.
- **Level of concern.** Your urine mercury result was below the level of concern.

The next page explains more about mercury.

Frequently Asked Questions about Mercury

Where is mercury found?

- Certain types of fish and seafood. This is the most common source of exposure to mercury.
- Some imported face creams used for skin lightening, anti-aging, or acne.
- Some herbal medicines and other traditional remedies, especially from China and India.
- Silver-colored dental fillings.
- Glass thermometers, older barometers, and blood pressure gauges.
- Fluorescent lights, including compact fluorescent light (CFL) bulbs.

What are possible health concerns?

Mercury:

- Can affect brain development and cause learning and behavior problems in infants and children who were exposed in the womb.
- Can harm the nervous system and kidneys.
- May affect the heart.
- May increase cancer risk.

What are possible ways to reduce exposure?

- Choose fish that are lower in mercury, such as salmon, tilapia, trout, canned light tuna, sardines, anchovies, and oysters.
- Avoid fish that are high in mercury, such as shark, swordfish, orange roughy, bluefin and bigeye tuna, tilefish, king mackerel, and marlin.
- Do not use imported skin lightening, acne treatment, or anti-aging creams unless you are certain that they do not contain mercury.
- Properly recycle CFL bulbs (see below).
- Properly clean up broken thermometers, CFL bulbs, and other items containing mercury (see below). Do not let children play with silver liquid from items like mercury thermometers.

For more information:

Information on mercury for people who catch and eat fish: <http://oehha.ca.gov/fish/mercury-fish-information-people-who-eat-fish>; or call OEHHA at (916) 327-7319 or (510) 622-3170

Guide for choosing fish that are lower in mercury: <http://oehha.ca.gov/media/downloads/fish/fact-sheet/2011commfishguidecolor.pdf>

Concerns about mercury exposure – contact the California Poison Control System hotline: www.calpoison.org/home.html or 1-800-222-1222

Cleaning up mercury spills, such as from broken thermometers or CFL bulbs: <http://www.epa.gov/mercury/spills/>

For CFL recycling location: Visit <http://recyclenation.com/> and enter “Compact Fluorescent Lights” and your zip code in the search box; or call 1-800-RECYCLING (1-800-732-9254)

Your Lab Result for Arsenic in Urine

We tested your urine for arsenic. Arsenic is found in soil and water in some areas, and in some foods. It occurs naturally and from human activity. Arsenic compounds were used extensively as pesticides and wood preservatives, but these uses have mostly been phased out. There are different forms of arsenic, some of which may cause health problems and others that are not a health concern.

Your urine arsenic result	Lowest result found in the ACE II Project	Highest result found in the ACE II Project	Number of ACE II participants with arsenic found in their urine	Middle level in the U.S.	95 th percentile in the U.S.	Level of concern
56.4	2.7	1100	All 100	6.1	48.0	50 and above

Results for arsenic in urine are reported in micrograms per liter ($\mu\text{g/L}$).

Did you find arsenic in my urine?

Yes. Your urine arsenic result was 56.4 $\mu\text{g/L}$.

What can I compare my result to?

You can use the table above to compare your arsenic result to:

- **Other participants in the ACE II Project.** We found arsenic in all 100 ACE II participants who had their urine tested. The results ranged from 2.7 to 1100 $\mu\text{g/L}$.
- **Middle level in the U.S.** Half the adults tested in the U.S. had a result below 6.1 $\mu\text{g/L}$, and half had a result above this level.
- **95th percentile in the U.S.** 95% of adults tested in the U.S. had a result below 48.0 $\mu\text{g/L}$, and 5% had a result above this level. The U.S. middle level and 95th percentile do not tell us anything about what level of arsenic in urine might be a health concern. We are providing this information so that you can compare your result to those of other U.S. adults.
- **Level of concern.** Your urine arsenic result was above the level of concern. You should already have heard from us that the form of arsenic found in your urine is not a health concern. Your elevated result was probably due to eating seafood. Please consult the separate letter and table in this packet for your complete results for arsenic in urine.

The next page explains more about arsenic.

Frequently Asked Questions about Arsenic

Where is arsenic found?

- Some foods, including:
 - Seafood*, especially shellfish. The form of arsenic in seafood is not considered to be a health concern.
 - Rice and foods with rice-based ingredients, such as some hot and cold cereals, some infant formulas, and rice cakes. Rice plants can take up arsenic from water or soil.
 - Hijiki seaweed (short, black, noodle-like seaweed).
 - Some drinking water sources, such as in some places in the Central Valley and Southern California.
 - Some pressure-treated wood used in outdoor structures, such as decks and playground equipment. Arsenic-treated wood was phased out in 2004.
 - Cigarette smoke.
 - Additive(s) put in some chicken and turkey feed to prevent parasites.
 - Some herbal medicines and other traditional remedies, especially from China and India.
 - Some herbicides in limited use on golf courses, cotton, and at sod-growing facilities.
-

What are possible health concerns?

Some forms of arsenic:

- May harm the developing fetus.
 - May harm the nervous system and may affect learning in children.
 - May contribute to cardiovascular disease and may affect lung function.
 - Can increase cancer risk.
-

What are possible ways to reduce exposure to forms of arsenic that may affect health?

- Include plenty of variety in your and your child's diet.
 - If you have an infant, breastfeed if you can. Include alternatives to rice-based foods in your infant's diet.
 - Do not burn older pressure-treated wood (manufactured before 2004) and avoid using it for home projects.
 - Have children wash their hands after they play on or around older wooden play structures or decks. If you own such a structure or deck, apply a sealant or coating every one to two years.
 - If your water comes from a private well, have it tested for arsenic. (If your water comes from a public water supplier, it is already tested regularly for arsenic.)
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*If you ate seafood within a few days before your urine sample was collected, your result may show an elevated level of arsenic, but the form of arsenic in seafood is not considered to be a health concern.

For more information:

Arsenic in food: <https://www.fda.gov/Food/FoodborneIllnessContaminants/Metals/ucm319948.htm>

Your Lab Result for Lead in Blood

We tested your blood for lead. Lead is a metal that is found in nature and is used in many industries and products.

Your lead result	Lowest result found in the ACE II Project	Highest result found in the ACE II Project	Number of ACE II participants with lead found in their blood	Middle level in the U.S.	95 th percentile in the U.S.	Level of concern*
0.89	0.32	5.1	All 99	0.88	2.9	5 and above

Results for lead in blood are reported in micrograms per deciliter ($\mu\text{g}/\text{dL}$).

Did you find lead in my blood?

Yes. Your blood lead result was 0.89 $\mu\text{g}/\text{dL}$.

What can I compare my result to?

You can use the table above to compare your lead result to:

- **Other participants in the ACE II Project.** We found lead in all 99 ACE II participants who had their blood tested. The results ranged from 0.32 to 5.1 $\mu\text{g}/\text{dL}$.
- **Middle level in the U.S.** Half the adults tested in the U.S. had a result below 0.88 $\mu\text{g}/\text{dL}$, and half had a result above this level.
- **95th percentile in the U.S.** 95% of adults tested in the U.S. had a result below 2.9 $\mu\text{g}/\text{dL}$, and 5% had a result above this level.

The U.S. middle level and 95th percentile do not tell us anything about what level of lead in blood might be a health concern. We are providing this information so that you can compare your result to those of other US adults.

- **Level of concern.** Your blood lead result was below the level of concern.

The next page explains more about lead.

*This is the level of concern for women of child-bearing age (18-49 years old).

Frequently Asked Questions about Lead

Where is lead found?

Lead is widespread in the environment and is found in:

- Peeling paint and dust in and around homes built before 1978 (when lead was banned in house paint).
- Bare soil around homes built before 1978 and near roadways.
- Job sites or hobby areas, such as construction and painting sites, shooting ranges, and electronics, battery, and scrap metal recycling facilities.
- Some candies and spices from Mexico and Asia.
- Some traditional remedies, especially brightly colored remedies like Azarcón and Greta.
- Many consumer products, including:
 - Some ceramic dishes and pottery; some pewter and crystal pitchers and goblets.
 - Some baby bibs, electrical cords, purses, garden hoses, and other products made of vinyl or imitation leather.
 - Some toys, art supplies, costume jewelry, cosmetics, and hair dyes.
 - Some brass faucets, fishing sinkers, and curtain weights.

What are possible health concerns?

Lead:

- Can affect brain development and contribute to learning problems in infants and young children.
- Can increase blood pressure, decrease kidney and brain function, and cause reproductive problems.
- May increase cancer risk.

What are possible ways to reduce exposure?

- Keep children away from chipped and peeling paint. Use a certified professional if you plan to permanently remove or seal lead-based paint.
- Cover bare soil with grass, bark, or gravel, especially near homes built before 1978.
- If you work with lead or do house renovation, use proper protective gear. Keep work dust out of your home. Shower after working. Wash work clothes separately.
- Use cold water for drinking or cooking to reduce release of lead from some faucets and old pipes.
- Wash your and your children's hands before eating or drinking.
- Clean your floors regularly, using a wet mop where you can, and dust with a damp cloth.
- Eat a well-balanced diet with adequate calcium, iron, and vitamin C, which can help reduce the amount of lead that your body absorbs.

For more information: California's Childhood Lead Poisoning Prevention Program at (510) 620-5600, or go to:

www.cdph.ca.gov/programs/CLPPB/Pages/default.aspx or California's Occupational Lead Poisoning Prevention Program at (510) 620-5740, or go to:
<https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/OHB/OLPPP/CDPH%20Document%20Library/medgdl.pdf>

Your Lab Result for Cadmium in Blood

We tested your blood for cadmium. Cadmium is a metal that is found in nature and is used in many industries and products.

Your blood cadmium result	Lowest result found in the ACE II Project	Highest result found in the ACE II Project	Number of ACE II participants with cadmium found in their blood	Middle level in the U.S.	95 th percentile in the U.S.	Level of concern
0.40	0.17	2.9	All 99	0.27	1.4	5 and above

Results for cadmium in blood are reported in micrograms per liter ($\mu\text{g/L}$).

Did you find cadmium in my blood?

Yes. Your blood cadmium result was 0.40 $\mu\text{g/L}$.

What can I compare my result to?

You can use the table above to compare your blood cadmium result to:

- **Other participants in the ACE II Project.** We found cadmium in all 99 ACE II participants who had their blood tested. The results ranged from 0.17 to 2.9 $\mu\text{g/L}$.
- **Middle level in the U.S.** Half the adults tested in the U.S. had a result below 0.27 $\mu\text{g/L}$, and half had a result above this level.
- **95th percentile in the U.S.** 95% of adults tested in the U.S. had a result below 1.4 $\mu\text{g/L}$, and 5% had a result above this level.

The U.S. middle level and 95th percentile do not tell us anything about what level of cadmium in blood might be a health concern. We are providing this information so that you can compare your result to those of other U.S. adults.

- **Level of concern.** Your blood cadmium result was below the level of concern.

The next page shows your result for cadmium in urine, followed by a page that explains more about cadmium.

Your Lab Result for Cadmium in Urine

We tested your urine for cadmium. Cadmium is a metal that is found in nature and is used in many industries and products.

Your urine cadmium result	Lowest result found in the ACE II Project	Highest result found in the ACE II Project	Number of ACE II participants with cadmium found in their urine	Middle level in the U.S.	95 th percentile in the U.S.	Level of concern
0.41	0.07	8.0	99 of 100	0.18	0.87	Above 3

Results for cadmium in urine are reported in micrograms per gram creatinine ($\mu\text{g/g}$).

Did you find cadmium in my urine?

Yes. Your urine cadmium result was 0.41 $\mu\text{g/g}$.

What can I compare my result to?

You can use the table above to compare your urine cadmium result to:

- **Other participants in the ACE II Project.** We found cadmium in 99 of the 100 ACE II participants who had their urine tested. The results ranged from 0.07 to 8.0 $\mu\text{g/g}$.
- **Middle level in the U.S.** Half the adults tested in the U.S. had a result below 0.18 $\mu\text{g/g}$, and half had a result above this level.
- **95th percentile in the U.S.** 95% of adults tested in the U.S. had a result below 0.87 $\mu\text{g/g}$, and 5% had a result above this level.

The U.S. middle level and 95th percentile do not tell us anything about what level of cadmium in urine might be a health concern. We are providing this information so that you can compare your result to those of other U.S. adults.

- **Level of concern.** Your urine cadmium result was below the level of concern.

The next page explains more about cadmium.

Frequently Asked Questions about Cadmium

Where is cadmium found?

- Cigarette and other tobacco smoke.
 - Some cheap metal jewelry, including some charms.
 - Rechargeable batteries labeled NiCd or NiCad.
 - Metal plating and solder.
 - Some red, yellow, and orange decorative paints, which may be used on glassware and pottery.
 - Some foods, including:
 - Fish and shellfish from contaminated water.
 - Potatoes, root vegetables, leafy vegetables, and fruit grown in contaminated soil.
 - Certain organ meat, such as liver and kidney.
-

What are possible health concerns?

- Cadmium:
- May affect brain development in young children.
 - Can damage the lungs and kidneys.
 - Can increase lung cancer risk.
 - Can weaken bones.
-

What are possible ways to reduce exposure?

- Do not smoke or let children breathe cigarette or other tobacco smoke.
 - Do not let children wear or play with cheap metal jewelry or charms.
 - Do not let children handle rechargeable batteries labeled NiCd or NiCad.
 - Properly recycle batteries (see below).
 - If you do any welding or metalworking, be sure that your work area is well ventilated and use proper protective equipment.
 - Keep children away from welding fumes and other metal vapors and dusts.
 - Include plenty of variety in your and your child's diet. Choose a well-balanced diet with adequate iron, which can help reduce the amount of cadmium that your body absorbs.
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For more information:

Cadmium fact sheet: www.atsdr.cdc.gov/toxfaqs/tfacts5.pdf

Battery recycling location: Visit <http://recyclenation.com/> and enter "Batteries (Rechargeable)" and your zip code in the search box or call 1-800-RECYCLING (1-800-732-9254)

Your Lab Results for PFASs in Blood

Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs)

We tested your blood for 32 PFASs. Perfluoroalkyl and polyfluoroalkyl substances are used to make various products resistant to oil, stains, grease, and water.

Did you find PFASs in my blood?

Yes. We found 11 PFASs in your blood. Your results are shown in the table on the next page.

What can I compare my results to?

You can use the table on the next page to compare each PFAS result to:

- **Other participants in the ACE II Project.** We found some PFASs in most of the 98 ACE II participants who had their blood tested.
- **Middle level in the U.S.** Half the adults tested in the U.S. had a result below the middle level, and half had a result above the middle level.
- **95th percentile in the U.S.** 95% of adults tested in the U.S. had a result below the 95th percentile, and 5% had a result above the 95th percentile.

The U.S. middle levels and 95th percentiles do not tell us anything about what levels of PFASs in blood might be a health concern. We are providing this information so that you can compare your results to those of other U.S. adults.

No state or federal agency has established a level of concern for any PFAS. Scientists are still studying how PFASs might affect people's health.

The next page contains a table with your PFAS results, followed by a page that explains more about PFASs.

Your Lab Results for PFASs in Blood

PFAS tested	Your PFAS result (µg/L)	Lowest result found in the ACE II Project (µg/L)	Highest result found in the ACE II Project (µg/L)	Number of ACE II participants with this PFAS found in their blood	Middle level in the U.S. (µg/L)	95 th percentile in the U.S. (µg/L)	Level of concern
PFOA	1.4	0.25	19.9	All 99	2.1	5.6	No state or federal agency has established a level of concern for any PFAS.
PFHxS	0.77	0.34	9.5	All 99	1.4	5.5	
PFOS	6.5	1.5	43.2	All 99	5.6	19.5	
PFNA	1.6	0.35	4.3	98 of 99	0.70	2.0	
PFHxA	0.19	0.06	1.6	97 of 99	NA	NA	
PFUdA	1.2	0.07	2.9	97 of 99	*	0.50	
Me-PFOSA-AcOH	0.24	0.01	0.52	96 of 99	*	0.60	
PFDeA	0.73	0.26	2.7	87 of 99	0.20	0.80	
PFBA	0.08	0.05	0.92	67 of 99	NA	NA	
PFDS	0.05	0.01	0.10	59 of 99	NA	NA	
PFDoA	0.07	0.05	0.29	52 of 99	*	0.20	
PFHpA	Not found	0.05	0.36	20 of 99	*	0.10	
7:3FTA	Not found	0.05	0.15	5 of 99	NA	NA	
PFBuS	Not found	0.05	0.80	3 of 99	*	**	
6:2 FTS	Not found	0.05	0.15	3 of 99	NA	NA	
PFOSA	Not found	0.01	0.02	3 of 99	*	**	
Et-PFOSA-AcOH	Not found	0.05	0.29	3 of 99	*	0.11	
5:3 FTA	Not found	0.06	0.16	2 of 99	NA	NA	
6:2 diPAP	Not found	0.05	0.35	2 of 99	NA	NA	

We looked for the following additional PFASs, but we did not find any of them in anyone's blood: 4:2 FTS, 6:6 PFPI, 6:8 PFPI, 8:2 FTS, 8:2 PAP, 8:2 diPAP, FHEA, FHUEA, FOEA, FOUEA, PFHxPA, PFOPA, and FOSA.

NA: Not available

* The middle level in the U.S. cannot be calculated because this PFAS was not found in enough people.

** The 95th percentile in the U.S. cannot be calculated because this PFAS was not found in enough people.

Frequently Asked Questions about PFASs

Where are PFASs found?

- Some foods, including:
 - Some red meat and fish.
 - Some butter and margarine.
 - Some fast food, like French fries and pizza.
 - Some packaged snacks, like potato chips.
- Certain grease-repellent paper food containers, such as some microwave popcorn bags, take-out boxes, packaging for store-bought ready-made food, fast-food wrappers, or paper used for dim sum and baked goods.
- Stain-resistant carpets and some carpet cleaning solutions.
- Stain- and water-resistant fabrics and some stain- and water-repellent sprays.
- Some non-stick cookware, including the inner pot of some electric rice cookers.

What are possible health concerns?

- Scientists are still studying how PFASs might affect people's health. There is concern that some PFASs:
- May affect the developing fetus and child, including possible changes in growth, learning, and behavior.
 - May decrease fertility and interfere with the body's natural hormones.
 - May affect the immune system.
 - Might increase cancer risk.

What are possible ways to reduce exposure?

- Scientists are not sure how best to reduce exposure to PFASs. However, you can:
- Include plenty of variety in your and your child's diet.
 - Limit how often you eat foods from grease-repellent paper containers.
 - Avoid buying stain-resistant carpets.
 - Avoid buying products labeled stain- or water-resistant, such as some fabrics, furniture, or clothes.
 - Avoid using sprays and carpet cleaning solutions that contain PFASs.
 - Because PFASs can come out of products and collect in dust, wash your hands often, especially before eating and preparing food, clean your floors regularly, using a wet mop or HEPA vacuum, and use a damp cloth to dust.

For more information:

National Biomonitoring Program fact sheet on perfluorochemicals, also known as perfluoroalkyl substances:

www.cdc.gov/biomonitoring/PFCs_FactSheet.html