

# Coping with Public Health Concerns: Exposure to PFCs

Perfluorinated chemicals (PFCs) are a family of synthetic chemicals that have been used for decades to make coatings and products that are resistant to heat, oil, stains, grease and water. PFCs have been identified in the well water at Pease International Tradeport.

## What We Know: PFCs are “Everywhere”

### Consumer Products

- Cookware (Teflon®, Nonstick)
- Fast Food Containers
- Candy Wrappers
- Microwave Popcorn Bags
- Personal Care Products (Shampoo, Dental Floss)
- Cosmetics (Nail Polish, Eye Makeup)
- Paints and Varnishes
- Stain Resistant Carpet
- Stain Resistant Chemicals (Scotchguard®)
- Water Resistant Apparel (Gore-Tex®)
- Cleaning Products
- Electronics

### Industrial Uses

- Photo-Imaging
- Metal Plating
- Semiconductor Coatings
- Aviation Hydraulic Fluids
- Medical Devices
- Fire-Fighting Foam
- Insect Baits
- Printer and Copy Machine Parts
- Chemically Driven Oil Production
- Textiles, Upholstery, Apparel and Carpets
- Paper and Packaging
- Rubber and Plastics

### Action Steps for Maintaining Your Health:

- Check well water for known harmful contaminants such as arsenic, radon, uranium, and bacteria
- Maintain a sensible diet as recommended by primary care physicians and pediatricians
- Maintain general, routine good health practices – nothing different than would be expected based on location
- As appropriate, practice reducing your exposure to PFCs
- Practice stress management to prevent the unknown effects of PFCs from resulting in chronic or intense stress

**What We Don't Know: To date, no one knows the impact or implications of PFCs in the environment.** The EPA has designated them “contaminants of emerging concern” (CEC) in order to study them further. This CEC designation is NOT a warning of known impact on human health and the environment (EPA 2014b).

**News of an environmental issue naturally elevates public awareness** and, sometimes, alarm. This has behavioral health implications for both individuals and the community. The keys to managing such distress are (1) promoting calm in self and others and (2) regaining a sense of life-control in the face of uncertainty.

### **What We Know:**

- Public health and environmental concerns have a wide range of possible effects including fear, anxiety, irritability and anger. When such reactions become chronic they can contribute to fatigue, depression, substance misuse, lowered productivity, and relationship problems.
- A certain amount of fear is a reasonable and expected reaction that motivates survival in a positive and protective way
  - Moderate fear may even promote helping others (a sense of community)
  - Intense fear hinders the ability to take appropriate action and can result in uncharacteristic or irrational behavior that may be harmful to oneself or others
- Some people may experience a sense of shattered assumptions about how life is supposed to be – feeling like nothing is the same
- When many people are distressed at once, the effects accumulate. Research suggests that threats to communities can lead to distrust, polarization, and impulsive decision-making.
- Communities with a history of collaboration, information sharing, and stakeholder partnerships are better able to promote calm, trust and realistic confidence.

## Signs of Stress

What are some other common signs that you may be experiencing stress? And how do you know when your stress level is becoming harmful?

*You may be able to “see” these stress signs better in your friends and family than in yourself.*

### Problematic or Risky Behavior

- ✓ An increase or decrease in your energy and activity levels
- ✓ An increase in irritability, angry outbursts, or frequent arguing
- ✓ Inability to feel pleasure or have fun
- ✓ Having trouble relaxing or sleeping
- ✓ An increase in your alcohol, tobacco use, or use of illegal drugs
- ✓ Having difficulty communicating or listening
- ✓ Crying frequently
- ✓ Worrying excessively
- ✓ Wanting to be alone most of the time
- ✓ Blaming other people for everything
- ✓ Having difficulty giving or accepting help

### Bodily Sensations or Physical Effects

- ✓ Having headaches and other pains
- ✓ Losing your appetite or eating too much
- ✓ Having stomachaches or diarrhea
- ✓ Sweating or having chills
- ✓ Getting tremors or muscle twitches
- ✓ Being easily startled
- ✓ Muscle tension

### Difficulty Thinking

- ✓ Having trouble remembering things
- ✓ Feeling confused
- ✓ Having trouble thinking clearly and concentrating
- ✓ Having difficulty making decisions

### Strong Negative Feelings or Social Conflict

- ✓ Being anxious or fearful
- ✓ Feeling depressed, deep sadness
- ✓ Feeling guilty
- ✓ Feeling anger, irritability, conflict with others
- ✓ Feeling heroic, euphoric, or invulnerable
- ✓ Not caring about anything
- ✓ Difficulty maintaining emotional balance
- ✓ Withdrawal or isolation

### The Northern New England Poison Center Recommendation: Avoid Myths for Treating PFC Exposure:

- Do not take Iodine or Iodide supplements
- Do not take excessive or unusual amounts of Vitamin C or Omega-3 fatty Acids
- Do not revaccinate
- Do not drink excessive amounts of well or bottled water
- Do not avoid drinking water
- Do not take excessive or unusual amounts of dietary supplements

## Practice Stress Management for your Health

- Know your personal signs of stress. Include others in your stress control plan; they can tip you off when they recognize your stress signs.
- Identify major stressors and develop a plan that identifies how you will address your stress
- Take time for yourself. Mentally disconnect from distressing information as completely as possible – limit exposure to media or conversations related to PFCs when possible.
- Choose constructive ways to release stress such as walking, stretching, deep breathing, reading, listening to music, etc.
- Practice healthy sleep behaviors. Train your body to downshift by getting into a routine sleep pattern.
- Try to eat nutritiously. Foods high in sugar, caffeine, alcohol, and tobacco can all trap stress chemicals in muscle tissues and leave you with flu-like symptoms (achy, fatigued, nauseous, dehydrated, etc.) .
- Use community networks to correct myths or misinformation.
- Maintain collaborative relationships among stakeholders.
- Promote action steps that are consistent with professional guidance (CDC, EPA, Public Health, medical associations, etc.
- Work with the local public health network to focus on constructive action that can be implemented once studies are complete and best practices are available.