Health Hazards of PFAS in Drinking Water

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March 10, 2022
PFAS are a family of man-made chemicals that have been used in many products.
Firefighting foam
Firefighting foam  Non-stick cookware
Firefighting foam

Non-stick cookware

Food packaging
Firefighting foam

Non-stick cookware

Food packaging

Water-resistant materials
People can be exposed to PFAS through several ways.
Some PFAS can impact human health.
High levels of PFAS may increase cholesterol.
High levels of PFAS may

- Increase cholesterol
- Reduce antibody response
High levels of PFAS may

- Increase cholesterol
- Reduce antibody response
- Decrease fertility in women
PFAS may also increase the risk of:

- Thyroid disease
- Osteoarthritis
- Ulcerative colitis
- Cancer (Kidney, testicular)
We work to protect health and safety of Wisconsinites from conventional and emerging contaminants.
We do this by evaluating the potential for drinking water hazards to impact health.
We do this by

Evaluating the potential for drinking water hazards to impact health.

Coordinating communications with partners on health hazards.
We do this by

- Evaluating the potential for drinking water hazards to impact health.
- Coordinating communications with partners on health hazards.
- Sharing how people can take to reduce their risk.
We do this by

Evaluating the potential for drinking water hazards to impact health.

Coordinating communications with partners on health hazards.

Sharing how people can take to reduce their risk.
DHS has recommended standards for 18 PFAS to protect the people of Wisconsin.
<table>
<thead>
<tr>
<th>Substance</th>
<th>Concentration</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>DONA</td>
<td>3 µg/L</td>
<td>PFOA</td>
</tr>
<tr>
<td>PFHxA</td>
<td>150 µg/L</td>
<td></td>
</tr>
<tr>
<td>HPFO-DA</td>
<td>300 ng/L</td>
<td></td>
</tr>
<tr>
<td>PFHxS</td>
<td>40 ng/L</td>
<td>PFOS</td>
</tr>
<tr>
<td>PFBA</td>
<td>10 µg/L</td>
<td>FOSA</td>
</tr>
<tr>
<td>PFNA</td>
<td>30 ng/L</td>
<td></td>
</tr>
<tr>
<td>PFBS</td>
<td>450 µg/L</td>
<td>NEtFOSA</td>
</tr>
<tr>
<td>PFODA</td>
<td>400 µg/L</td>
<td></td>
</tr>
<tr>
<td>PFDA</td>
<td>300 ng/L</td>
<td>NEtFOSE</td>
</tr>
<tr>
<td>PFDoA</td>
<td>500 ng/L</td>
<td>NEtFOSAA</td>
</tr>
<tr>
<td>PFUnA</td>
<td>3 µg/L</td>
<td></td>
</tr>
</tbody>
</table>

µg/L = micrograms per liter = equivalent to parts per billion
ng/L = nanograms per liter = equivalent to parts per trillion
DHS uses a hazard index approach to evaluate health risk from PFAS mixtures.
PFAS are commonly found together as mixtures...
And some **PFAS** chemicals can impact health in the same ways.

- Developmental Health
- Reproductive Health
Hazard Index =
Hazard Index = Level of PFAS 1 in drinking water

STOP

Health guideline for PFAS 1
Hazard Index = \text{Level of PFAS 1 in drinking water} + \text{Level of PFAS 2 in drinking water}

\text{STOP}

\text{Health guideline for PFAS 1} + \text{Health guideline for PFAS 2}
Hazard Index = Level of PFAS 1 in drinking water + Level of PFAS 2 in drinking water + STOP + STOP

Health guideline for PFAS 1
Health guideline for PFAS 2
DHS recommends that action be taken to reduce PFAS exposure when the hazard index is 1 or greater.
People can be exposed to PFAS through drinking water.

Exposure to high levels of some PFAS can affect health.

DHS’ recommended standards and hazard index approach protect people from the negative effects of PFAS.
Thanks!

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