



# HUMAN DEVELOPMENT AND CLIMATE CHANGE

Summary produced by the Blackfeet Environmental Office  
in cooperation with the Center for Large Landscape Conservation

For more information visit [blackfeetclimatechange.com](http://blackfeetclimatechange.com)

Climate change may increase risks of birth defects and early childhood exposure to substances that can impact development. Exposure to chemicals and heavy metals (for example, lead, mercury, and arsenic), whether through air, water, or food contamination, have been shown to impact human development at varying levels. Exposure to herbicides and pesticides can increase the risk of developmental changes, which is of particular concern since climate change is expected to increase weeds and pests. With harmful algal blooms expected to increase, pregnant women could have a greater risk of exposing a developing human to biotoxins.

Climate change is also expected to impact food supply and distribution, which would have adverse impacts on maternal health and fetal development. Poor nutrition in pregnancy can cause developmental deficits in children. Our decisions and actions can influence the degree to which our community will experience these impacts to our health. Being proactive and making decisions now to safeguard health will help us be more resilient.



## WHO IS MOST AT RISK?

Risk factors vary. However, people involved in ranching and farming operations, and their families, can have increased exposure to pesticides and herbicides. Pregnant women and children who eat a lot of fish or shellfish can have increased risk of exposure to biotoxins and methylmercury.

## HOW CAN WE ADAPT?

- Provide pregnant women with access to prenatal health care and early intervention services, and plan for sustaining these services during and after extreme events.

- Support the services that provide women with access to healthy and nutritious foods, and prepare to sustain those services in a changing climate that poses threats to food supply and distribution.
- Educate pregnant women about recommendations for fish and shellfish consumption.

This chart can help you consider which fish to eat and how often, based on mercury levels.

## Advice About Eating Fish

### What Pregnant Women & Parents Should Know


Fish and other protein-rich foods have nutrients that can help your child's growth and development.

For women of childbearing age (about 16-49 years old), especially pregnant and breastfeeding women, and for parents and caregivers of young children.

- Eat 2 to 3 servings of fish a week from the "Best Choices" list OR 1 serving from the "Good Choices" list.
- Eat a variety of fish.
- Serve 1 to 2 servings of fish a week to children, starting at age 2.
- If you eat fish caught by family or friends, check for fish advisories. If there is no advisory, eat only one serving and no other fish that week.\*


### Use this chart!

You can use this chart to help you choose which fish to eat, and how often to eat them, based on their mercury levels. The "Best Choices" have the lowest levels of mercury.



**What is a serving?**

To find out, use the palm of your hand!



For an adult  
4 ounces

For children, ages 4 to 7  
2 ounces

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\*Some fish caught by family and friends, such as larger carp, catfish, trout and perch, are more likely to have fish advisories due to mercury or other contaminants. State advisories will tell you how often you can safely eat those fish.

www.FDA.gov/fishadvice    EPA United States Environmental Protection Agency    FDA U.S. FOOD & DRUG ADMINISTRATION

THIS ADVICE REFERS TO FISH AND SHELLFISH COLLECTIVELY AS "FISH" / ADVICE UPDATED JANUARY 2017

Chart courtesy of the U.S. Food and Drug Administration and the U.S. Environmental Protection Agency.

- Ensure the safety of food and water supply and distribution systems and prepare strategies for responding to extreme weather events that could contaminate and/or disrupt food and water supplies.
- Encourage hunters to use lead-free bullets to reduce lead exposure.

For more information, visit the Blackfeet Country and Climate Change website:  
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Content on this page is summarized from the U.S. Global Change Research Program's report, "The Impacts of Climate Change on Human Health in the United States", the National Institute of Environmental Health Sciences' "A Human Health Perspective on Climate Change", and the Centers for Disease Control and Prevention's "When Every Drop Counts" to briefly describe some of the possible health outcomes that are most relevant to Blackfeet Country. This page does not include all possible health impacts and outcomes, nor does it include all possible risks and responses (December, 2017).