

Dense smoke from wildfires contributed to stress and anxiety, as well as impacted the physical health of many Methow Valley residents in summer 2021.

# Changing climate, changing health

## Warmer, wetter world could lead to new health risks

#### **BY SANDRA STRIEBY**

**C**limate change is likely to produce a warmer, wetter world with more natural disasters. Locally, we can expect larger and more frequent wildfires; smoke, locally generated or otherwise; and earlier loss of mountain snowpack (with potential flooding as snow melts more quickly in the spring). Drought may become more frequent and problematic, possibly affecting food production. Those changes can affect both our mental and our physical health.

#### How our bodies may be affected

According to the World Health Organization (WHO), "Extreme high air temperatures contribute directly to deaths from cardiovascular and respiratory disease, particularly among elderly people."

We've already seen that happen in Okanogan County, with four heat-related deaths this summer. Higher temperatures may also exacerbate or increase the incidence of illnesses such as kidney problems and urinary tract infections.

Warmer temperatures are likely to result in longer growing seasons and earlier pollen production. Increases in atmospheric CO2 may also increase the amount of pollen that's produced. Those factors can add up to more allergic reactions in those who are susceptible, according to the Fourth National Climate Assessment.

Diseases carried by ticks and mosquitoes may be on the rise, as well. Warmer weather is expanding their ranges and the seasons during which they are active, and increasing rates of disease caused by their bites. The Washington Department of Health (DOH) lists several ailments that may be spread by ticks in our state, including Lyme disease and Rocky Mountain spotted fever. DOH also reports that Washington's 40-plus mosquito species can spread disease, including West Nile virus, western equine encephalitis, and St. Louis encephalitis.

Air pollution is also likely to increase, both as a direct result of temperature increases and as a side effect of wildfires. High temperatures increase ground-level ozone, which forms when heat and sunlight act on pollutants in the air. It can cause mild symptoms like a scratchy throat and breathing discomfort; effects can be more severe for people with lung disease and asthma.

The greater threat in the Methow Valley is likely to be one with which we are all familiar: wildfire smoke and the tiny particles of burned material that it contains, according to Liz Walker, Director of Clean Air Methow. Those particles can irritate

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#### **Smoke Ready Checklist**

- Gather N95 masks
- Ensure you can create clean indoor air
- Know how to get air quality information
- Make a plan for vulnerable household members
- Consider ideas to stay mentally strong and engaged Learn more about each item on the check list at https:// www.cleanairmethow.org/ smoke-ready-checklist.

our eyes, noses, skin, lungs, and hearts, Walker said, and contribute to kidney problems, neurological disease, and low birth weights.

"We will continue to have poor summer air quality ... for the foreseeable future," Walker said. She adds, though, that "there are ways we can learn to live with it, learn to stay healthy, that will make it easier."

#### **Defensible space**

Our No. 1 defense, according to Walker, will be to "create spaces



Photo by Natalie Johnson

Instant Brands, a Chicago-based company, donated 2,000 of its Instant Air Purifiers and 2,000 replacement filters to the Methow Valley after reading national news coverage of its air quality during summer 2021.

that have clean indoor air ... as a safe refuge when we have poor air quality."

To do that: if you have an HVAC system, be sure it's set to recirculate

air, and use an upgraded (ideally, MERV 13) filter. Many houses in the Methow Valley don't have HVAC in that case, using an air purifier can keep the air safe to breathe.

In addition, Walker said, "People need to use N95 masks, fitted well ... It's worth the effort to find an N95 mask that you feel comfortable in." Gathering masks and preparing to maintain clean indoor air are two of five steps on Clean Air Methow's Smoke-Ready Checklist and are part of becoming a smoke-ready community that is prepared for seasonal smoke.

#### How our minds may be affected

Climate change can affect mental as well as physical health. Amy Snover, Director of the Climate Impacts Group at the University of Washington and part-time valley resident, outlined four ways in which climate change is likely to affect mental wellbeing. First, there may be stress or anxiety related to immediate effects.

"We know one of the most stressful things that happens in the valley has been the fires, and we know that climate change is going to increase the risk of fires," Snover said.

Fires are likely to be unsettling while they're happening, provoking fears about our safety and whether our houses or land will be burned.

"Along with that go all the challenges of it not being safe or healthy to be physically active outdoors in

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Two thousand Instant Air Purifiers were distributed to Methow Valley residents and businesses this summer.

Photo by Natalie Johnson

smoky times," Snover said. "There can be real mental health stress over whether it's safe to do your job outside or whether your livelihood is likely to survive or what economic stress you are going to have," she said.

Other traumatic changes, such as flooding or extreme weather events, can have similar effects.

In addition to the stresses during and immediately following such events, people may experience grief related to loss of place and landscape changes; anticipatory grief; and feelings of alienation related to societal response (or lack of response) to climate change.

Changes in landscapes and natural patterns can evoke feelings of loss. Some of those changes may happen very quickly, as when a forest is transformed by fire. Others may occur over time, as when trees stressed by heat and drought are killed by insects, or snow seasons become shorter.

"That can bring grief, that can bring anxiety, that can bring anger or frustration," Snover said.

Anticipatory grief, or climate anxiety, is likely to be triggered when



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#### **Resources for coping with climate-related feelings**

- Find a climate-aware therapist: https://www.climatepsychology.us/ climate-therapists
- Participate in a climate café: https://climatecafes.org/
- Visit Climate & Mind for more resources, including steps to take and support-group information: https://www.climateandmind.org/
- Adults who work with young people can find resources at Talk Climate: https:// talkclimate.org/

people acknowledge the prognosis for the future, "knowing the large changes that are set in motion, and that even larger changes are coming if we don't drastically reduce emissions, and yet feeling resigned around an inability to fix the problem," Snover said. Finally, watching communities and governments proceed as if climate-related changes are not happening "can be very alienating and dislocating," she said.

#### Beyond doom and gloom

Andrew Bryant, developer of the Climate & Mind website and a therapist practicing in Seattle, suggests four steps for dealing with mental and emotional responses to climate change. First, it's important to identify and accept one's reactions. Then, talk with someone you trust—a friend, family member, or therapist, for instance.

"Getting the feelings out and naming them is a huge step," Bryant said. It's important to validate "realistic concerns or anxieties based on projections about the future," and recognize that you're not alone in having those feelings, he said.

Once those two steps have been taken, Bryant recommends connecting with others who have



similar concerns. Whether you join an environmental group, collaborate with neighbors, or volunteer as part of a trail crew, said Bryant, becoming part of a larger community can help overcome a sense of isolation.

Finally, take action. Taking the first three steps will leave you better prepared to identify "action that can be meaningful and aligned with your strengths, capacities, and resources," said Bryant. Skipping the initial steps may lead to feeling overwhelmed and inaction, or action that doesn't suit you. The ideal is to "find action that's sustainable [and] rewarding" for oneself, recognizing that each of us has a unique role to play, he said.

Both Snover and Walker agree that there's much we can do to take charge of our circumstances and affect long-term outcomes related to climate change. Walker suggests we acknowledge the scope of the problem and then "do what we can. Work locally to make sure your property is as prepared as possible; engage on forest health plans; become a knowledgeable citizen—participate."

"The actual change we will see is not set in stone...we have to choose not to have that future, and we can," said Snover.



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