



wildsight golden

Box 25 Golden BC V0A 1H0 • 250-439-8491 • e golden@wildsight.ca

For Immediate Release

Health Effects of Wood Smoke – Something to Sneeze At

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In this installment of our bi weekly series on air quality, we consider the potential effects of excessive wood smoke on the health of residents and visitors to Golden.

Wood smoke contains a number of hazardous chemical substances such as carbon monoxide (CO), nitrogen oxides (NO_x), volatile organic compounds (VOCs), dioxins, polycyclic aromatic hydrocarbons (PAHs) (including potential carcinogens such as benzo[a]pyrene), and inhalable particulate matter (PM).

The chemical composition and quantity of contaminants emitted depends on how the wood is burned. Conditions that burn wood as completely as possible, not only produce the most usable energy, but also emit the least smoke. In general, more energy efficient wood burning appliances produce less of these hazardous air pollutants.

Particulate matter goes deep into the lungs

One of the biggest human health threats from wood smoke comes from particulate matter less than 2.5 microns in size (PM_{2.5}). These very fine particles are suspended in air, can be inhaled deep into the lungs, and can trigger asthma attacks and heart problems.

Wood smoke is one of the largest contributors to PM_{2.5} contamination in Golden along with diesel exhaust.

How many people are sparking up a new fire? Is the road closed increasing vehicle idling? Are slow wind speeds and temperature inversions trapping emissions in the valley?

Those most sensitive to the effects of PM_{2.5} include young children with developing lungs, the elderly, and people of all ages who have asthma, bronchitis, other respiratory

problems, or cardiovascular disease. On average, an adult breathes 13,000 litres of air each day. Children breathe 50% percent more air per kilo of body weight.

Breathing wood smoke can lead to:

- Eye, lung, throat and sinus irritation
- Increased risk of respiratory tract illness including coughing, wheezing, shortness of breath and chest tightness
- Reduced lung function, especially in young children
- Increased severity of existing lung diseases such as asthma, emphysema, pneumonia and bronchitis
- Increased risk of heart attacks

Long term exposure to air pollution may contribute to chronic obstructive lung disease, increased risk of cancer and cardiovascular disease.

Smoke from backyard recreational fires also releases harmful contaminants that can penetrate indoors to neighboring homes through intake vents and windows.

The Golden and District Air Quality Committee strongly encourages those who choose to burn wood to be a good neighbor and minimize smoke by building only small hot fires with dry, seasoned wood. It's also important to use only EPA/CSA approved wood stoves and to properly maintain your stove and chimney. Check your chimney frequently to see if it is smoking and if so, take action to reduce your contribution to air pollution in Golden.

It is for the benefit of everyone's health.

For more information about the wood stove exchange rebates, air quality issues, or to find out how to join the Golden and District Air Quality Committee, please see <https://wildsight.ca/branches/golden/air-quality/>.

For more information, please contact Leslie Adams, Branch Manager, golden@wildsight.ca