

# **Forest Fire Smoke Report**

## **From State Medical Officer Steven D. Helgerson, MD, MPH**

Pertinent information on acute and long-term effects from smoke exposure  
June, 2009

Dear Reader:

Each year forest fires and their resultant smoke have a significant impact on the health of many Montana citizens. The individuals affected the most and having the most serious outcomes are those with underlying cardiac and/or pulmonary disease and the elderly. Individuals with asthma, emphysema, chronic bronchitis and other chronic pulmonary diseases as well as those with coronary artery disease, pulmonary hypertension and other cardiovascular diseases are particularly vulnerable when the air quality deteriorates. Special efforts must be made to identify these individuals and assure that their exposure to an adverse environment is minimized.

Although the impact of the poor air quality is quite serious for those with underlying heart and lung disease this is not necessarily true for healthier individuals. There is no doubt that the smoke is irritating and results in scratchy throats, dry coughs, irritated sinuses, headaches and rhinorrhea. However, these affects are not permanent. Studies have been conducted in professional forest fire fighters who have been followed for up to 15 years. Although these individuals had many of the acute, irritating health problems during their exposure to the smoky air over the years, they did not suffer any long-term heart or lung problems.

That is not to say that one should ignore the smoke and go on about business as usual. Increased levels of carbon monoxide and carbon dioxide accompany the particulate matter in smoky air. This is important because it has an impact on exercise tolerance. Therefore people should be careful not to exert themselves excessively when the quality of the air is poor. This also pertains to children who are involved in sports. It is only prudent to assure that activities such as football and soccer practices are conducted indoors and if air quality is poor games may need to be rescheduled. This will help avoid preventable health problems in Montana youth.

It goes without saying that anyone who smokes tobacco should stop smoking. There is no doubt that this type of smoke exposure leads to long term adverse health effects.

If you have any questions about these issues please do not hesitate to contact me at {  
HYPERLINK "mailto:shelgerson@mt.gov" }

Sincerely,  
Steven D. Helgerson, MD, MPH  
Medical Officer