



Facts About Environmental Exposure to Grain Dust

Grain dust is a complex mixture of grain particles and other associated materials.

Irritation of eyes, nose, and throat and cough are the most common symptoms associated with environmental exposure to grain dust.

The best way to avoid symptoms is to increase the distance between yourself and the source of the dust and to use Sun Wind Dust Goggles and dust inhalation barriers.

WHAT IS GRAIN DUST?

Grain dust is a complex mixture of grain particles and other associated materials. It is produced during the mixing, pouring, or transport of grains, including wheat, corn, rice, barley, or sorghum. Grain dust may produce allergic reactions in some people.

WHAT ARE THE SYMPTOMS THAT GRAIN DUST EXPOSURE MAY CAUSE?

Typical symptoms are due to irritation:

- ✓ Eye irritation
- ✓ Nasal irritation (and runny nose)
- ✓ Cough

Other symptoms that are less common and generally associated with long-term, high-dose exposure in grain workers include:

- ✓ Wheezing
- ✓ Chest tightness and difficulty breathing
- ✓ Asthmatic reactions in certain people who are predisposed to allergies
- ✓ "Grain fever" (an allergic reaction that can happen after very high dose exposure)
- ✓ Persistent breathing problems in certain people after long-term, high-dose exposure (i.e., grain workers over years)

WHO IS AT RISK FOR SYMPTOMS AND MEDICAL PROBLEMS DUE TO GRAIN DUST EXPOSURE?

Anybody exposed to even low levels of grain dust might develop symptoms. The likelihood varies among individuals. The vast majority of problems noted have been in workers who are exposed to high levels of grain dust every day for years. There is evidence that those with a tendency for allergies (e.g., past history of asthma) are more likely to develop symptoms such as persistent cough, wheezing, difficulty breathing, and rash. In addition, some studies have shown that smokers have a higher risk of developing lung symptoms than non-smokers.

ARE THESE PROBLEMS PERMANENT?

Not when the exposure is limited. The symptoms caused by grain dust usually clear when the exposure ends or falls below a

certain level of intensity. Some people who work with high levels of grain dust over many years may develop chronic lung disease that is similar to that developed after years of smoking. This has been shown to persist even after removal from the exposure.

WHAT CAN I DO TO LESSEN MY EXPOSURE TO GRAIN DUST?

- ✓ Increase the distance between yourself and the source of the dust
- ✓ Use Sun Wind Dust Goggles and dust barriers (surgical masks, scarves)
- ✓ Stay indoors, if possible, when outdoor grain dust levels are highest

IN ADDITION TO MINIMIZING MY EXPOSURE, WHAT CAN I DO TO TREAT SYMPTOMS THAT DEVELOP DUE TO EXPOSURE TO GRAIN DUST?

- ✓ Saline (salt water) eye drops
- ✓ Saline nasal spray
- ✓ Throat lozenges
- ✓ Cough suppressants
- ✓ Prescription inhalers for persistent wheezing, cough, breathing problems
- ✓ Other prescription allergy medicine
- ✓ See your medical provider for any symptoms that persist or are severe

Fact sheet available:

<http://www.chppmeur.healthcare.hqusareur.army.mil/>

References and more Information:

1. High Plains Intermountain Center for Agricultural Health and Safety (HICAHS)
<http://www.hicahs.colostate.edu/pdf%20files/WheatDust.pdf>
2. University of Maryland
http://www.inform.umd.edu/EdRes/Topic/AgrEnv/nd/occsafe/GRAIN_DUSTS.html
3. National Institute of Occupational Safety and Health (NIOSH) publication number 89-126 – click on table - very technical, detailed
<http://www.cdc.gov/niosh/pdfs/86-117.pdf>