

DUST & SAND STORMS

A global environmental problem that affects the environment and people in various ways. They reduce air quality and visibility and may have adverse effects on health.

What is a dust storm?

Dust or sand storms are natural events that usually occur when **STRONG WINDS** lift a large amount of sand, dust, dirt and other fine particles from bare and dry soil into the atmosphere, transporting them to sites hundreds to thousands of kilometres away. Dust storms are **MOST COMMON IN DRY SEASONS** or arid regions with little vegetation cover, and their frequency may be increased after periods of drought. Human activities and global climate change have resulted in an increased frequency of dust/sand storms in various parts of the world.

Why can dust or sand storms be a problem?

Depending on weather conditions and fine particle sizes, dust can remain suspended in the atmosphere for a few hours or several days. However, its impact can last for months and years afterwards and can be dangerous for several reasons:



A dust or sand storm may **REDUCE VISIBILITY** while driving a car or riding a motorcycle, leading to a higher risk of motor vehicle incidents and associated injuries, disability or death



Dust and sand storms are associated with **INCREASES** in emergency room visits and hospital admissions



Dust storms may **REDUCE AGRICULTURAL PRODUCTIVITY** by removing organic matter and nutrient-rich particles from topsoil which is blown away



There may be an **INCREASE** in hospital visits for health outcomes related to sand and dust storms, including acute and chronic respiratory affections, eye irritation or injuries and traffic injuries.



Dust or sand from storms may settle on agricultural lands, **CAUSING DAMAGE** to crops, as well as houses and other infrastructure



Prolonged **EXPOSURE** to airborne dust may lead to chronic breathing and lung problems, and possibly heart disease



Dense dust in the atmosphere can **REDUCE VISIBILITY** for pilots, causing delays and cancellation of flights



Dust or sand storms may **HARM** animals (e.g., livestock, wildlife etc.)



CONTAMINATION AND REDUCTION of water supplies for drinking irrigation etc.



Breathing dusty air during a dust storm may cause **RESPIRATORY AND HEART PROBLEMS**

Who is mostly affected by dust or sand storms?

Anyone may be detrimentally affected by a dust or sand storm. The longer you are exposed to high levels of dust or sand, the more likely you are to experience health effects. Those at **HIGHEST RISK** of developing relatively severe symptoms include:



Infants and children



Pregnant women



The elderly



People with existing breathing or lung conditions, such as asthma, bronchitis and emphysema



People with heart conditions or diabetes

How can a dust storm harm my health?

Relatively large particles of sand or dust usually remain in the nose, mouth or throat, and cause local irritation. Smaller particles may be inhaled deeply into the lungs. Very small dust particles may enter the bloodstream and cause damage to blood vessels, as well as alter the coagulation pathway, cause structural and biological changes of the cells, leading to inflammatory response and increase the risk of heart failure and heart attacks. Most of the time particles of sand or dust during storms are large and not inhaled; however, some people, especially those with existing breathing-related problems, such as asthma and emphysema, may experience difficulties.

The **MOST COMMON SYMPTOMS** and ill health outcomes experienced during or after a dust or sand storm are:



Skin irritation



Worsen heart problems



Hay fever and other allergic conditions



Throat irritation, coughing, sneezing, wheezing or chest tightness



Itchy and burning eyes



Lower respiratory tract infections (including viral, bacterial and fungal infections) | Triggering of conditions such as asthma, bronchitis and chronic obstructive pulmonary disease | Lung fibrosis (sand and dust storm-associated silicosis)

What can I do to protect myself and my family during or after a dust or sand storm?



STAY INDOORS until the storm passes. If you have to go outside, spend as little time outdoors as possible. Close all doors and windows



SWITCH OFF AIR CONDITIONERS or set them to the recirculate setting to avoid drawing air from the outside indoors



COVER your nose and mouth with a mask or damp cloth to prevent the inhalation of dust particles



If you have **GOGGLES** or **GLASSES**, put them on



AVOID VIGOROUS EXERCISE during dust or sand storms, especially if you have asthma, another breathing-related health problem or diabetes



Continue to take prescribed **MEDICATION**



Help other people to **UNDERSTAND WHAT DUST STORMS ARE**, how they can affect health and how to prevent negative health impacts



If you are an asthmatic or have a respiratory condition and you **DEVELOP SYMPTOMS** such as shortness of breath, coughing, wheezing, or chest pain during or after a dust or sand storm, follow your prescribed treatment plan. If symptoms do not settle, seek medical advice



Visibility deteriorates very quickly during a dust or sand storm. If you are on the road and your ability to drive a vehicle is impaired by poor visibility, **REDUCE YOUR SPEED**. Be prepared to pull off the road at a safe location if visibility deteriorates to less than 100 metres. If your car is air-conditioned, reduce the amount of dust entering your car by switching the air intake to 'recirculate'

Where can I find more information about dust and sand storms?



The South African Weather Services (SAWS) monitors the climate conditions and air quality in South Africa. If a dust storm is imminent, SAWS will alert the public on their website and through radio and television news bulletins. For more information, visit the SAWS website: www.weathersa.co.za/home/warnings