Volcanoes

Advice for travellers affected by volcanic activity during their trip

Key messages

- **Most travellers are at extremely low risk of being affected by volcanic activity.**
- **Those travelling to areas of volcanic activity should be prepared, check FCDO and local authority advice and follow their guidance.**
- **Individuals with pre-existing health conditions should seek health advice prior to travel to volcanic areas.**
- **During an eruption monitor local media, exercise caution and follow evacuation orders.**
- **Avoid exposure to ash.**

Overview

A volcanic eruption is a natural disaster that can cause widespread damage, disruption and pose multiple health threats, depending on how close the volcano is to a community and whether there is any warning [1].

Volcanoes can produce ash particles, toxic gases, flash floods of hot water and debris called lahars, lava flows, and fast-moving flows of hot gases and debris called pyroclastic flows. Some dangers from volcanoes can be predicted ahead of time while others may occur with little or no notice after an eruption. Each volcano and situation is different [2].

A map is available showing the location of the earth's major volcanoes [3].

Volcanic eruptions can:

- Contaminate water supplies.
- Damage infrastructures and machinery.
- Reduce visibility through smog and harmful gases that may threaten low-lying areas [4].
- Negatively affect health, increasing the risk of, for example, infectious diseases, breathing difficulties, and irritation to skin, eyes, nose and throat, burns, injuries from falls and road

traffic accidents [2, 4].
- Cause secondary events, like floods, landslides and mudslides, if there is accompanying rain, snow or melting ice. Hot ashes can also start wildfires.

Risk for travellers

The risk of encountering a volcanic eruption is extremely low for most travellers.

Before travel

Before travelling to an area that is prone to volcanic activity, check local reports and follow the advice of the local authorities, including respecting any exclusion zones [2].

Check Foreign, Commonwealth & Development Office current travel advice and follow any guidance they provide, including recommendations not to travel [5].

Ash clouds can affect flight schedules, disrupt international travel and the operation of regional airports. Check with your airline or travel company for the latest information. Get comprehensive travel health insurance that covers all health conditions and any planned activities.

If you have any health problems consult your healthcare provider before travel. If you have a pre-existing breathing (respiratory) condition such as asthma, be aware you might be at increased risk of triggering or worsening your symptoms. If you choose to travel, make sure you travel with sufficient supplies of any regular medicines to cater for this.

During travel

During eruptions, remember areas beyond local exclusion zones can be affected by mud/debris flows (particularly in valleys) and volcanic ash falls.

- Monitor local media, exercise caution and follow the advice of the local authorities, including any evacuation orders [2, 5].
- Ideally stay inside, with windows and doors closed and do not travel unless you must.
- If your drinking water has ash in it, use another source of drinking water, such as purchased bottled water, until you are advised otherwise [2].

More information is available from the US Centers for Disease Control and Prevention and International Volcanic Health Hazard Network websites.

Exposure to ash can be harmful, particularly to the respiratory system. Avoid contact with ash as much as you can. If contact is unavoidable, keep skin covered with long sleeves and trousers and wear goggles to protect your eyes.

To protect yourself outdoors or when cleaning up ash indoors, you may wish to use some sort of

respiratory protection (e.g. a facemask) [4, 7]. When you wear respiratory protection, the effectiveness depends particularly on two factors: how effective the mask or material is at filtering particles (stopping the ash from passing through the material); and the fit of the mask or material to the face. The most effective masks are certified European P2 and P3 masks (equivalent to the US N95). It is not recommended to wear a facemask while sleeping. Care should be taken to ensure that it is not harder to breathe when using any form of respiratory protection. People with existing respiratory or cardiovascular disease should talk to a health professional about whether facemasks are suitable [6, 7].

After travel

Travellers who have been in an area affected by volcanic activity should consult their healthcare provider on return to the UK if they have any on-going health concerns or symptoms.

Resources

- WHO: Communicable diseases following natural disasters
- Our World in data: Natural Disasters
- World Meteorological Organization: Natural disasters and disaster risk reduction

REFERENCES

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