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Do foehn winds affect human health?

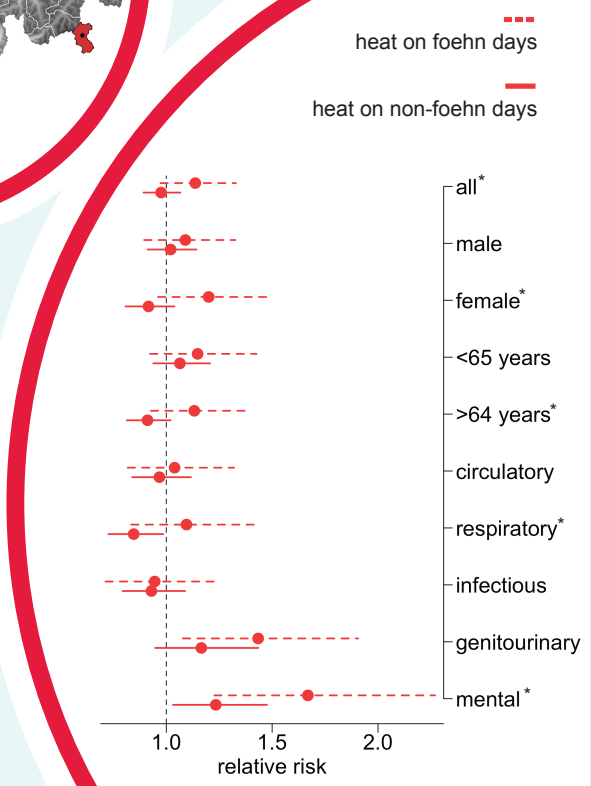
Foehn winds increase the risk of hospitalization during heat, especially for females and older individuals.

Results
We did not find a direct association between foehn winds and hospitalizations, even when adjusted for temperature and across all subgroups. However, foehn wind presence increased the risk of heat-related all-cause hospitalization. During heat, foehn winds disproportionally affected females, older individuals, respiratory and mental hospitalizations, while no effectwas observed for males and younger individuals. During cold, only the risk for mental hospitalization was increased by foehn wind presence.

Foehn winds are common in all mountainous regions, yet their health impacts remain poorly understood.

Research questions
1) Do foehn winds increase the risk of hospitalization?
2) Do foehn winds increase the risk of hospitalization associated with temperature?
3) Are certain subpopulations more vulnerable to both effects?

Methods
- Daily hospitalizations, mean temperature, foehn wind scores
- 8 foehn wind observing regions in Switzerland (1998–2019)
- Case-time series analysis with DLNMs, interaction term between foehn winds and temperature
- A foehn wind day has at least 6 hours of foehn wind.



Read the full paper here.