

Heat stress and preventive measures

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Wet Bulb Globe Temperature (WBGT) meter

Assess potential of heat injury at workplace by measuring WBGT to ascertain heat stress level:

High: $WBGT \geq 32^{\circ}C$

Moderate: $31^{\circ} < WBGT < 31.9^{\circ}C$

Low: $WBGT < 31^{\circ}$

The WBGT meter measures environmental conditions including air temperature, air humidity, air movement and level of solar radiation. It is portable and handheld units are also available.

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Ice slurry

There are studies to show that ingesting ice slurry mitigates heat injuries and improves heat tolerance, by lowering body core temperature by about half degree Celsius. Ingestion of ice slurry is also shown to be more efficient than drinking cold water.¹

A serving of 200-400ml of ice slurry would cool the body and improve heat tolerance for up to an hour, after which the effects will start to wear off. It is recommended to consume the ice slurry just before high intensity exercises, such as a 10km run. Use of ice slurry to mitigate heat stress is also one of the recommended measures under WSHC's guideline.

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¹ T.Naito and T.Ogaki, Comparison of the effects of cold water and ice ingestion on endurance cycling capacity in the heat, Journal of Sport and Health Science, 2017; Vol 6: 111-117
<https://www.sciencedirect.com/science/article/pii/S2095254615001258>