

International Golf Federation Extreme Heat Guidelines for Golf



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1. BACKGROUND

The IGF Extreme Heat Guidelines have been developed following a series of consultations with the IGF Medical Committee, senior medical staff and managers of the PGA European Tour, the PGA Australasian Tour, the PGA TOUR, The R&A, members of the IOC Medical and Scientific Commission and golfers.

These Guidelines are not mandatory. It is up to each event organiser or organizing committee to determine specific courses of action, based on the local circumstances of the event, historic measured meteorological data as well as local applicable laws and regulations.

These guidelines will be subject to review every two years (next due 2025).

2. INTRODUCTION

Risks associated with physical exercise in extreme heat / humidity include underperformance, heat related illnesses and conditions, heat stroke, and death. Risks / heat related illnesses and conditions in the context of golf can apply to players, caddies, event staff, media, and spectators.

Playing or caddying at golf tournaments provides moderate intensity physical activity for most persons (1*). While the lessened intensity of exercise compared to for example athletics, or tennis (2*) decreases risk of heat illness, exercise in the extremes of heat and / or humidity can be expected to have negative health consequences for some persons.

This document outlines guidance for persons exposed to these conditions, and for those responsible for the planning and hosting of golf tournaments that can be expected to be subject to challenging environmental and weather conditions (4*, 5*).

3. RISK FACTORS FOR HEAT ILLNESS:

(a) Increasing heat / humidity and risk of heat illness at golf tournaments.

Air temperature (Celsius)	Air temperature (Fahrenheit)	Relative Humidity	Risk of heat illness	Comments
<20	<68		Extremely low	
21-25	69-77	Up to 100%	Low	
26-30	78-86	>60%	Moderate	Risk increases with increased air temperature, and increased humidity
31- 37	87-99	>30%	High	Risk moderate with temperature in this range, even with lower humidity. Consider risk mitigation strategy.
>38	>100	0	Extremely high	Progressively higher with increasing air temperature and humidity. Mitigation strategies required. Consider event postponement.

The presence of wind, or increased air flow decreases risk (3*).

- (b) Lack of acclimatisation to heat / humidity.
- (c) Topography of course (hilly, lack of shaded areas or considerable walking between tees increases risk).
- (d) Individuals who have previously suffered heat injury.
- (e) Females, children, the elderly, and those with increased Body Mass Index are at increased risk.
- (f) Lack of access to heat illness mitigation strategies.
- (g) Lack of heat awareness and proper education on mitigation measures.

4. STRATEGIES FOR REDUCING RISK OF HEAT ILLNESS

4.1 Event scheduling

- (a) Where possible, events should be scheduled to avoid locations and conditions leading to inevitable high-risk of extreme temperatures.
- (b) Subject to event type and scheduling, if high thermal strain conditions are anticipated, consideration of timings to avoid exposure to the hottest part of the day should be considered.
- (c) Subject to event type and scheduling, if high thermal strain conditions are anticipated, the possibility to provide opportunities for regular pauses should be considered.

4.2 Pre-event strategies for reducing heat illness for players, caddies, staff, media, and spectators.

- (a) A risk assessment of heat injury at the event location at the same time of the year based on historical environmental and meteorological data should be conducted.
- (b) Specific education, on risk and available mitigations, to participants in advance of the tournament should be provided.
- (c) Adequate acclimatisation to hot and / or humid conditions. Full acclimatisation can take up to 10-14 days.
- (d) Information provided to players, caddies, staff, media, and spectators regarding:
 - i) Optimising hydration (including recommended level of daily hydration)
 - ii) Having appropriate clothing, breathable and UV blocking fabrics, and sunscreen (sun protection factor SPF 30 to SPF 50, alcohol based rather than oil based) should be used.
 - iii) Seeking shade (umbrellas, course structures or others) where possible

- (e) Planning and provision of
 - i) Shade and Cooling Stations around the course
 - ii) Water, beverages, and other fluids, preferably cooled to drink available for players, caddies, staff, media, and spectators.
 - iii) Medical facilities and personnel that can rapidly assess and treat persons exhibiting any symptoms of heat illness. Also, Medical personnel should be pre-trained to treat a range of related incidents from heat exhaustion to managing EHS (Exertional heat stroke).

4.3 Strategies during event for reducing heat illness for players, caddies, staff, media, and spectators.

- (a) Provide a daily assessment of risk conditions using Wet Bulb Globe Temperature (WBGT) measured on the course and main spectators stands or assembly areas.
- (b) Notify players using, for example, the IOC colour coding flag system (1-5 heat stress scale), or any other applicable heat stress scale.
- (c) Consider pre-cooling strategies prior to play e.g., ice vest.
- (d) Provide shade (natural, structures, or umbrellas), and cooled water and electrolyte drinks on each hole during events with expected high, or very high thermal strain.
- (e) Provide cooling stations around the course, including fans / mist and ice slushee drinks to facilitate rapid cooling.
- (f) Provide ice machine stations accessible to athletes / caddies. Same ice machine could be used for the provision of ice for all rehabilitation procedures.
- (g) Maintain hydration via intake of approximately 1000ml per hour and limiting sweating by seeking shade when available.
- (h) Choose light-coloured, loose-fitting clothing with high wicking / breathability. The use of UV blocking fabrics should be preferable. Also, sun-protective clothing should not block direct sweat evaporation.
- (i) Consideration may be given to permitting a mid-round change of clothes when thermal strain is expected to be high, or remarkably high.
- (j) Wear a hat that is well vented, with a ventilated mesh crown and with a wide brim.
- (k) Apply sunscreen with >SPF 30 and sunglasses with UV400 or grade 3.
- (l) Avoid stimulants including caffeine.
- (m) Persons should seek medical attention should they have a current respiratory or gastro viral infection which can impair normal temperature regulation.

4.4 Medical provision

- (a) Persons experienced in managing heat illness and other expected medical consideration should be involved in pre-event planning to provide their recommendations.
- (b) Medical personnel should be located strategically to ensure ease and fast access to the spectators stands and other areas and to resources/ambulance required in case of evacuation of any affected person.
- (c) Senior medical personnel should be located strategically to ensure ease and fast access to the course and to resources/ambulance required in case of evacuation of the athlete.
- (d) Senior medical personnel should be available, with appropriate facilities and personnel, to cope comfortably with the expected number of occurrences.
- (e) Senior medical personnel should be consulted on how to mitigate risk where the risk of heat illness is considered high, or remarkably high.
- (f) If risk assessment identifies high risk: provision of 'spotters' (or video surveillance) to survey the course and identify athletes in difficulty along the course should be considered.
- (g) All cases of life-threatening illness (for the absence of doubt this includes persons diagnosed with "heat stroke") should be discussed with the senior medical officer who should have experience or should be trained to recognize and manage heat related illness.

5. DISCLAIMER

This document should be used for reference only.

These guidelines are not intended to:

- be a legal document.
- replace any existing council/local/national/international legislation or regulations but should be considered as guidance for the recommended minimum standard.
- It is also recognised that these guidelines are not intended to provide rules on how to plan and respond to any medical incidents, as this is more appropriately managed by trained professionals in medical and emergency services.

This document should be used as a guide only. Authors and their respective organisations are not liable for acts or omissions at specific golf tournaments out of their jurisdiction.

6. REFERENCES

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