Heat Stress at the FIFA World Cup 2026: Are hydration breaks adequate?



At the **FIFA World Cup 2026**, heat has become one of the **most discussed topics** of the tournament, not only because of the **high temperatures** recorded in several host cities, but also because of the **decision to** introduce **mandatory hydration breaks** in every match. This measure was introduced with the stated aim of **protecting players' wellbeing**, but it **has raised** an important **technical question**: **is it enough to establish the same breaks for every match,** or should decisions be based on real environmental measurements, such as WBGT, taken directly on the pitch?
This question does not concern football alone. **It concerns professional sport, outdoor** events, safety management in extreme climate conditions and, more broadly, the ability to make decisions based on objective data.

What does FIFA require? And what does FIFPRO recommend?

Within the **FIFA framework**, **heat stress** is recognized as a **medical risk**, and **WBGT** is **indicated** as the **reference index** for **assessing environmental risk**. The **FIFA protocol** states that, when **WBGT** reaches or exceeds **32°C**, mandatory cooling breaks must be provided or the postponement/suspension of the match must be considered.

WBGT is also used as a reference by **FIFPRO**, the International Federation of Professional Footballers, which **proposes more cautious thresholds** in its recommendations for athlete safety: cooling breaks starting from **26°C WBGT** and consideration of match **postponement** or **suspension** from **28°C WBGT**

The **critical point** is that this **threshold does not** always **work** as a strict **automatic trigger** in the Laws of the Game. In competition regulations, such as those for the FIFA World Cup 2026, the **decision remains linked** to the referee and **FIFA medical protocols**, with match-by-match assessment. These **breaks** are **not directly triggered** by **real-time WBGT measurements** taken on the pitch, nor by specific microclimatic thresholds measured in the actual conditions of the match.
This means that **risk management remains** more closely linked to a **general preventive measure than to an objective system** based on real environmental data. And this is precisely the aspect that has generated debate: in several situations, playing conditions could have required more decisive measures if assessed through more conservative and binding WBGT thresholds.

WBGT: the reference index for assessing heat stress

WBGT, Wet Bulb Globe Temperature, is the index used to assess heat stress according to ISO 7243:2017, taking into account **three** key **parameters**: **natural wet-bulb temperature** (Tnw), **black globe temperature** (Tg) and **air temperature** (Ta).
In football, WBGT is particularly useful because it provides a reading that is closer to the real conditions experienced by athletes, rather than describing air temperature alone.

Heat on the pitch: why is WBGT better than air temperature alone?

Assessing heat risk by looking **only** at **air temperature** is **reductive**, because **several** other **essential** variables come into play on the pitch: **direct solar radiation**, heat reflected by the playing surface, humidity and the actual ventilation inside the stadium. These factors can make two

matches played at the same air temperature very different in terms of risk. For this **reason, WBGT** is the most **representative index**, recognized by FIFA and FIFPRO as a reference for defining the heat stress to which athletes are exposed.

It is also important to consider that, inside **stadiums**, the **microclimate can vary significantly from one area to another**. This means that WBGT must be measured with suitable instruments, correctly positioned and placed in the most critical areas of the pitch.
The measurement must also be interpreted according to clothing and the metabolic workload of the activity. In an intense and prolonged sport such as football, environmental data becomes truly useful only when compared with thresholds consistent with the level of effort, becoming a concrete support for more objective decisions on athlete safety.

Other sports are already adopting more structured approaches

Football is **not** the **only discipline** facing **this issue**. In **several outdoor sports**, such as tennis, endurance sports, rugby, American football, equestrian sports and motorsport, protocols have been introduced that use WBGT or other thermal indices to define risk levels, breaks, changes to competitions or suspensions.

In **some cases**, these **approaches** are **even stricter** than those adopted in football, because they link operational decisions to clearer thresholds and more objective measurements. **This confirms** an **increasingly evident direction**: heat management in sport must move from general assessments to systems based on reliable environmental data, measured directly in the context in which the activity takes place.

LSI LASTEM solutions for WBGT monitoring

LSI LASTEM develops solutions for monitoring heat stress in **outdoor** and **indoor environments**, with portable or fixed systems capable of measuring parameters such as air temperature, relative humidity, radiant temperature and wet-bulb temperature, calculating heat stress indices including WBGT according to the **ISO 7243 standard.**

Data can be transmitted in real time, viewed remotely and used to generate alerts via SMS, email or electrical outputs.

Conclusion

The **FIFA World Cup 2026** is making one thing clear: **heat** is set to become an **increasingly central issue**, and it cannot be managed only through standard breaks or general assessments.

Water breaks and **cooling breaks** are **important measures**, but since they are currently applied on a discretionary basis, they are **not sufficient** and may underestimate the real severity of heat stress conditions on the pitch. Objective, real-time measurements that are representative of the actual conditions experienced on the field must be introduced.

This is why WBGT is essential: it makes it possible to go beyond air temperature and assess heat stress in a more complete, reliable and useful way for athlete safety.

Download the full report: “WBGT and Safety in Sport: State of the Art, Standards and Strategies to Monitor Heat Risk”