Scientists Highlight the Hidden Stress Chemistry of Big Sporting Events — and Why Alcohol May be a Poor Way to Cope

Is the Super Bowl Going Hard on Your Heart? How Game Day Drama and Drinking Can Impact Cardiovascular Health

SAN FRANCISCO , CA, UNITED STATES, January 23, 2026 /EINPresswire.com/ -- As the Super Bowl approaches, much of the conversation focuses on advertising, alcohol consumption and the growing visibility of alcohol-free beer. Far less attention is paid to a quieter but well-documented phenomenon: watching high-stakes sport can provoke a genuine physiological stress response in fans.

A body of international research has shown that emotionally intense sporting events are associated with measurable changes in stress hormones, heart rate and cardiovascular strain — particularly during close, high-pressure matches. In some contexts, population-level studies have even observed short-term increases in acute cardiac events around major games, highlighting how powerful emotional stressors can act on the body.

According to Professor David Nutt — one of the world's leading neuropsychopharmacologists and CSO at SENTIA Spirits and GABA Labs — this response is rooted in basic neurochemistry.

"High-stakes sport activates the same stress systems as other acute emotional challenges," says Prof Nutt. "Adrenaline and noradrenaline rise, heart rate and blood pressure increase, and cortisol keeps the body in a heightened state of arousal. It's why fans describe games as 'heart-in-mouth' experiences — that's not just metaphorical."

The Stress Chemistry of Big Games

Research around major soccer tournaments has provided some of the clearest illustrations of this effect. A landmark German study during the 2006 FIFA World Cup found a substantial rise in cardiovascular emergencies on days when the national team played, particularly during tense knockout matches. [1]

Similarly, UK researchers reported a marked increase in hospital admissions for heart attacks following England's dramatic penalty shoot-out loss in the 1998 World Cup. [2]

These findings align with a broader evidence base showing that acute emotional stress — including anger, excitement and anxiety — can act as a trigger for cardiovascular events in susceptible individuals. [3]

At a neurochemical level, this stress response involves:

> There's a contradiction here, people reach for alcohol to relax during intense games, but physiologically it often adds another layer of stimulation on top of an already activated stress response."
>
> *Professor David Nutt, CSO*
> *SENTIA Spirits*

- Sympathetic nervous system activation, driving adrenaline and noradrenaline release
- Elevated cortisol, prolonging arousal and emotional intensity
- Interactions with dopamine pathways, amplifying anticipation, reward and disappointment

Together, these systems create a potent physiological cocktail — one that many fans attempt to manage with alcohol.

Why Alcohol May Worsen, Not Soften, the Stress Load

Alcohol is traditionally used during sporting events to "take the edge off". However, evidence suggests it may be biologically mismatched to stress-heavy situations.

Acute alcohol consumption:

• Raises heart rate and alters autonomic balance
• Affects cardiac electrical activity, increasing susceptibility to short-term rhythm disturbances — sometimes referred to clinically as *“holiday heart”*[4]
• Can amplify emotional volatility and impair judgement

Recent studies using continuous heart monitoring have shown that even short periods of heavy drinking are associated with increased heart rate and transient arrhythmias, particularly during and shortly after consumption. [5]

Stress, Alcohol and Aggression

The combination of emotional arousal and alcohol also has implications beyond cardiovascular strain. A substantial body of research links alcohol consumption with increased aggression and reduced impulse control, particularly in emotionally charged social settings. [6] [7]

High-stakes sporting events, where identity, rivalry and group emotion are heightened, can further amplify these effects.

Beyond Alcohol-free: Addressing the Real Need State

In recent years, alcohol-free beer advertising has become a visible feature of major sporting events, including the Super Bowl. While removing alcohol reduces risks, it does not necessarily address the underlying need state that drives game-day drinking: remaining relaxed and socially connected during intense shared experiences.

This has led to growing interest in functional alcohol alternatives — drinks designed not simply to remove alcohol, but to support calm sociability by working with, rather than against, the brain’s stress systems.

At GABA Labs, Professor Nutt works with scientists to develop alcohol alternatives informed by decades of research into neurotransmitters such as GABA, which play a key role in regulating stress and neural excitability.

“The future of social drinking isn’t about intoxication,” says Prof Nutt. “It’s about understanding brain chemistry and creating experiences that support connection without the physiological downsides.”

Media Opportunity

With the Super Bowl imminent and other major global sporting events — including the World Cup — on the horizon, Professor David Nutt is available for interview to discuss:

• The science of stress in sports fans
• What happens in the brain and body during high-stakes games
• Why alcohol may be a poor tool for managing sporting stress
• How functional alcohol alternatives could change the way we drink during big events

Samples and background research are available on request.

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