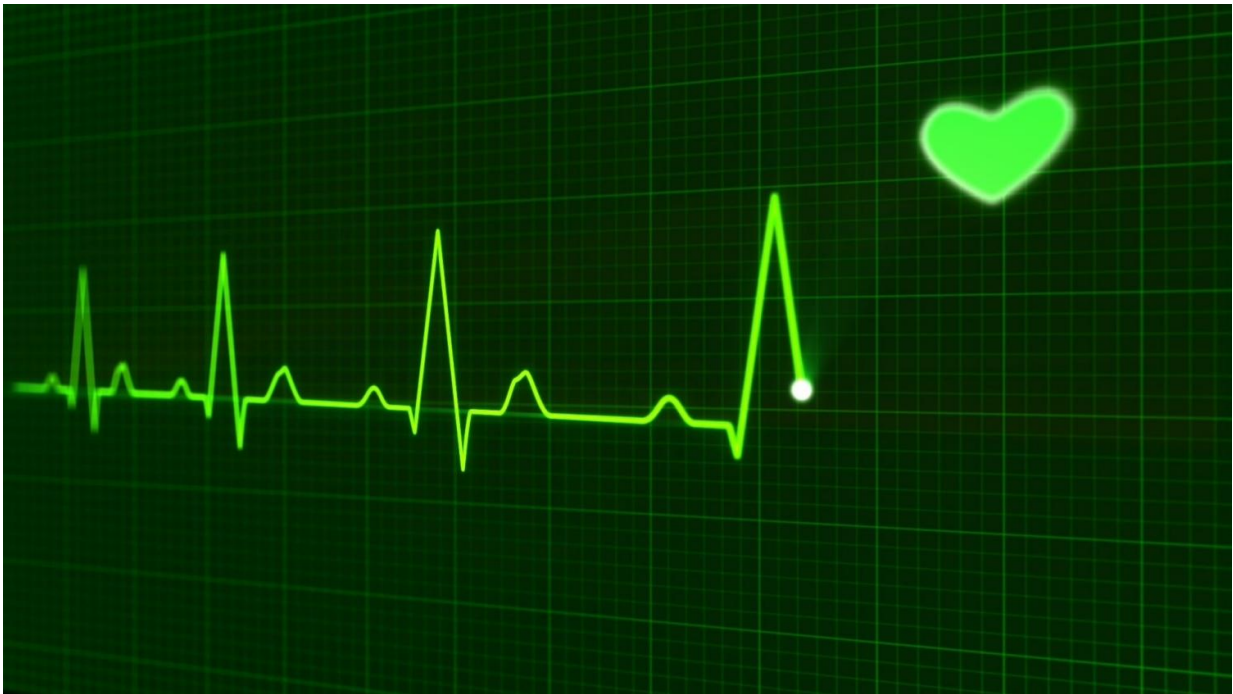


Mandatory health screen to rule out risk of sudden death in footballers not fail-safe

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A mandatory health screen before the start of a season, to rule out heart problems associated with a heightened risk of sudden death in professional footballers, isn't a fail-safe, no matter how comprehensive it is, suggests research published online in the *British Journal of Sports Medicine*.

UEFA and FIFA have made these health checks, known as pre-participation screens, mandatory. But even when they include a scan (echocardiography or echo for short) and a recording of the [heart's electrical activity](#) (electrocardiography or ECG), they still don't always pick up potentially critical problems, the findings indicate.

The pros and cons of this type of screening to stave off the sudden loss of blood flow resulting from the heart's failure to pump properly (cardiac arrest) continue to be hotly debated.

The researchers therefore decided to use media tracking software to find out what happened to 595 male Norwegian professional footballers with an average age of 25, from 28 of the country's 30 elite and first division teams.

The players' health screens, carried out over three months in 2008, during pre-season training, included reporting any cardiovascular symptoms during sporting activity and any family history of heart disease/stroke, an echo, and an ECG.

Most tested negative (563), but 32 tested positive, two of whom were subsequently cleared for play after treatment. The other 30 were recommended to have further tests, but were cleared to play.

During the eight year monitoring period, six players, equivalent to 1 in every 100, had a serious cardiovascular problem.

Three had a cardiac arrest, all of whom were successfully resuscitated. Another three had, respectively, a [heart attack](#), a mini stroke (transient ischaemic attack or TIA), and irregular heartbeat (atrial fibrillation).

Three players had ignored warning symptoms, including chest pain, laboured breathing (dyspnoea), and feeling as if they were about to pass

out (near syncope).

And prompt treatment was delayed in three cases, because doctors either misinterpreted symptoms—neuromuscular weakness (paresis), near syncope, palpitations—or discharged patients with serious symptoms without further medical check-ups.

Nevertheless, in all six cases, the screening results had come back negative, both at the time, and when these were reviewed again by a senior cardiologist a few weeks later.

"The number of severe [cardiovascular] incidents was remarkably higher than expected in this young population," note the researchers. "We have no explanation for this; it could simply represent a random effect due to small numbers," they suggest.

They acknowledge that standard screening protocols are designed to capture some, but not all, [heart problems](#), and that they are usually one-off events, so health might have deteriorated during the interim in the six [players](#)-something which a repeat screen might have picked up, they say.

"This raises the question of the 'use by' date for a 'clearance to play'," they suggest. And they emphasise: "It is important to remind athletes that a normal screening exam does not protect against all cardiac disease, and that timely reporting of symptoms is essential."

Their findings also underscore the importance of training in the use of portable defibrillators-devices that can shock the heart back into normal rhythm-they say.

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