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WOMEN'S BODYBUILDING THE DEADLY RISK IS NOT JUST A MAN'S BUSINESS

A new study by the University of Padua raises the alarm on the use of doping substances, extreme practices, and aesthetic expectations: heart and psychophysical balance at risk.

Sudden cardiac death is responsible for an unusually high proportion of deaths in female bodybuilders worldwide, according to research published in the *European Heart Journal* today.

Sudden cardiac death is when someone dies suddenly and unexpectedly due to a problem with their heart. It is generally rare in young and seemingly healthy individuals.

The study found the greatest risk among women competing professionally. It also revealed a high proportion of deaths from suicide and homicide among female bodybuilders.



Marco Vecchiato

This is the first large-scale study to systematically investigate deaths in female competitive bodybuilders, **and it was led by Dr Marco Vecchiato from the University of Padua, Italy. He said: “Bodybuilders, both female and male, often engage in extreme training, and use fasting and dehydration strategies to achieve extreme physiques. Some also take performance-enhancing substances. These strategies can take a serious toll on the heart and blood vessels.”**

“Over recent years, more and more women have taken up strength training and competitive bodybuilding. Despite this growing participation, most of the available research and media attention has focused exclusively on male athletes. After publishing our previous study on mortality in male bodybuilders, we realised there was a striking lack of data on female athletes in the same field.” [2]

The researchers gathered the names of 9,447 female bodybuilders from the official competition records and from an unofficial online database. All the women had participated in at least one International Fitness and Bodybuilding Federation event between 2005 and 2020.

The researchers then searched for reports of deaths of any of these named competitors in five different languages across different web sources including official media

reports, social media, bodybuilding forums and blogs. Any reported deaths were then cross-referenced using multiple sources and these reports were verified and analysed by two clinicians to establish, as far as possible, the cause of death.

The researchers found 32 deaths among the women, with an average age at death of around 42 years. Sudden cardiac death was the most common cause of death, accounting for 31% of deaths. The risk of sudden cardiac death was more than 20 times higher among professional bodybuilders, compared to amateurs.

These results indicate that the risk of sudden cardiac death seems much higher in women bodybuilders compared to other professional athletes, although it is lower than the risk for male bodybuilders.

Suicide or homicide accounted for 13% of deaths, four times higher than in male bodybuilders. “This striking difference suggests that, beyond cardiovascular risks, female athletes in this field may face unique psychosocial pressures, possibly linked to body image expectations, performance-enhancing substance use, or the extreme demands of the sport,” Dr Vecchiato said.

The researchers acknowledge that the study is based on a web-based search strategy, which could have influenced their findings. For example, some deaths, especially among less-known athletes, may have gone unreported. They also found that autopsy data were available for only a small proportion of cases, meaning that sudden deaths had to be classified based on clinical interpretation rather than confirmed forensic findings.

Dr Vecchiato said: “For female bodybuilders, this research is a reminder that the pursuit of extreme muscularity and leanness, while often celebrated, may come at a cost to health, particularly cardiovascular health. Awareness of these risks is essential to promote safer training practices, informed decision-making, and a more health-oriented approach to competitive bodybuilding.

“We also need a shift in the sport’s culture, to raise awareness of the risks, not only within the professional ranks, but also in the broader community of women engaging in high-intensity strength training.

“For clinicians, especially those working in sports medicine and sports cardiology, these findings underscore the need for proactive screening and counselling, even in young and seemingly healthy female athletes. These individuals may not perceive themselves as at risk, but the data suggest otherwise.”

Dr Vecchiato and his team are now studying the health outcomes for athletes across the different historical eras of bodybuilding to see whether changing practice has had an impact on the causes and rates of deaths.

See attached study.