Where should we draw the line between a healthy and an unhealthy sports body?

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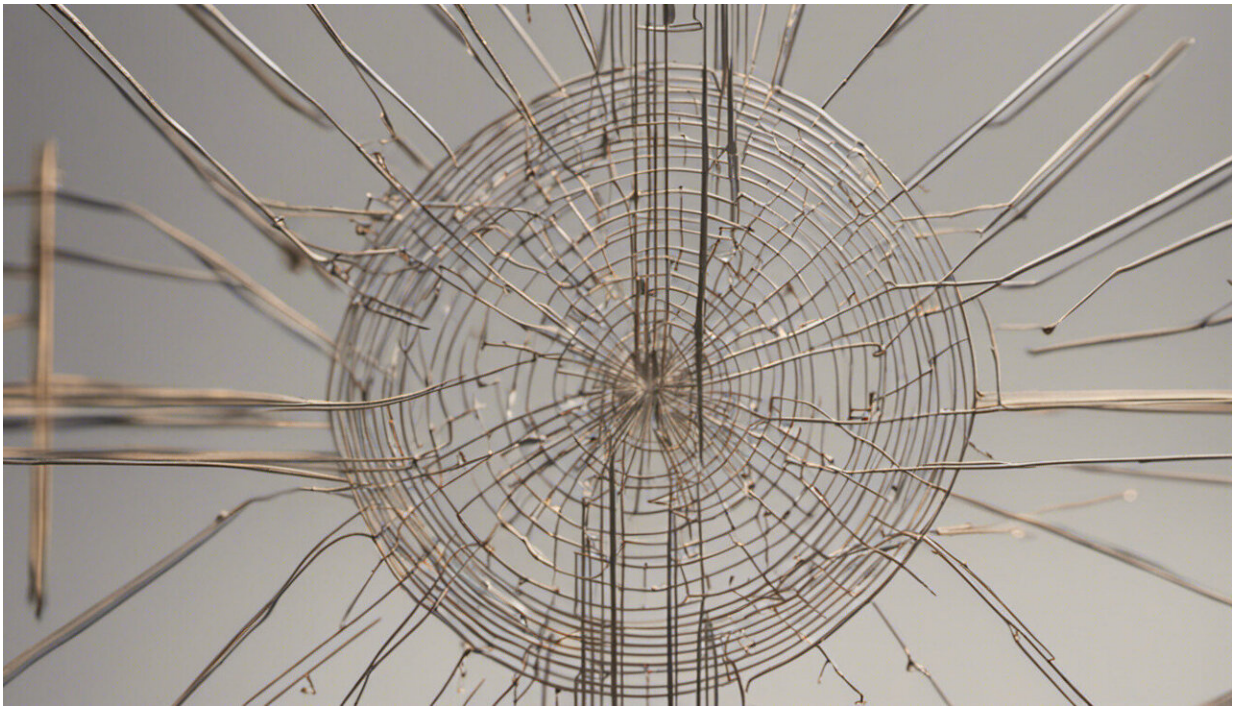

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Athletes focus on their weight and carefully control their food intake for obvious reasons. It goes without saying that a long distance runner with a lighter body will run more easily from one point to another.

The longer the distance, the more important the runner's weight

becomes.

Runners in particular suffer more eating disorders compared to the general population, but also dancers and gymnasts are also at risk.

A wealth of research shows that women are also at particular risk of developing eating disorder symptoms including restrictive eating, distorted perceptions of their body, anxiety over putting on weight, and forced exercise.

Are these symptoms part of the game, which the athletes have to live with and seek help for? Or could the sport create some frameworks to reduce the occurrence of eating disorders and contribute to healthier athletes? This is the theme of this article.

The Norwegian model for healthy sport

In Norway a number of federations have joined forces to produce a set of protective guidelines to prevent top athletes from becoming malnourished, which may harm both their health and performance.

The Norwegian association of sports federations (Sunn Idrett) has developed specific limits for BMI, fat percentage and menstruation.

They are meant to promote good health among athletes and prevent eating disorders among young athletes.

The recommendations say that an athlete's BMI is not allowed to fall below 18.5. A woman is not allowed to have a fat percentage below 12, and girls under the age of 18 should not have a BMI below 14. For adult men the fat percentage limit is 5 per cent, and for boys the limit is 7 per cent.

Menstruation must not be absent for more than three months in girls and six months in adult women. Bone mineral density is not allowed to fall, anemia must not be present (too low blood percentage), and the athlete must not use vomiting agents and laxatives to regulate body weight.

Restrictions must protect the athlete

If an athlete is to represent Norway he or she is required to have a health certificate. This includes a bone scan, interviews, and blood tests.

If the athlete is malnourished or has a critical eating disorder, he or she will not get a health certificate.

This leads to training restrictions so that the athlete does not harm his or her health further. If the athlete has an actual eating disorder, he or she will not be allowed to compete.

This may perhaps feel like an unfair punishment or an impossible requirement to the athletes in question, because other competitors are not subject to the same rules.

But the Norwegian model is not to constrain the athletes. Their vision is to create well-being, healthy eating habits, and harmonious athletes, and to increase the awareness of eating disorders in sports.

Athletes are at risk of health problems

An inadequate nutritional status, underweight, and eating disorders, can lead to osteoporosis, bone fractures, hormonal disruptions, deterioration in performance, reduced immune system, increased risk of injury, and mental strain.

So, there are good reasons to take the problem seriously and help prevent and treat eating disorders in elite athletes.

Perhaps the Norwegian model goes to far, as it does not take into account athletes who have a naturally low fat percentage.

Or perhaps it is not strict enough because a BMI of 18.5 is on the limit of underweight, and absence of menstruation is damaging to bone thickness, according to several studies.

Finally, it might be difficult to implement the model in practice, due to complications in measuring weight, fat percentage, menstrual status, nutritional status, and eating disorder symptoms.

BMI of elite athletes

There are remarkably few studies that record the BMI and fat percentage of elite athletes. So, we cannot determine if there is an optimal BMI or fat percentage for optimal performance.

A British study found an average BMI of 19 in 251 female elite runners, and they found ongoing or former eating disorders among 16 per cent of the women. Frequent symptoms were binge eating attacks, provoked vomiting, and excessive training to control the body.

The eating disorder group had a lower average BMI of 18.3. The healthy group had a BMI of 19.1. In this study, the eating disorder group appeared more vulnerable to low self-esteem, body dissatisfaction, anxiety and depression, and dieting.

An Australian study showed that elite athletes had an average BMI of 18.6, while the non-elite had an average BMI of 22.

A study of 36 professional gymnasts from the US, found a BMI between 14 and 20 (average 17.2), and concluded that a very low BMI negatively affected performance.

The thinnest gymnasts had the lowest rankings, suggesting that there is a lower limit to how thin you can be and still preserve both strength and springiness.

Is the healthy body also the winning body?

The Norwegian model recommends a BMI of at least 18.5, which is the World Health Organization's underweight limit.

Danish clinical guidelines recommend that a realistic body weight for women correlates to a BMI of 22-25 and 21-26 for men. But a BMI of 21-22 hardly has a chance at major championships in aesthetic and endurance sports.

So, you either need to be born with a naturally low fat percentage, or you have to endure hard training and tough diets to force your body into a condition that is unhealthy but wins sporting medals.

In this dilemma, an eating disorder may occur and ruin a sporting career.

But perhaps it makes no sense to pursue health at the price of sporting victory because elite sport isn't about health. Should the question be how high a price the athlete is willing to pay to be the best?

These are questions all athletes, trainers, and sports associations, must ask themselves.

BMI and fat percentage

- WHO defines a normal Body Mass Index (BMI = weight in kg/height x height in meter) between 18.5 and 25.
- A normal fat percentage is dependent on age and gender, but is defined as 21 to 36 per cent in women, and 8 to 25 per cent in men.
- The Norwegian model recommends that women and men do not fall below a fat percentage of 12 and 5, respectively.

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