

Food supplements for athletes: health risks with uncertain benefits

Between 2009 and February 2016, ANSES's national nutrivigilance scheme collected 49 reports of adverse effects potentially related to the consumption of food supplements aiming to develop muscle mass or reduce body fat in athletes.

The adverse effects reported were primarily cardiovascular (tachycardia, arrhythmia and stroke) and psychological (anxiety and nervousness).

These reports of adverse effects led ANSES to assess the risks associated with the consumption of these supplements and to draw the attention of the athletes concerned to the health risks induced by these practices.

In order to reduce these risks, ANSES recommends that consumers take care to ensure that these food supplements are compatible with their nutritional status, state of health and the objectives sought. It is therefore essential to obtain personalised advice from a healthcare professional, where applicable in cooperation with the trainer or the fitness coach, and with reference to the training periods and loads. To ensure an effective interdisciplinary dialogue, it is important that the healthcare professionals have obtained solid initial and continuing training in the field of nutrition, and sport nutrition in particular.

In addition, and more specifically when seeking to reduce body fat and/or increase muscle mass, people practising sport should be informed of the risks associated with the consumption of pharmacologically-active products, and the health risks associated with following weight-loss diets without medical assistance.

ANSES emphasises that any claimed effects of these food supplements on performance do not in any way rule out the health risk. In general, the absence of scientifically demonstrated data on effectiveness makes the expected benefits of these food supplements extremely hypothetical, meaning that the merits of products containing them are highly questionable in view of the risks incurred. In addition, purchases on the Internet de facto increase the athlete's exposure to the consumption of fraudulent or adulterated food supplements, liable to lead to positive anti-doping tests and cause effects on health.

The Agency's recommendations

In light of the results of its expert appraisal, ANSES strongly advises against the consumption of food supplements aiming to develop muscle or reduce body fat:

- for people with cardiovascular risk factors or suffering from heart disease, impaired kidney or liver function, or neuropsychiatric disorders;
- for children and adolescents;
- for pregnant or breastfeeding women.

ANSES is issuing the following recommendations:

For consumers:

- The consumption of food supplements containing caffeine should be avoided before and during any sporting activity, as well as by any individuals susceptible to the effects of this substance.
- The concomitant consumption of several food supplements or their combined consumption with medicinal products should be avoided.
- The consumption objectives of the food supplements should be discussed with a healthcare professional.
- The individual's doctor and pharmacist should be informed that he/she is taking food supplements.
- Athletes should pay attention to the composition of the products consumed, and favour products complying with AFNOR standard NF V 94-001 (July 2012) as well as supply channels with the best oversight by the public authorities (compliance with French regulations, traceability and identification of the manufacturer).

For sports managers:

- The use of food supplements should only be considered as part of a multidisciplinary approach involving both sports managers and healthcare professionals;
- Effective information for sports practitioners, especially targeting young athletes, should be provided.

In addition, considering the widespread consumption of these food supplements, the Agency recommends that the public authorities conduct a debate on whether it is appropriate to distribute these products at sites where sports are practised.

Lastly, ANSES reminds **healthcare professionals** of the importance of reporting to its nutrivigilance scheme any adverse effects potentially related to the consumption of food supplements for athletes about which they become aware.

Charlotte LEGER (Anses)

TO FIND OUT MORE, VISIT:

<https://www.anses.fr/en/content/food-supplements-athletes-risks-health-and-uncertain-benefits>