

SUPPLEMENTS

Due to the competitive nature of tennis and its physiological demands, it is not surprising that supplementation is often part of an athlete's training diet.

Dietary supplements may be used to provide the body with extra fuel before, during, and after training. However, supplements should be regarded with caution, for several reasons.

Not only are the long-term physiological effects of many dietary supplements not fully understood, but the supplement industry is largely unregulated, and so they are not subject to the manufacturing rigour that occurs in the food industry.

As such, there is no guarantee that the ingredients list on any supplement is accurate. Some supplements contain ingredients that are not listed on the label, or in different amounts than stated on the label. As such, there is no way to guarantee the safety and/or purity of these products.

Many athletes have produced positive doping tests as a result of ingesting supplements, including in tennis. Under the strict liability principle adopted by the WADA Code (and so the Tennis Anti-Doping Programme), athletes are responsible for any substance found in samples produced by them, and so a contaminated supplement will not excuse a positive doping test. As such, the ITF does not recommend any supplement.

Any player who consumes a dietary supplement does so at their own risk. Players who consume supplements may be subject to sanctions under the Tennis Anti-Doping Programme.

[Click here](#) to view the WADA prohibited list.

The consumption of any dietary supplement contaminated with a Prohibited Substance may subject a Player to penalties under the Tennis Anti-Doping Programme.

If you would like to check whether a supplement or medication contains a prohibited substance, please complete a 'Product Information Request' form on the 'Tennis Anti-Doping Programme App' available on Android and Apple devices.

In order to understand nutritional supplements, the following questions will be answered for some of the most popular legal dietary supplements: (1) What is its claimed action? (2) Does research support the action? (3) Does it have any side effects?

Creatine	Claimed Action	<ul style="list-style-type: none"> Increases phosphocreatine stores in muscle, short- term endurance, strength, and lean muscle mass
	Research on Action (Pluim et al., 2006)	<ul style="list-style-type: none"> No performance enhancing effect on service velocity or forehand and backhand velocity No significant improvement on repetitive sprint power No significant improvement in the strength of the upper and lower extremities
	Side Effects	<ul style="list-style-type: none"> Upset stomach, muscle cramping, dehydration Long-term side-effects unknown (has been linked to renal (kidney) damage)
Protein	Claimed Action	<ul style="list-style-type: none"> Optimises muscular growth and repair
	Research on Action	<ul style="list-style-type: none"> No conclusive evidence that protein supplements are required for optimal muscle growth or strength gain The body's limit for using protein to build muscle already reached, so excess protein is burned as fuel or stored as fat
	Side Effects	<ul style="list-style-type: none"> None unless underlying medical condition
Caffeine	Claimed Action	<ul style="list-style-type: none"> Increases muscle contractility and aerobic endurance. Enhances fat metabolism
	Research on Action	<ul style="list-style-type: none"> Supports the claimed action No evidence that caffeine is useful in power or speed-type events
	Side Effects	<ul style="list-style-type: none"> Causes water loss and increase probability of dehydration Causes jitters and a lack of precision Heart palpitations
Bicarbonate	Claimed Action	<ul style="list-style-type: none"> Buffers the lactic acid created by anaerobic metabolism, allowing for prolonged maintenance of force or power
	Research on Action	<ul style="list-style-type: none"> Well-hydrated athletes do not derive a performance benefit
	Side Effects	<ul style="list-style-type: none"> Potential for severe gastrointestinal distress Nausea