



# SPORTS SUPPLEMENTS AND THE YOUNG RUGBY PLAYER

**GUIDELINES AND RECOMMENDATIONS**



# IRFU Recommendations

## Sports Supplements and the Young Rugby Player

1. Young rugby players should focus on good eating and drinking practices to support optimum performance. Fact sheets to support this are available through the IRFU website **[www.IrishRugby.ie](http://www.IrishRugby.ie)**
2. The use of protein supplements should not be recommended by schools, coaches, teachers or others involved in the training of young rugby players.
3. The IRFU strongly advises against the use of nutritional ergogenic aids (Table 2), in particular creatine, in young rugby players under 18 years of age.
4. Young rugby players with medical conditions (for example diabetes, asthma, coeliac disease and nutritional allergies) should receive appropriate medical and nutritional advice to assist their optimum performance.

## Background Information on Sports Supplements

Dietary supplements, nutritional supplements, ergogenic aids - these are some of the terms used to describe the range of products that collectively form sports supplements. There is anecdotal evidence that there is a widespread use of sports supplements in rugby, which includes use by young players.

Sports supplements are manufactured by a large variety of companies. The manufacturing process, labelling and marketing of these products is poorly regulated with variable quality control. Unlike medicines, sports supplements are not licensed and regulation regarding their production is limited. This means that supplements may contain ingredients that are not stated on the label, or that the label does not reflect exact quantities of ingredients in the product. The control over claims as to how the product works is also poor e.g. products sold as 'fat burners' will claim to cause 'dramatic body fat reduction' and 'reduce fat storage' with little or no evidence to support these claims, and no statement as to possible adverse effects of the product.

There is some evidence that certain sports supplements (notably creatine) can play a small role in the peak performance of physically mature adult athletes.

Creatine is probably the sports supplement that has received most attention in the last 10 years. Some facts about creatine include:

- It is not illegal in Ireland and is not a banned substance (World Anti-Doping Agency (WADA))
- Performance benefits can occur in some adult athletes
- Its long term safety is not known
- Recognised adverse effects can include gastrointestinal discomfort, muscle cramps and headache

## Are there any risks associated with the use of sports supplements in young rugby players?

The risks associated with the use of sports supplements in young people have not been adequately studied to provide a detailed answer to this question. This lack of research on the risk to long term safety of sports supplements use on individuals under 18 years of age has led to a recommendation against the use of ergogenic aids/sports supplements by children and adolescents (American Academy of Paediatrics, 2005), and a recommendation from the American College of Sports Medicine (ACSM 2000) that creatine should not be used by anyone under 18 years of age.

It is on the basis of insufficient data of the real side effects in the young population (<18 years) that expert groups have made statements against the use of creatine in young athletes.

### Drug testing

There have been a number of high profile examples where an athlete has claimed that the use of a sports supplement was the reason for a positive doping test. Given the poor regulation of the sports supplements industry, there is always a possibility that a sports supplement will contain an illegal and possibly harmful substance. The sports supplement may contain an illegal substance that is not declared on the label or there may be cross-contamination during production due to poor quality control. Ultimately, an athlete is responsible for any substance that they consume and claiming that a sports supplement has been the cause of a positive drug test is very difficult to prove. Even if a sports supplement is to blame, it will not exonerate the athlete from a positive test finding.

# What are the important elements that maximize performance in young rugby players?

It is absolutely clear that successful individual performance in rugby, as in other sports, is related to a number of variables that include:

- talent
- coaching and skill acquisition
- structured training and conditioning
- motivation and dedication
- optimal nutrition
- adequate sleep and recovery

None of these can be replaced by the use of sports supplements. Often the desire to get physically bigger is the reason young players choose to take supplements, which may seem the quick-fix answer for accelerated growth. There is little evidence to condone such practice, as young players will gain size and strength from well planned training and recovery, supported by adequate eating and drinking.

## Sports Supplement Classification

Sports supplements can be broadly divided into two main categories:

### **Dietary Supplements** **Nutritional Ergogenic aids**

These categories are explained in the tables below.

<b>Table 1 Dietary Supplements</b>	
<b>Function</b>	<b>Examples</b>
Provide nutrients found in everyday foods in a form that may be convenient or practical	Sports bars Sports drinks
May be designed to prevent or treat a nutritional deficiency (under medical supervision)	Multi-vitamins/minerals Specific nutrients e.g. Iron, Calcium
May allow players to meet a specific need in training or competition, if not met by diet	Liquid meal replacements Protein powders Recovery formulae

<b>Table 2 Nutritional Ergogenic aids</b>	
<b>Function</b>	<b>Examples</b>
Contain larger amounts of nutrients than would be typically found in everyday foods	Commonly used ergogenic aids include: Creatine Caffeine tablets Individual proteins (Amino Acids) Chromium Picolinate Herbal preparations Fat burners and lots more ....
Claim to have a direct work enhancing effect on performance	
Often rely on theoretical or anecdotal support rather than sound scientific evidence	

Dietary supplements are often considered less 'risky' than ergogenic aids in terms of health, doping outcomes and expense. Some products in this category could be considered useful in helping players meet their nutritional goals, for example, sports drinks during training and matches, sports bars and liquid meal replacements to support high energy requirements. However some dietary supplements e.g. protein powders, vitamins and minerals are often used without any evidence of need, and are often taken to 'rectify' an otherwise poor diet. Excess intake is not beneficial to performance, and could potentially be harmful to the health of young players.

## IRFU Guidelines

Dietary education is the key to support good nutrition habits for health and optimal performance.

Eat2Compete fact sheets give practical nutrition information to help young players eat and drink well to support their performance. These fact sheets can be downloaded from the IRFU website [www.IrishRugby.ie/eat2compete](http://www.IrishRugby.ie/eat2compete)

The IRFU also has a nutrition education programme in place that all staff involved in training and coaching young players are encouraged to participate in.

The focus of the education is to equip staff with the knowledge and skills to deliver practical nutrition advice to young players.

## Useful websites

Irish Nutrition and Dietetic Institute	<a href="http://www.indi.ie">www.indi.ie</a>
Food Fitness	<a href="http://www.foodfitness.org.uk">www.foodfitness.org.uk</a>
Performance Food	<a href="http://www.performancefood.co.uk">www.performancefood.co.uk</a>
Australian Institute of Sport	<a href="http://www.aus.org.au/nutrition">www.aus.org.au/nutrition</a>
Sports Dietitians Australia	<a href="http://www.sportsdietitians.com.au">www.sportsdietitians.com.au</a>
Iowa State University Sports Nutrition	<a href="http://www.extension.iastate.edu/nutrition/sport">www.extension.iastate.edu/nutrition/sport</a>
Irish Sports Council	<a href="http://www.irishsportsCouncil.ie">www.irishsportsCouncil.ie</a>
UK Sport	<a href="http://www.ukSport.gov.uk">www.ukSport.gov.uk</a>
World Anti-Doping Agency	<a href="http://www.wada-ama.org">www.wada-ama.org</a>

## Professional contacts

The Sports Nutrition Interest Group (SNIG) is part of the Irish Nutrition and Dietetic Institute, whose members are Dietitians (in both north and south of Ireland) with experience in sports nutrition practice. If you wish to arrange for a player or team of players to see a dietitian, please email your request to the secretary at [snigindi@gmail.com](mailto:snigindi@gmail.com)

## References

- American Academy of Paediatrics Committee on Sports Medicine and Fitness.  
Position on use of performance-enhancing substances. *Paediatrics* 2005;115:1103 - 6
- American College of Sports Medicine. Roundtable: The physiological and health effects of oral creatine supplementation. *Med. Sci. Sports Exerc.*, 2000;32:706 - 17