CLAYESMORE

USE OF
SPORTS SUPPLEMENTS POLICY

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Summary

Based on the information below, Clayesmore does not recommend the use of sports supplements in adolescents and we do not allow pupils to use or store them in school, unless they have been prescribed by a GP or recommended by a dietician or nutritionist. In this case, parents must notify the Health and Wellbeing Centre in writing so that arrangements can be made for the safe storage and dosage of the prescribed supplement.

Clayesmore School is committed to supporting our pupils in their sporting goals and our sports and pastoral teams will ensure that pupils have easy access to dietary protein to avoid the need for supplementation.

Introduction

The term Sports Supplement covers a wide range of products which are easily available in the high street or online, and which contain a variety of ingredients such as protein, minerals, vitamins, caffeine, creatine and glutamine. Various claims are made that such products enhance athletic performance and/or build muscle bulk in a way that is beyond what could be achieved without them.

Some websites offering these supplements are couched in pseudo-scientific terms and look very plausible to the young reader seeking an instant improvement in his or her athletic prowess.

A frequent dilemma for school staff concerns the young athlete who is discovered to be using these supplements or who asks for advice about such products. The usual reasons stated by young people for using or wishing to use supplements are that they want to either improve their athletic ability and muscle size and strength, or a combination of both. They may also feel under pressure from their sports teams to bulk up via the use of supplements, although at Clayesmore we advise a “Food First” approach. Attitudes to diet and exercise are often developed in adolescence, and we feel that teaching pupils to prioritise food rather than supplements should help establish positive habits.

A young athlete who already eats a healthy, well-balanced diet with plenty of fruit and vegetables as well as adequate protein (either animal or plant based), who refuels correctly after exercise and who maintains adequate hydration before, during and after exercise should have no need of supplements. The challenge becomes the lure of the short cut that supplements are felt to provide.

Information about Specific Sports Supplements

Protein

Of all the supplements that are on the market, protein supplements are the most widely used. These come in a host of different formats from milkshakes, brownies, and pancakes, to pizza bases and chocolate bars. There is debate about the optimum amount of protein that someone

who is trying to build muscle should be taking daily but the amounts are likely to be much higher than the recommended minimum of 50g per day. A range of between 1.2-2g/kg of body weight is often cited. Protein supplement powders are expensive and bulky. They are often dairy protein and either whey or casein based. They may be isolate or hydrolysed which are said to make the protein easier to digest. There are also vegan supplements which are often based on pea protein.

Creatine

Creatine tends to be a powder that is added to water either by itself or as part of a pre-workout supplement. It is also available in capsule form. Creatine is a combination of amino acids which is found naturally in fish and red meat and can help the body use its energy stores more effectively. Creatine is only helpful if the muscle cells are saturated with it and for that reason it needs to be taken regularly to have the maximum effect.

Pre-Work Out

The contents of pre-workout supplements are many and varied but generally they contain ingredients such as carbohydrates, branch chain amino acids, creatine, taurine and caffeine. These supplements often act as a stimulant and an easily accessible source of energy and amino acids to fuel optimal performance in physical activity. They are often taken 30 minutes before exercise. The amount of caffeine in these can be extreme with several of them containing more than a day's recommended caffeine intake for an adult in a single 7g scoop.

BCAAs and EAAs

These supplements are Branch Chain Amino Acids (leucine, isoleucine, and valine) which are 3 of the 9 Essential Amino Acids that our body can’t produce and must be ingested through various protein sources. Amino acid supplements are claimed to have an impact on the power output of muscles and have a role in improving recovery times. There is significant debate about their effectiveness over protein supplementation alone.

Disadvantages of Sports Supplements

Protein

Taking a protein supplement is probably the least potential harmful sports supplement that you might encounter in the school environment. The main side effects of taking it are digestive with some users reporting side effects of abdominal pain, diarrhoea and excess flatulence. It is generally expensive and needs to be taken regularly if it is going to have a meaningful effect. It is not recommended in people under the age of 18 and could be harmful if there are underlying health conditions such as renal disease. It has been suggested that high protein intakes could be detrimental for bone health by causing demineralisation due to increased urinary calcium excretion.

Protein supplementation is effectively a short cut to avoid having to eat large amounts of protein and can also be abused to aid weight loss in people with eating disorders due to its

effect on reducing appetite and stimulating metabolism. There have been investigations that have cast doubt on the ingredients in these supplements with reports of supplements containing heavy metals, pesticides or other contaminants.

Protein supplements are processed materials and lack other essential nutrients required for a healthy lifestyle. It is this lack of other essential nutrients that prompts many nutritionists to recommend whole foods over supplements. While you can meet your protein requirements via a protein shake or whole food, the protein powder will contain fewer nutrients than the whole food protein source.

Creatine

People who consume creatine may experience side effects. These side effects include stomach discomfort, nausea, weight gain, and muscle cramping. These are often dose related and taking creatine regularly at the recommended dose is unlikely to cause harm although its safety has not been studied in people under the age of 18. The concerns about creatine use in adolescents may be related to risk taking behaviour and impatience for results leading to overdosing, as well as the lack of evidence in this age group.

Investigations into the true content of supplements has shown that some contain more ingredients than listed, and some supplements contain actual banned substances which risk the athlete falling foul of routine drug testing in their sport. Some products that are sold as dietary supplements, especially those containing ephedrine, are associated with serious adverse effects. Additional risky supplements include androstenedione and other "prohormone" precursors of testosterone, yohimbine and products containing cava.

Pre-Work Out

The concerns around pre-work out use typify those that many doctors have around adolescent use of sports supplements in general. Whilst many teenagers may wish to use supplements responsibly, there are always going to be those that push the envelope and take them in ways and doses that are not suggested by the manufacturer. The example of pre-work out abuse has been in the press recently: Doctors alerted to dangerous dry scooping workout trend - BBC News

The article reports that over the last year there has been a trend on Tik Tok where users have filmed themselves “dry scooping” pre-work out supplements i.e. taking them without water, sometimes in higher doses than intended. There have been reports of a heart attack and multiple hospitalisations as a result of the trend which are likely due to the doses of caffeine involved.

International Advice on Dietary Supplements

The International Association of Athletics Federations (IAAF) states:

- All athletes are cautioned against the indiscriminate use of dietary supplements, and young athletes are actively discouraged from supplement use.

- The perceived link between a high protein intake and gain of muscle protein is understandable but is not supported by scientific evidence.
- A food first philosophy is promoted in relation to nutritional needs, and supplements should only be used under supervision to treat or prevent nutrient deficiencies. Only five supplements have an evidence base of contributing to performance: caffeine, creatine, nitrate/beetroot juice, beta-alanine and bicarbonate. But there is a risk of ingesting banned substances in the use of any supplements.

The International Olympic Committee (IOC) states that: -

- Young athletes eating a wide range of foods should not need to use dietary supplements, including the use of energy drinks that contain high amounts of caffeine and are not suitable for young athletes. Athletes and coaches should be aware that supplements do not provide a short cut to success.

- Supplement use in young athletes should be discouraged and the focus should be on consuming a nutrient-rich, well-chosen diet to allow for growth while maintaining a healthy body composition.

- Carbohydrate needs and fat intake should be in accordance with established guidelines, and youth athletes do not need protein supplements to meet elevated protein needs, as these can be readily met by appropriate and well timed eating patterns.

Sports Dietitians Australia Position Statement: Sports Nutrition for the Adolescent Athlete

- It is the position of SDA that nutrient needs should be met by core foods rather than supplements, as the recommendation of dietary supplements to developing athletes over-emphasizes their ability to manipulate performance in comparison with other training and dietary strategies.

References

- The Association of UK Dieticians Factsheets: Sports Nutrition, Supplements

- IOC consensus Statement on Youth Athletic Development 2015

- IOC Consensus Statement: Dietary supplements and the high performance athlete March 2018

- International Association of Athletics Federations Consensus Statement 2019: Nutrition for Athletics

- Nutrition for Special Populations: Young, Female, and Masters Athletes in International Journal of Sport Nutrition and Exercise Metabolism 2018

- Sports Dietitians Australia Position Statement: Sports Nutrition for the Adolescent Athlete