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Connecting Coaches Newsletter

Volume 2 Issue 14 September 2011

Coaching Tips Research ASDC Services Resources

Welcome to Connecting Coaches Newsletter,

Services: Performance Training for High Performance Rugby Athletes

Research: Muscle-Building Effect of Protein Beverages for Athletes Investigated

Upcoming Events: Sport Leadership Conference

Educational Opportunities: Extension for CS4L and SPI Grants

Coaching Tips: Coaching Young Athletes

Alberta Sport Development Centres
www.asdc.ca

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ASDC Network

Partners

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ASDC Services

REGISTER TODAY!

Performance Training for High Performance Rugby Athletes



The ASDC Network in five regions across Alberta have teamed up to provide this exceptional training opportunity. As a High Performance rugby athlete, you will receive a minimum of:

- 64 strength and conditioning sessions
- 6 mental skills sessions
- 6 nutrition skills sessions

Dates: October 2011 - May 2012

* Please contact the nearest ASDC for further information on dates, times, training locations etc. at www.asdc.ca



Research

Muscle-Building Effect of Protein Beverages for Athletes Investigated

ScienceDaily (Aug. 18, 2011) — Physical activity requires strong, healthy muscles. Fortunately, when people exercise on a regular basis, their muscles experience a continuous cycle of muscle breakdown (during exercise) and compensatory remodeling and growth (especially with weightlifting). Athletes have long experimented with methods to augment these physiologic responses to enhance muscle growth. One such ergogenic aid that has gained recent popularity is the use of high-quality, high-protein beverages during and after exercise, with dairy-based drinks enriched with whey proteins often taking front stage.

Many studies have documented a beneficial effect of their consumption. Of particular interest is the effect of the essential amino acid leucine contained in these products. Two papers, published in the September 2011 issue of *The American Journal of Clinical Nutrition*, report the results of two independent studies conducted to understand better how amino acids influence protein synthesis in recreational athletes.

According to ASN Spokesperson Shelley McGuire, PhD: "These studies, and others like them, help us understand and apply something we all inherently know: the human body works in a complex, yet completely logical way! It makes good sense that consuming a food containing high-quality protein (like milk) during and/or immediately following exercise would help muscles get stronger. Muscle strength doesn't just happen on its own -- our muscles need to be both encouraged (as happens via exercise) and nourished (as happens when we eat well). Now we have even more scientific proof for this common-sense concept."

In the first study, researchers led by Stuart Phillips (McMaster University) investigated whether postexercise muscle protein synthesis is different when a large, single dose of whey protein (25 g) is consumed immediately after activity compared with when smaller doses (2.5 g) are consumed 10 times over an extended period. The idea with the small "protein shots" was to mimic how another milk protein, casein, is digested. Participants (8 men; mean age: 22 y) performed 8 sets of 8-10 repetitions on a leg-extension machine; each subject participated in both dietary treatment regimens. In the second study led by Stefan Pasiakos from the US Army Research Institute of Environmental Medicine, active-duty military personnel (7 men and 1 woman; mean age: 24 y) consumed a high-protein beverage (10 g protein as essential amino acids) containing 1.87 or 3.5 g leucine while exercising on a stationary bicycle. In both studies, postexercise muscle protein synthesis was evaluated.

Consuming the large bolus of whey protein immediately after exercise increased muscle protein synthesis more than when periodic smaller doses of protein were consumed. In the second study, muscle protein synthesis was 33% greater after consumption of the leucine-enriched protein beverage than after the lower-leucine drink.

The researchers concluded that muscle metabolism after exercise can be manipulated via dietary means. In terms of the most beneficial timing of protein intake, immediate postexercise consumption appears to be best. Furthermore, leucine may play an especially important role in stimulating muscle growth in the postactivity recovery period.

[Source: Retrieved September 28, 2011, from <http://www.sciencedaily.com/releases/2011/08/110818132225.htm>]

KEY POINTS



Cereal And Milk Is The New Sports Supplement (May 15, 2009)

— A bowl of whole-grain cereal is as good as a sports drink for recovery after exercise. Research has shown that the readily available and relatively inexpensive breakfast food is as effective as ...



The Global Drug Reference Online (Global DRO) provides athletes and support personnel with information about the prohibited status of specific substances based on the current World Anti-Doping Agency (WADA) Prohibited List. Visitors can search the Global DRO for specific information on products sold in the United Kingdom, Canada, and the United States.
<http://www.globaldro.com/>



Upcoming Events

Breakfast of Champions Presents

Jennifer Jones
4 Time World Champion
Thursday, Nov 3rd
7:00 am - 9:00 am
Westerner Park
Table of 8 = \$280
Adults = \$40
Students = \$25
Tickets will be available from ASDC & STOHL soon



Nicotine placed on monitoring program

In order to detect potential patterns of abuse, nicotine has been placed on World Anti Doping Agency's (WADA) 2012 Monitoring Program. It is NOT WADA's intention to target smokers, rather to monitor the effects nicotine can have on performance when taken in oral tobacco products such as snus. Nicotine is one of several stimulants added to the Monitoring Program, along with the narcotics hydrocone and tramadol. Out-of-competition use of glucocorticosteroids has also been included. Under Article 4.5 of the World Anti-Doping Code, WADA is mandated to establish a monitoring program regarding substances that are not on the List, but which the Agency wishes to monitor in order to detect potential patterns of misuse. *Updated Sep 16, 2011*



Free Webinar

Making Sense of the Commercial Sports Food Scene

Presented by Nancy Clark
 Wednesday, October 12th
 1:00 - 2:00 PM ET
 (12:00 - 1:00 PM CT)



Hosted by Nancy Clark, author of *Nancy Clark's Sports Nutrition Guidebook, Fourth Edition*, this webinar will provide an overview of the importance of appropriate fuelling before, during and after exercise, and highlight some of the popular commercial sports foods that athletes commonly consume. Topics will include sports drinks, energy drinks, gels, bloks, energy bars, protein bars, and recovery foods, and their role in enhancing athletic performance. The goal is to help the participant become an informed consumer, and be better able to guide athletes and fitness professionals on appropriate fuelling tactics.

[Register now!](#)

CS4L and SPI Grants Open Again

Thanks to an extension of the agreement between the Governments of Canada and Alberta, the Foundation is once again able to offer the two following grant programs:

- **The Sport Participation Initiative Program** supporting programs for under-represented groups
- **The Canadian Sport for Life** grant supports programs related to the first four stages of the LTAD model

Deadline for both grants is November 1, 2011 and up to \$10,000 will be available for successful applicants.

[Find out more.](#)

NCCP needs your input

Attention all Coaches! Are you looking at taking a National Coaching Certification Program (NCCP) workshop? Are you new to coaching or looking to enhance your coaching skills? I am in the process of organizing NCCP courses for the winter semester and need your input. If you are interested in either Part A or Part B, please email or call me for more information.

Catherine Decelles BSc, CSEP-CEP

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Foundation Grant Opportunities

Coach and Official Initiatives	Provides opportunities to further coaches and officials development.
Development Initiatives Program	Supports individuals and organizations in the areas of sport, recreation, parks and wildlife projects and programs.
Event Support Program	Encourages hosting major events in sport, recreation, parks and wildlife programs to communities and associations.
Podium Alberta	The Alberta High Performance Athlete Assistance Program grant supports Alberta's high performance athletes.
Canadian Sport for Life Grant	The Alberta High Performance Athlete Assistance Program grant supports Alberta's high performance athletes.
Sport Participation Initiatives Program	The Alberta High Performance Athlete Assistance Program grant supports Alberta's high performance athletes.

Coaching Tips

Coaching Young Athletes

Avoid training child athletes like adults

Training theory and coaching methods are mostly based on the physiology of adults, which creates problems considering the vast differences in physiology between adults and children.

The purpose of this article is to help coaches become aware of the kinds of training that are right for young athletes and the kinds of training that aren't.

Exercise will neither stunt nor promote growth in terms of height. Instead, it thickens the bones by increasing mineral deposits, which is a positive benefit of exercise for children.

However, growing bones are sensitive to stress, especially repetitive loading, and so there are injury risk factors associated with bone growth.

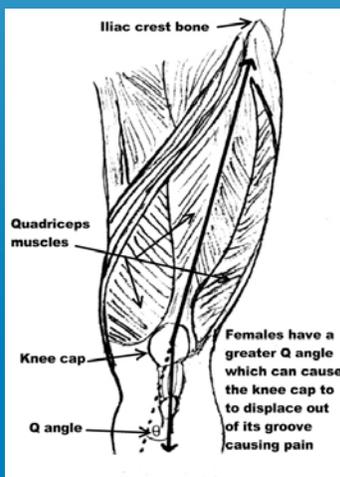
Bone growth examples

- *The epiphyseal plate*

A fracture to the epiphyseal plate prior to full growth would be quite a serious injury because it could disrupt bone growth. In addition, anabolic steroid use in children can stunt growth by causing premature calcification of the epiphyseal plate.

- *The female knee cap*

The changes in female body shape during the growth spurt also lead to particular injury risks. The hips widen, placing the femur, or thighbone, at a greater inward angle. During running or walking, this increased femur angle leads to greater inward rotation at the knee and foot.



- *Traction injuries*

They're another type of injury associated with bone growth. Again, they are caused by repetitive loading while the tendon is sensitive to stress. In particular, they are characterised by crescendo pain, ie it gets worse as the activity continues.

Muscle and Fat

As with bones, muscle growth is also uneven. Muscle mass increases steadily until puberty, at which point boys show faster muscle growth.

At 15, the average boy has 25% relative muscle mass, which increases to 44% at 19. At 15, the average girl has 27% relative muscle mass, which increases to 39% at 19.

An Introduction to Coaching Young Athletes

The difficulty for most teenage girl athletes, at a time when they start to gain weight, is striking the right balance between keeping in shape, which means about 18% body fat, and not being too paranoid about weight gain and thus not eating enough.

Coaches need to make girl athletes aware that eating the right kinds of foods is the way to avoid unwanted weight gain.

The right foods include fruits, cereals, wholemeal bread, pasta, rice, potatoes and vegetables, which are all complex carbohydrates and full of nutrients.

Protein foods, such as lean meat and fish, which are low in fat, are also necessary for a healthy diet.

Foods that need to be avoided are those that are high in fat and simple sugars and empty of nutrients, such as cakes, chocolate, biscuits and sugary drinks.



Physical Ability and Strength Training

Coaches should

remember that children

will get bigger, stronger and faster every year, regardless of the

training you do with them. Keeping it fun, concentrating on skills and laying foundations for the future, represent the best coaching policy for children. Specialised, advanced training should be saved for later, when the athlete will really need it!

Eastern European coaches have long been strength training young children with bodyweight exercises and light weights. The focus has been on technique and general conditioning – for instance, teaching the power clean with a very light bar.

Extensive research on the differences between weight training for adults and children, including experiments.

Aerobic and Anaerobic development

Cardiorespiratory function also develops throughout childhood. Lung volume and peak flow rates steadily increase until further growth. For example, maximum ventilation increases from 40 L/min at five years to more than 110 L/min as an adult.

Cardiovascular function is also different for children. They have a small heart chamber and lower volume than adults. This results in a lower stroke volume than adults, both at rest and during exercise.

Although they are biomechanically and physiologically inefficient, children rely heavily on aerobic metabolism for exercise. They have been described as aerobic animals!

[Source: Peak Performance, www.pponline.co.uk]