

SportsNutrition

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The Athlete's Kitchen

For cutting edge sports nutrition information, the annual meeting of the American College of Sports Medicine is the place to be! Over 5,000 exercise scientists, sports dietitians, physicians and coaches gather to share their latest research. Below are some of the sports nutrition highlights. (For other highlights, see www.acsm.org; click on *news releases*.)

- Eating an energy bar just 15 minutes before you exercise is as effective as eating it an hour before. Grabbing fuel as you rush to your workout is a good idea that gets put to use.
- Natural sports snacks, like a granola bar or banana, offer a variety of sugars. But engineered foods might offer just one type of sugar. Because different sugars use different transporters to get into muscle cells, eating a variety of sugars enhances energy availability. In a 62 mile (100 km) time trial, cyclists who consumed two sugars (glucose + fructose) completed the course in 204 minutes; those who had just glucose took an 16 additional minutes. The bottom line: eat a variety of foods with a variety of sugars during endurance exercise, such as sports drinks, tea with honey, gummi bears....
- Salty pre-exercise foods such as chicken noodle soup can make you thirsty and encourage you to drink more. This can reduce the risk of becoming dehydrated during hot weather.
- A survey of 263 endurance athletes indicates they understand the importance of recovery after a hard workout. But they don't know *what* to eat. They believe protein is the key to recovery. Wrong. Carbohydrate should really be the fundamental source of recovery fuel. Or better yet, enjoy a foundation of carbs with a little protein ...Chocolate milk!
- When exhausted cyclists were given a choice of recovery drinks, they all enjoyed—and tolerated well—the chocolate and vanilla milks, more so than water, sports drink or watery chocolate drink. Chocolate milk is familiar, palatable.
- How long do elite soccer players need to recover from a game? Five days for sprinting ability to return to pre-game level. That's four days longer than most athletes allow...
- How many calories does a triathlete burn during the Hawaii Ironman? Using labeled water, researchers determined a 173 lb (78.6 kg) man burned 9,290 calories. Body water turnover was about 4 gallons (16.5 L), and weight dropped 7.5%. Muscle glycogen dropped by 68%.
- Fatigue is related to not only glycogen depletion and dehydration but also to body temperature higher than 104° F (40° C). Try to keep cool when exercising in hot weather!
- Have you ever wondered how long it takes for the water you drink to end up as sweat? Only 10 minutes (in trained cyclists). Ingested fluid moves rapidly, so don't hesitate to drink even towards the end of an event.
- Should an endurance athlete choose a sports drink with protein during exercise? The research is confusing, due to different protocols (time trials vs. endurance tests). Plus, in most research studies the subjects have nothing to eat before the exercise tests—an unlikely situation for most endurance athletes. Hence, we need more “real life” research. Until then, plan to eat carbs with a little protein pre-exercise—cereal with milk, half a sandwich—so the protein will be available, if needed. During exercise, choose a sports drink that tastes good, so you'll consume enough.
- Some endurance athletes do perform better with protein during exercise. For example, when given carbs or carbs + protein during an endurance exercise test, those who were “high responders” to the protein performed about 10% bet-

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ter in the time trial at the end, as compared to the “low responders”. This is just one example of how each athlete has his or her individual response to different fuels during exercise. The best bet: Experiment to learn what settles best, tastes good and works well for you personally!

- A Norwegian study of elite endurance athletes indicates 73% took vitamin supplements. Little did they realize their diet provided the recommended nutrient intake *without* the pills. The vitamin intake of the pill takers was even higher—135% to 391% of recommended levels. Two exceptions were Vitamin D (low in 22% of the athletes; perhaps due to the fact they live in Norway and have less sunshine) and iron (low in 10% of the women). The researchers remind us that high intakes can have toxic effects and may be detrimental to health over time. The best bet is to eat your vitamins via healthy foods.
- Coaches encourage football players to be big—but what is the long term cost? A survey of former college players indicates a high rate of obesity and associated health problems.
- The “freshman fifteen” pounds gained in the first year of college may be an exaggeration. Among a group of 40 female college freshman, half gained and half lost weight (~4 to 5 lbs) Excess calories from specialty coffees and soda contributed to the weight gain. Watch out for liquid calories!
- If kids are going to play video games, they might as well play active ones such as Wii Boxing, Wii Tennis or Dance Dance Revolution. These burn two to three times the calories as traditional hand held games.
- If you read ultra-fit magazines when you are exercising, you'll likely feel more anxious and depressed than if you read Oprah or no magazine. Take note: the models' “perfect bodies” are altered to look leaner and more glamorous.
- Women who exercise experience an increase in the hormones that stimulate appetite; men have less of a response. This means women tend to get hungry after exercise and have a harder time with weight reduction than do me. Science finally validates what women have known all along!
- Lightweight rowers commonly get rib stress fractures. In their efforts to maintain a light weight, many rowers under-eat, lose their menstrual period, and end up with low bone mineral density. Even after rowers with menstrual dysfunction retired from their sport, their bone density remained low, suggesting the effects might be irreversible. Light weight athletes should meet with a sports dietitian for professional guidance. (For a local referral, see www.SCANDpg.org.)
- Athletes with eating disorders are known to over-exercise. If they get admitted into an eating disorders recovery program, they often are not allowed to exercise (for health reasons). This can be very upsetting. A study with patients with eating disorders who did 10 weeks of supervised strength training as a part of their recovery achieved higher bone mineral density and muscular strength. The exercise generated positive physical and psychological benefits.
- If you have “healthy genes”, you still need to exercise to be able to gain access to the potential good health you inherited. There's no slouching when it comes to prolonging life!

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