

CALENDAR OF EVENTS

- Feb 27- Mar 1
 Girls' Basketball State Tournaments
 AA Great Falls
 A Belgrade
 B Hamilton
 C Butte Civic Center
- Mar 6-8
 Boys' Basketball State Tournaments
 AA Great Falls
 A Belgrade
 B Butte Civic Center
 C Billings Metra
- Mar 10 1st date for softball, track & tennis practices
- Mar 17 Montana Athletic Enhancement Spring Session



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 David Shenton, M.D., and Suzette Hackl, ATC, Editors



HIGHLIGHTS:
 Over The Counter Medications & the Student Athlete
 Post Exercise Nutrition: The Glycogen Window
 Injury Assessment: The First Step in Treatment and Recovery
 Getting Healthier by Turning Sport into Games and Games into Play

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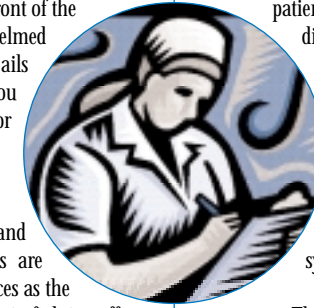


OVER THE COUNTER MEDICATIONS & THE STUDENT ATHLETE *By: Shane A Anderson PharmD. RPh.*

Stuffy Nose? How in the world are you going to be able to practice when you can't even breathe? More self treatment options are available now than ever before. In the year 2000 more than one hundred new drugs were reviewed and approved for use by the Food and Drug Administration. Many of these are medications that will be available as over the counter medications, now or in the near future, which would be easy to believe as you stand in front of the OTC (over the counter) drug aisle overwhelmed by the thousands of options for whatever ails you. This article may be able to guide you in the proper selection of OTC products for your specific needs.

Allergies

Another common affliction encountered by student athletes is allergies. These symptoms can be particularly debilitating. Some people's allergy symptoms wax and wane through different parts of the country or during different seasons of the year. Your athletic performance can be dramatically affected by that stuffy nose and itching, watery eyes. Asthmatic patient particularly can suffer severe respiratory difficulties.



Our best defense to allergy difficulties is a good offense. Once allergy symptoms arise, only time can erase them, but if we prevent these symptoms from occurring, by taking antihistamines, we can virtually eliminate physical limitations from these symptoms.

Cough, Cold and Flu Season

The season has arrived for sniffles and sneezes. Classrooms and locker rooms are perfect breeding grounds for such nuisances as the cold and flu viruses. We are not so helpless in fighting off these colds as we used to be. Lozenges containing Zinc are on the shelf at any retail store or pharmacy. They can reduce the length and severity of the symptoms of the common cold if they are started at onset. These lozenges should not be used by pregnant women and diabetics should be very careful with their blood sugars as well.

What if you think you have the flu? Body aches, persistent high fever, headache, coughing, and fatigue might indicate that your illness is more than just a cold. The best thing to do in this case is to actually be seen by a doctor. New prescription medications are now available that can significantly reduce the time that you are going to be out of commission. The trick to these, however is to get diagnosed and initiate treatment as soon as you suspect the flu.

One simple rule governs OTC drug selection for most any affliction, that is, **only treat symptoms that you actually have.** It is best to avoid multiple drug preparations (such as Nyquil, Thera-Flu, etc.) for cough and cold; these often contain several different unnecessary medications. Keep your selection of medications to a minimum, and if you are confused, call or talk to a local pharmacist to assist you.

Student athletes with special needs such as diabetics or asthmatics should be particularly careful in their selection of OTC medications. Diabetics should always avoid cough medicines or cough drops with sugar in them. Many products are available now that specifically state that they are sugar-free. Asthmatics might want to avoid Aspirin, Advil, or Aleve unless they have previously used them without difficulty in the past.

The antihistamine selection alone can be mind-boggling. There are so many to choose from. And then what about all the generics? Which one would be best? Basically, there is two separate and distinct groups of this medicine to choose from. First generation antihistamines are medicines like Benadryl, Actifed, Chlorotrimeton, etc. Second generation antihistamines are a newer class of medications, they include Claritan, Allegra, and Zyrtec.

The difference between these drugs lies in how much sedation they cause. All first generation antihistamines will cause some drowsiness to varying degrees. This can be troublesome while trying to keep awake in class. Lethargy associated with these drugs can also make it very difficult to put forth a good athletic effort in your sport. So the logical decision would be to use a non-drowsy antihistamine, which is exactly what is offered by the second generation antihistamines. Claritan is the only option currently available without a prescription. It will be joined soon on the market by its competitors Allegra and Zyrtec. Claritan is a great medication to take when those allergy symptoms start to affect your performance or concentration. It only needs to be taken once daily, and can be discontinued when your seasonal allergies are no longer "in season".

Performance Enhancers

Everybody is looking for an edge today in competitive sports. "What can I use to make me play harder, stronger, and faster than everybody else?" The answer is a definitive, **"Nothing!!"** If you want to be bigger, faster and stronger than everybody else you compete against, then you must train more, train harder, and train better than them. You may ask, "Then why did 'Joe' put 70 pounds on his bench press last year when he took 'Super mega blaster'?" That would be because

'Joe' motivated himself to train harder and he believed it was going to work for him. His self-motivation fueled itself each time he mixed up a glass. The truth is that he could have done the same thing without spending 60 dollars a month a local health food store.

Now, with that said, there are some things that can be used to help to maintain and supplement our bodies throughout the training process. Pain relievers and anti-inflammatories like Ibuprofen (ADVIL), Naproxen (ALEVE), and Ketoprofen (Orudis) can be and are used safely to treat and prevent pain associated with sports injuries. They can and are used effectively along with sports balms and rubs by athletic trainers to aid us through our workouts and beyond.

Creatine is a new trend in athletics that has been quite controversial. Many athletes have tried this supplement, and its scientific background offers some promising results. The absolute bottom line with using this product is, **"Never, ever use this product while training in high heat and/or humidity"**. Several deaths have been linked to the use of creatine and it apparently affects the way our internal thermostat works.

Ephedrine and ginseng are also becoming more popular drugs of abuse among college athletes. These are often found in 'pill packs' used to help boost alertness or athletic performance. Ephedrine is also a very dangerous drug, it actually raises blood pressure and may do so to dangerous levels. Enhancement of performance would be no more than what a cup of coffee might do for you, but the side effects could be deadly.

Chromium is another common supplement used in some pill packs, which may actually offer some advantage. It is processed by the body to utilize our naturally produced insulin more efficiently. Student athletes with diabetes may find this especially helpful.

In summary, OTC drugs can be used to aid student athletes in a variety of ways. This article may have shed some light on a few gray subjects, but if you still have some questions, call your doctor or pharmacist.

Shane Anderson is a clinical pharmacist specialist with St. Vincent's Hospital. Shane graduated with his PharmD from North Dakota State and has been with St. V's for 5 years.





POST EXERCISE NUTRITION: THE GLYCOGEN WINDOW

With today's training techniques and exercise programs becoming increasingly advanced, athletes are able to overcome such drawbacks as bad genetics, poor biomechanics, etc. As a result of advanced training, there is much more competition for the prospering athletes. However, with all the advances in training techniques one area that is consistently neglected, especially in beginning and intermediate level athletics, is a sound post exercise/event nutrition program. Post exercise/event nutrition is an area that is usually over looked in most athletes except those in elite levels of competition. Fortunately, even athletes in beginning levels of competition can gain speed, endurance and power from following a few post exercise nutrition guidelines.

The hours following exercises/events are commonly known as the glycogen window. During this window, the body actually increases the rate of glycogen synthesis (Berning & Burke, 1996). At the same time, the more glycogen the body can synthesis, the more it can store and consequently, the more glycogen the athlete has in his/her body will readily convert into more energy on the field.

To take the biggest advantage of the glycogen window, an athlete needs to consume carbohydrates as soon as possible after exercising. The athlete should try to consume 1 gram of carbohydrate for every pound of body weight (Burke, 1999). This amount of carbohydrate can be complimented with 1 gram of protein for every four grams of carbohydrates. This ratio can help improve the insulin response during glycogen synthesis, but it does place stress on the athlete's hydration or gastric emptying (Burke, 1999).

For some athletes, eating this amount of solid food post-exercise can seem impossible due to stomach irritation or lack of appetite. If this is the case, the athlete may consume the needed carbohydrates in a liquid form. When looking for a post-exercise carbohydrate drink/shake the athletes need to pay particular attention to the carbohydrate and protein levels of the beverage. Most sports shakes have a high level of protein which can cause dehydration when taken this early after exercise (Berning & Burke, 1996). When choosing a post-exercise shake athletes are encouraged to find one high in calories (around 500 +), high in carbohydrates, moderate in protein (maintain the 4 to 1 ratio), and low in fat (Gastelu & Burke, 1999)

Once the athlete has passed through the glycogen window (4 hours +), they should be able to return to their regular, healthy, daily nutritional habits. With this, the athletes should be eating approximately 3 to 5 grams of carbohydrate for every pound of body weight (Burke, 1999). This is in addition to the carbohydrates that they ate during the post-exercise meal. All of the meals afterwards should follow the basic nutritional guidelines of 60- to 65-percent of calories from carbohydrates, 20- to 25-percent from fat, and 15-percent from protein (Berning & Burke, 1996)

For the elite level athletes these simple guidelines are already being utilized. Unfortunately, beginning and intermediate level athletes have yet to take advantage of the increased energy provided during the glycogen window and it is an important tool that any developing athlete should use. Overall, the glycogen window technique mentioned above can help even the most average athlete.

As with this technique or any other nutritional advice, the athletes should try the methods well before any competition in case some adjustments need to be made. Also, with the glycogen window technique and any other techniques, athletes need to remember to consume plenty of fluids before, during and after to help ward of any affects dehydration. If the athlete is not hydrated then it is pointless to attempt any diet adjustments because of the setbacks caused by lack of water.

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askthesportspecialist

I am a sophomore in high school and compete on the cross country and track team. I heard that there are foods that will help with performance and aid recovery for longer competitions. Can you give me any advice on what I should do nutritionally pre-event/workout and post event/workout?

Pre-Workout

- Eat 2-4 hours before workouts.
- Eat foods that you are accustomed to eating. Keep the meal around 70% carbohydrates.
- Avoid meals high in fat and protein, around 10-15% for each.

Post-Workout

- It takes almost 24 hours to replenish glycogen stores after a strenuous event.
- Eat carbohydrates as soon as possible after the event.
- If possible try to consume carbohydrates in small amounts over the next 1-2 hours.
- Try to use one of the following three methods:
.75 grams of carbohydrate per kilogram of body weight every hour
1.5 grams of carbohydrate per kilogram of body weight immediately after exercise and every two hours there after
.4 gram carbohydrate per kilogram of body weight every fifteen minutes after exercise.
- Use liquid supplements if possible to avoid stomach irritation.
- If eating solid foods stick with those that are high on the Glycemic Index (potatoes, cooked carrots, honey, bananas, etc). See Index.
- If possible try to maintain a 4 to 1 ratio of carbohydrates to protein in your post event meal to help improve the insulin response and increase glycogen synthesis.
- After the two hour window try to consume 8-10g of carbohydrate per kilogram of

bodyweight throughout the next day.
• Remaining meals should be lower in carbohydrates, but a higher protein.

Post-Workout Hydration & Sports Drinks

- Sports drinks can actually increase the amount of water absorbed by using moderate levels of sodium.
- The sodium in sports drinks can also increase the thirst response which causes more fluids to be consumed.
- Sports drinks should include up to 75 milligrams of sodium for every eight ounces, and no more than 15% carbohydrates. Look for carbohydrates in the form of polysaccharides and simple carbohydrates.
- Drink up to 12 ounces of sports drink fifteen minutes before exercising, and 4 to 8 ounces every ten minutes during workout.
- A good sports drink should contain adequate levels to sodium, potassium, magnesium, and chloride to help the body's electrolyte levels.
- Monitor hydration levels by weighing before and after event, for each pound lost try to consume 16 oz. of fluid. Also have athletes monitor urine color. (dark yellow and strong smelling = bad, light yellow = good)

Glycemic Index of Common Foods (Try to stay in the medium and high columns)

High (>85)	Medium (60-80)	Low (60->)
Bagels	Baked Beans	Apples
Baked potatoes	Bananas	Applesauce
Carrots	Bran cereals	Cherries
Crackers	Grapes	Dates
Honey	Oatmeal	Ice cream
Maple syrup	Orange juice	Kidney beans
Molasses	Pasta	Lentils
Raisins	Pineapple	Milk
Rice, white	Rye bread	Peaches
Soda	Fruit cocktail	Tomato soup
Sports drinks	Yams	Yogurt

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Bernig, J. R., & Burke, E. R. (1996). Training Nutrition; The Diet and Nutrition Guide for Peak Performance. Traverse City, Michigan: I.L. Cooper.
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2003nationalathletictrainingmonth

Injury Assessment: The First Step in Treatment and Recovery

The National Athletic Trainers' Association (NATA) has announced that injury assessment will be the emphasis for National Athletic Training Month – March 2003. Certified athletic trainers (ATCs) will be recognized nationwide during the national health event, celebrated each March, with the theme "Injury Assessment: The First Step in Treatment and Recovery". This year's theme focuses on one of the ATC's primary area of concentration – injury assessment. The goal of this year's theme is to advance the public's knowledge of injury assessment and the importance of prompt and proper assessment in developing a plan and achieving full recovery.

Certified athletic trainers (ATCs) are allied health care professionals recognized by the American Medical Association who specialize in the prevention, assessment, treatment and rehabilitation of injuries to athletes and other who are engaged in everyday physical activities. They are often the first to respond and assess an injury. As a skilled professional, the ATC will perform a thorough evaluation and assessment when treating an injured individual. ATC's are specially trained and dedicated to the job at hand and can be found in high schools and colleges, corporations, professional sports, military branches and clinics and hospitals.

For further information contact the NATA at www.nata.org



Dr. Russel Lord – MSU-Billings

Too few Americans play – while far too many mistakenly view entertainment as sport, mistakenly see sport as just a game, and fail to understand that games are not necessarily play. Further, just because someone has fun at an activity, it is not necessarily play. Many professional athletes have fun in their profession, but it is decidedly not play (in few, if any cases, it has stopped being a sport and has become entertainment). Many of us have fun at activities that are far removed from play, activities that are deadly serious, goal-directed, rule-governed, and clearly means to other ends – all the opposite of play, which by definition lacks seriousness, disappears in the presence of rules, and is its own goal. As a human universal – one of the very few rarities in life that does not have to be taught to us by someone else – play is fundamental to human development, as it seems to be for many mammals and perhaps even some other species. It serves as a sort of central organizing principle in human development by providing the safe context in which much critical learning occurs. For instance, in play, we learn how to belong and stay emotionally connected to others when competing as well as cooperating. We learn how to be creative by breaking some expectations while conforming to others and how to handle success and failure with increasing equanimity. When in the reverie of play we forget to quit, we first start to learn how to persevere in the face of discomfort. Without play, our learning is seriously impaired and, in the opinion of many researchers, with potentially tragic results.

Play is a universal and essential dimension of being human and crucial in healthy development –at all ages. It has to involve spontaneity, changeability, and can not be governed by rules. Beyond the moment-to-moment adjustments needed to maintain engagement of the participants, it is unorganized. As an activity becomes regularized or systematized, it ceases to be play. Though adult researchers might struggle to define play, everyone engaging in play knows when they are playing as well as when their play has given way to the structured, organized, and rule-governed activity that indicates a game – with its more explicit goals and approved means for attaining the goals. As the activity becomes still more systematized, game gives way to sport and for the first time,

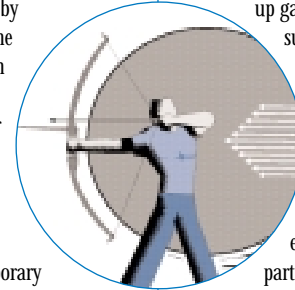
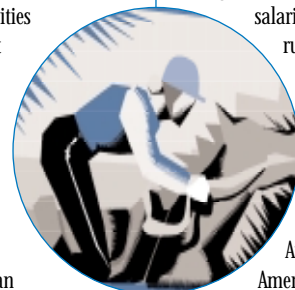
participants see the need for governing bodies, whether in the form of teams, leagues, conferences, or even national governing bodies. An activity that had its origins in play has then become fully a sport – and, if entrepreneurs can see a way to make money from it, the sport morphs

into entertainment. At a very early age in Cabin Creek, WV, Jerry West ran, jumped, and threw balls. Soon he fell in love with the game of basketball and at a young age excelled at the sport. He was an almost unbelievably skilled player of the game and sport, at the college, Olympic, and professional levels. Then, by the time he was general manager of the Los Angeles Lakers, in the modern era of multi-million dollar salaries for performers who lack even the rudimentary skills required by the rules that regulate the game, he acknowledged that he signed performers in light of a full understanding that the NBA is about entertainment.

People can be denied access to entertainment, or sport, or a game – as were Americans of African descent in theaters all over America, women in high school and college sports, and anyone too poor to join a country club or own polo ponies. Even in those same eras, however, poor children, little girls, and African Americans who remained healthy still found ways to play. Those who failed to play experienced far greater loss than those denied access to games, sports, or entertainment. Games, sport, and entertainment are elective activities in the journey that describes healthy human development. Life with them can have more texture and might be richer with them than without them, but they are not essential. In this they could not be more different from play, without which healthy development across the lifespan, not just in youth, is impossible. Play is central to human development.

Recently, websites such as Play-Sport News, Media have been established to offer consultants for hire by people who seek professional consulting in the area of play-sport. Various media support can be purchased with enticing titles like Play From Birth to Twelve and Beyond – yours for \$135. There is even The Institute for For Play, established a couple years ago and available on PBS as well as their website. It says volumes about the artificiality and disconnectedness of so much of our contemporary experience of life that something absolutely universal to humans, something with no dependence on being taught to us by anyone else, something that by its nature is free from the constraints that arise as soon as any outside expert introduces organization, regularization, or structure can be packaged, marketed, and sold successfully. And, even though the problems that arise from such fabricated and controlled experience are beyond the scope of this column, the effects of such problems affect all of us in one way or another.

As in virtually every other facet of human life, balance is the key to health. How can we determine if we are too far removed from play and too immersed in entertainment, sport, or games? How can we judge if we spend too little time playing and too much time in games and sports that at best are a sort of pseudo-play, lacking the benefits of play? If need be, how can we re-align our activities so we engage in more play and less games and sport?



GETTING HEALTHIER BY TURNING SPORT INTO GAMES AND GAMES INTO PLAY

If you find yourself consoling yourself or others by noting that it's only a game only after losing, and never after winning, are you really playing?

If the activities that you consider play are largely governed by rules and involve some form of external enforcement of those rules by outside authority, can it really be play?

If there is a purpose beyond the activity itself, be it material awards, public acclaim, or other extrinsic accoutrements, play has been displaced.

If perseverance in the face of adversity and discomfort requires discipline and effort, then the activity probably is not play, for discomfort and adversity are often unnoticed when we are lost in the reverie that often accompanies play.

For those of us recognizing that we are playing too little and spending too much time on other diversions – even if they are healthy and enjoyable games or sports – and, consequently in need of some balance, perhaps we can accomplish some small corrections.

Like Calvin, the no-longer-in-print hero of the comic strip Calvin and Hobbes, we might look more to create our own version of Calvin Ball (his favorite no-rules – except for those he made up as he went along – alternative to Little League) and spend less time in organized, structured games or sport events that overemphasis accommodating ourselves to externally imposed rules, strictures definitions of success, etc. We might make sure that we never go too long between attempts to engage others in our own favorite, physical pastimes with no benefit to them of participating other than the activity itself – and, of course, interaction with us in the activity. Activities excluded from this category would be pick-

up games of basketball or the like, while activities such as skiing, rock scrambling, perhaps fishing (not in a tournament!), and the like would be included.

We should strive to balance the enjoyment we derive from games and sport, in which participation is predicated on conforming to the rules, structure, etc. with the challenge of engaging others in playful activities in which participation is maintained only through the interpersonal skill of the participants and the enjoyment that everyone derives from the activity itself, not from any outcome. Canoeing, rafting, or kayaking with friends come to mind (for personal reasons), wandering around on a mountain bike not in a race, and golf or Frisbee golf (folf) without scores all seem to fit, as would similar activities.

As in virtually every aspect of life, the lines between play and games/sports often blurs, the point of balance changes from time to time, and all of us move around and back and forth between too little and too much of even good things. In all of life, though, as we move farther from the play of youth, less often express childlike glee simply at the joy of an activity without any score, or less frequently interact with others solely for the pleasure of joining in the activity, we lose the positive benefits of play – which is essential to human life even if we fail to realize it.