

Supported by  Liberty Mutual.**THEME: WINTER HEALTH**

Staying Fit During the Winter Months

by Delia Roberts, Ph.D., FACSM



There is a cold wind blowing outside and the temperatures have dropped below freezing. The sidewalks and roads are covered by slush or ice, and the sky is a gloomy shade of grey. It's hard enough to motivate yourself to get outside and exercise when the weather is sunny and warm, so how are you supposed to maintain your goal of healthy living when Old Man Winter makes outdoor activities so unappealing?

The American College of Sports Medicine (ACSM) recommends a minimum of 30 minutes of moderate-intensity physical activity five days per week and 8-10 strength training exercises (with 8-12 repetitions of each) twice per week to maintain good health. The

benefits of physical activity are vital to reduce the risk of disease and increase longevity, so it's important to keep your exercise program going all year long.

Going Outdoors

Though the weather outside isn't warm and sunny, you can create your own micro-environment for exercise. You don't need expensive exercise wear; rather, the simple use of multiple layers allows you to pile on enough insulation to keep you warm at the start of your workout and then shed layers as you warm up and begin to perspire. It's very important to avoid getting wet because you'll lose heat through evaporation very quickly when temperatures drop.

Take a bit of extra time to ensure that you are well warmed up before beginning a strenuous workout. Even if your core feels warm, the areas of your body exposed to the wind may remain cool. Don't forget to cover your head and hands, and be particularly careful to ensure that extremities like your fingers, toes, nose and ears are well protected. These and other suggestions can be found in [ACSM's *Selecting and Effectively Using Clothing for Inclement Weather*](#) brochure available online.

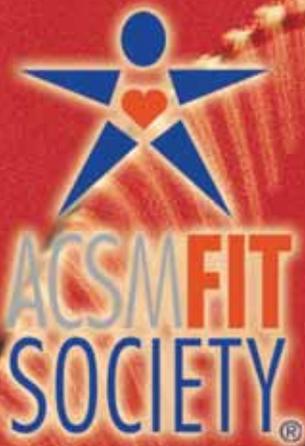
Safety can be a consideration when there is a layer of ice or snow on the ground. Commercially available rubber cleats are a good way to get more traction. A simple and inexpensive solution is to use double-sided tape to attach a piece of a metal scouring pad or metal netting to the bottom of your shoes.

Learning a new sport like ice skating, snowshoeing or skiing is a great way to increase your physical activity in the winter, and it offers the added benefit that you and your family can have fun and make new friends in the process. Exercising outdoors when the temperatures fall below freezing can be exhilarating, but it's important to make sure you are safe and well protected during your workout. ➤

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AMERICAN COLLEGE
of SPORTS MEDICINE
LEADING THE WAY

Letter from the Editor

by Dixie L. Thompson, Ph.D., FACSM

Welcome to the winter 2011 edition of the *ACSM Fit Society* Page, sponsored by Liberty Mutual. The onset of winter often causes exercisers to lose steam in their fitness regimen. Whether it's the cold temperatures, harsh elements or early darkness, the winter blues creep up and cause people to stay inside. This issue will help you fight the winter blues by highlighting the many ways you can prepare yourself for winter-weather exercise, featuring stories about what to wear in the winter and protecting your skin from the elements. We hope these articles will reinforce that physical activity and fitness are safe in all seasons, as long as you have the know-how to get started.

Also new to 2011 is our partnership with insurance provider Liberty Mutual. We thank our friends at Liberty Mutual for their generous support of this quarterly publication in 2011.

Please look over this information that ACSM experts have prepared for you, share it with friends and family, and enjoy the fitness opportunities that winter weather presents!

Dixie L. Thompson, Ph.D., FACSM
Editor, *ACSM Fit Society* Page
E-mail: dixielee@utk.edu

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Staying Indoors

Indoor workouts are a nice alternative to outdoor activities during the winter months. Changing your routine is a real opportunity to improve your fitness. If a fitness club is accessible to you, they can offer stationary bikes, treadmills, rowing machines and other types of trainers as well as strength training equipment. But it's easy to find ways to get in a good workout without purchasing a club membership or specialized equipment. Get together with your officemates and run a contest to see who can use the stairs the most in a month. Not only will you help the environment by reducing the use of elevators or escalators but each set of stairs you go up and down will strengthen your legs and core, as well as give your heart and lungs a good workout. Also, malls are a great place to meet friends for coffee, so why not spend a half hour walking briskly at the same time? Some

malls even offer after-hours access for walking groups.

One of my favorite indoor workouts is a simple form of higher-intensity circuit training. After warming up with some skipping or dancing to some good fast music, set your watch alarm to go off every 30 seconds and get creative. Try alternating upper-body exercises and lower-body exercises. For example, do 30 seconds of push-ups, followed by 30 seconds of lunges, followed by 30 seconds of tossing a five-pound bag of rice up in the air, and finish with 30 seconds of squat jumps. Then take 2-5 minutes to recover with easier exercise such as walking up and down one flight of stairs, some core work, or even a household chore such as vacuuming. Repeat the sequence three times, and you will have just had a great workout. The variations are endless!

So whatever the weather brings, there are always opportunities to give your body much-needed care. Making exercise a priority is important, and the best way to make sure you meet your physical activity requirements on a daily basis is to make it part of your everyday life.



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Q&A

by Anthony Luke, M.D., FACSM

Q: I'm an avid skier, and my brother tore his ACL last year. How can I prevent a similar knee injury?

A: Ski season is here. The injury that is still the most worrisome for skiers is the dreaded anterior cruciate ligament (ACL) tear. The ACL lies in the center of the knee and prevents the lower leg (shin) from moving forward in relation to the upper leg (thigh). It can be torn when a twisting motion is applied to the knee. A common mechanism for ACL tears occurs when a skier loses his or her balance and falls as the ski turns outward, causing a twisting injury to the knee.

While many ski injury rates are decreasing, ACL tears are still a significant concern. Plus, ACL tears in women are reported to be five times more common than in men. Bad ski injuries often occur on the first day of skiing before the skier has warmed up or at the end of the day when the skier becomes tired. To prevent injuries this ski season, start working out early to get in shape for the slopes. Backward running or using an elliptical machine in reverse can work the hip extensors and hamstrings, which are important muscles that protect the ACL. Using the leg press can get your lower leg muscles in shape. Hip abductor and adductor exercises are extremely useful, as the hip muscles can control rotation at the knee.

Finally, exercises using a wobble board or hopping and landing on one leg can be useful to work on balance and coordination. Sometimes lifting weights or dribbling a basketball on one leg with the knee slightly bent can improve your balance. When heading out for skiing, spend five minutes stretching out the lower leg muscles including the ankles, calves, quadriceps, hamstrings, hip flexors and lower back. At the end of the day, try to resist the last black diamond mogul run, especially if you're feeling a bit tired after a long day of skiing. It's better to take smart steps early on so you are ready for the next day of fresh snow.

For more information, check out ACSM's free "[Skiing Injuries](#)" Current Comment fact sheet.

Q: I find it easier to run in the cold. I feel faster when running, and I like running marathons. Is there any advantage to running in the cold?

A: This may feel like something you experience; however, it seems that the reverse is actually true. Participants in prolonged, physically demanding cold-weather activities are at risk for a condition called "thermoregulatory fatigue." When a person exercises in the cold, body heat is lost to the environment. Our body's defense for the cold is a shivering response, where your muscles contract to make heat, and vasoconstriction, where the blood vessels narrow to divert blood from the

What to Wear for Winter Exercise

by Thomas Altena, Ed.D., FACSM



When I agreed to write this article on winter weather clothing, my mind first recalled my many exercise sessions performed in winter extremes that made me question my sanity at times. My second thought was the scene from *A Christmas Story* where Ralphy's little brother, Randy, was immobilized in his red snow suit. In comparison to that memorable movie, current winter-weather exercise clothing has technologically advanced fabrics. Today, manufacturers produce clothes in a variety of natural and synthetic materials that wick moisture, insulate the body and protect skin from cold temperatures, and these clothes often block both wind and precipitation while remaining highly mobile and comfortable.

My experience with exercise in sub-zero temperatures combined with deadly windchills down to -40°F in the intense winter weather comes from my time in the upper Midwest, where I spend the holiday season with family. If you are anything like me, exercise happens in any weather. Before you challenge the elements, it is important to know the current weather conditions and if they may change as your exercise session progresses. Being underprepared or underestimating the elements is unwise, and

there are days when the best option is finding an indoor alternative. Keep in mind that definitions of winter weather will vary based on geographical location, personal experience and personal tolerances. When you begin your exercise session, your body should feel cold, but you will warm up quickly and begin to feel more acclimated to the winter weather. Your body will sweat; thus, skin exposure and moisture management are key to remaining warm, safe and comfortable.

Skin exposure can create dangerous—even deadly—circumstances if you are unprepared for cold temperatures and wind chill factors. Keeping the outside “out” is important, and many materials made of both synthetic and natural fibers keep the elements away from your skin.

Winter Weather Materials

A few manufacturers make windproof materials that completely block the wind from penetrating the fabric, which is typically incorporated at the specific locations of jackets, pants, tights and gloves that face the wind. The downside of windproof material is that it does not allow sweat to escape, so plan to accumulate sweat under the shell. A shell like GORE-TEX® is great for winter because the material is waterproof to precipitation yet allows sweat to escape. But GORE-TEX is not windproof. If your choice is to not wear a synthetic material or a windproof fabric, wool or wool blend (50 percent wool) are amazing natural fiber alternatives that provide excellent breathability, mobility, wind prevention and insulation. Unlike synthetic materials that do not accumulate moisture, sweat and precipitation will pass through natural wool-blended fabrics and will freeze on the outer part of the fabric. This freezing effect may seem detrimental, but the ice formed on top of the fabric creates a natural wind barrier effective for keeping a person warm. Many of these high-tech fabrics, including hats, socks, and gloves, have special washing and drying instructions. Washing these items on delicate or hand-wash cycle and drying them on low heat or line-drying will make sure the fabrics continue to be high performers with longevity for many winter seasons.

Moisture Management

Moisture management might be the single most important factor for keeping the body warm during winter exercise. Even in the coldest of temperatures, the body will produce sweat and, if that moisture is not removed from the skin, feel chilled. I recommend avoiding cotton and cotton blends because they absorb sweat. Instead of cotton, a better

choice is base layer, a moisture-wicking synthetic fabric that moves sweat from the skin. Base layer is a blend of nylon, Lycra®, elastane, polyester and acrylic. A good base layer fits snugly against the skin and moves as your body moves because it is skin-tight and elastic. When selecting a base layer, make sure that you explore different fabric thicknesses for different temperatures. As an added bonus, layering two or three base layers can provide added insulation for very cold conditions (approximately 10°F or lower) and will increase moisture management. Running and cycling tights also come in a variety of material thickness, just like base-layer shirts. The Lycra-spandex tights of old are still available, but now tights incorporate windproof front panels or a polyurethane coating that feels like thin neoprene in the front of the legs to prevent wind and water from reaching the skin.

Layering 101

Concerning layers, the goal is to keep the core of your body warm, so upper-body layering is more important than lower-body layering. However, layering tights in the most extreme combinations of cold temperatures and wind chills is recommended, though it may compromise mobility. What you wear under your tights is a personal preference; one of the best options I have discovered is tri-shorts (minimal chamois bike shorts).

Protecting Your Extremities

Hands—Gloves with a GORE-TEX lining are a great choice for moisture management, but windproof gloves might be an advantage in a cold wind. I have discovered that these gloves fail after about 90 minutes of exercise, as sweat production exceeds the material's ability to remove moisture. The thin, stretchy knit gloves are a low-cost option for gloves in moderately cold weather. These are easy to layer for variety. Plus, losing one glove won't break the bank.

Feet—If you exercise in ice and packed snow, trail running shoes have an aggressive tread pattern. To improve grip even more, fit your running shoes with crampons.

Face—Face covering is important to some people, but a facemask can capture humidity in breathing and impair vision by fogging up sunglasses or prescription lenses. Instead of a facemask, try using petroleum jelly on exposed skin in extreme cold. Petroleum jelly creates a thin barrier between your skin and the elements, but it will increase the risk of sunburn.

As you consider exercising in the cold weather, I'd also recommend that you always carry a cell phone in case of emergency. But remember that sweat ruins cell phones. You can protect your cell phone with simple a zipper-locked plastic bag.

ACSM BROCHURES: Information On a Variety of Workout Equipment and Programs



The American College of Sports Medicine touts the benefits of physical activity through offering comprehensive, up-to-date information on a variety of exercise-related topics. ACSM offers a variety of health and fitness brochures to anyone with an interest in sports medicine and exercise science.

ACSM brochures are linked below in PDF format, and are free to print, as many copies as you need.

For more information, visit
www.acsm.org/brochures

THEME: WINTER HEALTH

Protecting Your Skin in the Cold

by Brian Sloan, M.D.



In the northern hemisphere, winter has been thrust upon us. As we all strive to continue maintaining a healthy lifestyle and exploring the great outdoors, we must also prepare ourselves and our largest body organ—our skin—for the harsh and extreme conditions that Mother Nature may throw our way.

Skin exposure to cold can be as benign as a red face and numb fingers or as crippling as frostbite with amputations, hypothermia and even death. The earliest symptoms of cold injury are numbness and tingling, called “frostnip.” For patients with symptoms of frostnip, there will be no long-term damage to the skin if they are removed from the cold.

Continuous and severe exposure to cold puts one at risk for developing frostbite. The symptoms of frostbite include loss of sensation to the affected skin tissue, white or blue skin, blister formation and possibly swelling to the affected body part. As is true with frostnip, the most commonly affected body parts for frostbite are the fingers, toes, nose, ears and cheeks.

The hands, feet, ears and nose take the brunt of exposure to the cold, simply because blood flow to these extremities decreases in an effort

to prevent the body's internal temperature from dropping and developing hypothermia. If the body's internal temperature drops below 95°F, then the signs and symptoms of hypothermia will likely be present. Early symptoms of hypothermia may include chills, hunger, nausea, confusion, itching and difficulty with judgment.

The hallmark of preventing any cold weather exposure injury is preparation. When you are going on your cold-weather hike, or when you get in your car to trek to Grandma's, remember that if you are prepared for winter's onslaught, you will be more likely to survive. Also take the time to look out for those who may not have the ability to prepare. Young children, the elderly, those with mental illness or those with medical conditions or on medications will need your assistance before venturing out into the cold.

If you or your loved ones are going to be near the water or exposed to wind, realize that these two factors, along with the length of time that you are out in the cold, are very important considerations in cold injury prevention. Moisture and cold are vicious enemies of the skin, and it is critical to remember that water is a superior conductor of cold. The combination of wind and cold make the wind chill index, which is commonly reported by weather forecasters. Wind chill indices are usually reported with a warning that should be closely observed by those with plans on venturing out into the cold during the winter months.

When you are planning your winter wardrobe on those cold, wet and blustery days, remember to layer your clothing. The inner layer should have a moisture-wicking material, such as cotton or wool. Air trapped between layers of clothing acts as insulation against the cold. Layers may also be removed if you become too hot. Ensure all clothing is in good condition, clean and dry. Change out of wet clothes immediately.

Protect your feet by wearing quality socks and boots. Carry an extra pair of socks in case you get wet. Do not over-tighten boots and avoid tight socks. Remember that to promote good blood flow, snug—but not tight—footwear is critical.

Hands should be covered with gloves or mittens. In extreme cold, mittens are preferred. Carry an extra pair of gloves or mittens with you in case yours gets wet. Also, do your best to avoid hand contact with snow, water or bare metal. These are excellent cold conductors that can accelerate the affects of cold injury.

Don't neglect your head, face and ears. Wear a hat. Remember that 70 percent of your body's heat can be lost through an uncovered head. Increase your thermal insulation by adding a scarf to your hat wardrobe.

Sunscreen is crucial for skin protection in the winter. That's right—sunscreen. The snow is an excellent reflector of the sun's rays, and sunburn can creep up on you rapidly in the winter.

In case of injury, medical care is important. If you happen to be the victim of frostnip, frostbite or hypothermia, remember to immediately begin warming your affected body parts. Start by removing any cold or wet clothing and replacing it with dry clean clothes, socks, hats, gloves or mittens. If you notice extreme changes in your skin, such as blisters, loss of feeling, extreme pain or change in color, proceed to the nearest medical provider to be evaluated. In these extreme cases, advanced medical treatment might be necessary to avoid long-term problems with your skin, such as tissue loss, nerve damage or blood vessel injury.

The winter weather can be a great time to enjoy the outdoors if you prepare properly. Spending time with your friends and family on the ice rink, a sledding hill, the slopes, hiking or whatever you choose can be fun and exciting if you plan ahead and protect your body's largest organ—your skin!



How to Make the Common Cold Less Common

by David C. Nieman, DrPH, FACSM



The common cold is the most frequent illness you will have during your lifetime. More than 200 different viruses cause colds, with adults suffering two or three colds each year and young children about six or seven. Rhinoviruses and coronaviruses are to blame 25 to 60 percent of the time. Rhinoviruses often attack during the fall and spring seasons, while the coronavirus is common during the winter.

Cold viruses are passed from person to person by being inhaled into the nose and air passageways (*i.e.*, spread through the air). Severe colds transmit viruses more readily than mild ones because a greater amount of virus is passed into the air by coughing and sneezing. Thus, to hinder the spread of cold viruses, coughs, sneezes and nose-blows should be smothered with clean handkerchiefs, facial tissues or your bent arm.

Cold viruses are also spread by simple hand-to-hand contact with an infected person or with contaminated objects such as door knobs, phones or computer keyboards. Cold viruses can live for hours on hands and hard surfaces. When the hand is then brought to the nose or eyes, self-inoculation with the cold virus occurs. Thoroughly washing your hands and cleaning surfaces with Lysol or other disinfectants will protect against transmission. Also, keeping your hands away from your face is a good preventive measure.

Damp, cold or drafty weather does not increase the risk of getting a cold. According

to most cold researchers, cold or bad weather simply brings people together indoors and leads to more person-to-person contact. Vitamin C, another common remedy, does not prevent colds, but it may slightly reduce the severity and duration of symptoms. Resting, drinking plenty of hot fluids and seeking what comfort one can derive from over-the-counter cold remedies is still about all that can be done to treat most colds.

Whether one gets sick with a cold after a sufficient amount of virus has entered the body depends on many factors that affect the immune system. Mental stress, low food intake, rapid weight loss, lack of sleep and poor hygienic practices have all been associated with impaired immune function and increased risk of infection.

Can you prevent a cold through regular exercise? When surveyed, people who exercise on a regular basis report fewer colds than their inactive peers. Several exercise training studies with adults support this belief. In these studies, subjects in the exercise groups walked briskly 35-45 minutes, five days a week, for 12-15 weeks during the winter/spring or fall, while the control groups remained physically inactive. The results were in line with the fitness enthusiasts' claims—walkers experienced about half the days with cold symptoms of the sedentary controls. Several large population studies have also shown that frequent aerobic activity compared to a sedentary lifestyle predicts fewer sick days during the cold season.

During moderate-to-vigorous exercise (*e.g.*, brisk walking, cycling, swimming, sports play), several positive changes occur in your immune system, including an enhanced movement of important immune cells throughout the body. Stress hormones, which can suppress immunity, are not elevated during moderate exercise. Although the immune system returns to pre-exercise levels very quickly after the exercise session is over, each session represents a boost that reduces the risk of infection over the long term.

Heavy doses of exercise, however, can have the opposite effect. For example, after running a marathon race, the body is inflamed for about one-half day with high stress hormones, cytokines and suboptimal immune function. During the ensuing one to two weeks, the odds of becoming sick increase two- to six-fold, depending on the time of year. During periods of heavy training, the immune system reflects the physiologic stress experienced by the athlete, and illness rates climb. Even a good thing like exercise can be carried too far, and each individual needs to find the right balance between training workloads and rest. ➤

For more information, check out ACSM's free [Exercise and the Common Cold](#) Current Comment Fact Sheet.

We live in a world where viruses and bacteria are omnipresent, waiting to pounce on any of us with weakened immune systems. In summary, your best strategy is to keep immune defenses operating normally by following a variety of lifestyle habits:

- ✓ **Exercise moderately on most days of the week.** This will improve the ability of the immune system to detect and destroy viruses.
- ✓ **Avoid overtraining and chronic fatigue.** Heavy exertion causes immune dysfunction in multiple body compartments leading to an increased risk of illness. Another word of caution: do not exercise when ill with a fever. This can lead to more severe symptoms, relapse and sustained feelings of fatigue.
- ✓ **Eat a well-balanced diet to keep vitamin and mineral pools in the body at optimal levels.** Nutrient supplements are typically not needed by healthy adults and will not boost immune function above normal levels.
- ✓ **Keep life stresses to a minimum and practice stress management techniques.** Mental stress increases the risk of the common cold, so learn to control the burden and pace of life.
- ✓ **Obtain adequate sleep on a regular schedule.** Sleep disruption has been linked to suppressed immunity.
- ✓ **Limit exposure to viruses and bacteria by practicing good hygiene.** Wash your hands frequently, and avoid touching your eyes and nose (the primary route of introducing viruses into the body). Also, give your immune system an edge by receiving the flu shot and other recommended vaccinations each and every year.



THEME: WINTER HEALTH

Ward Off the Winter Blues with Exercise

by Greg Chertok, M.Ed., CC-AASP



The onset of colder weather often brings forth the “winter blues,” with corresponding ailments such as the common cold, constant congestion, seasonal depression and increased fatigue. But perhaps paramount to those pesky problems is one’s tendency to be inactive during the cold winter months. The shortened days and severe chill inspire little motivation to leave the house to do something active, let alone go out for the normal morning run.

Exercise provides an effective natural boost to both mood and health. Studies support the effectiveness of regular exercise as a way to manage mental stress, cognitive performance and energy. The unfortunate irony is that we find it most difficult to exercise during the winter when, arguably, we need it most. Those of us who have trouble adhering to an exercise program typically blame our lack of time or energy or winter’s early darkness. And when we truly believe we can’t maintain an exercise regimen, we become hopelessly disempowered to make any positive change.

So first, change the internal dialogue. This starts by understanding—regardless of your personal circumstances—that you really do have what it takes to fight the winter blues. This article will briefly outline how to maintain or begin a satisfying exercise plan,

even in the most frigid months. Empower yourself with thoughts such as, “I can and will get healthier this season.”

Before embarking on your winter exercise journey, you must ask yourself: “Why am I doing this?” An honest, thoughtful and realistic answer is required here. Are you doing it to lose weight? Improve strength? Look good for spring break or for a special valentine? Keep up with your grandkids? Structure your answer based on what you would like to do, something that is personally meaningful, rather than what you think you ought to do. That is, don’t answer this question with a line that simply sounds right. Try to create a clear, vivid mental picture of what your goal looks like. Visualizing yourself as thinner, stronger or more confident, for example, conjures positive and pleasant emotions. Your journey will depend on this answer and the accompanying image you develop, so construct each with care. Once you have a specific, personalized and somewhat challenging goal and image in mind, you’re ready to begin the process.

The process is the everyday work—your chosen method(s) of exercise—that will get you closer to your goal. You should not feel compelled to fit into a generic program. Instead, fit an exercise program to your needs and characteristics. If you are looking for a social atmosphere, think about joining a class—there’s Zumba, Pilates, yoga, spinning, swim, all types of dance, among others. If you are looking for something more private, inquire at your local gym about personal training. Or, don’t leave the house at all. Buy an exercise DVD or a video game console as a special post-holiday gift. And listen to some music. Studies have shown that listening to your favorite music during exercise can improve results, both in terms of being a motivator (people exercise longer and more vigorously to music) and as a distraction from fatigue.

Think about ways to incorporate exercise into your daily activities. The benefits of moving throughout the day were demonstrated in a recent study by researchers at the Mayo Clinic about fidgeting. Simply being restless—by standing, pacing or toe-tapping—can burn about 350 calories a day. Walking briskly between errands, stretching in the shower or contracting your stomach muscles while at the office are some of the novel, convenient ways that you can fit exercise into your life. Don’t let the word “work” in workout mislead you—whichever exercise method you choose, the experience should be enjoyable.

With a goal, image and process firmly ingrained in your mind, the journey begins. Like you would with a new pair of sneakers or a sentimental piece of jewelry, be proud of your journey. Take ownership of it and make a real commitment to it. It's enticing to say "I'll fit exercise in when I can" and be content with that. But making it an anticipated and essential part of your day—like eating and bathing—completely changes your attitude. Those who write their goals tend to accomplish significantly more than those who do not. So personal slogans and reminders around the house, car and office will keep you motivated and on track.

We can achieve more, in all of life's domains, if we restructure our attitudes. Start viewing your good health as a critical but engaging part of your daily life and fight those winter blues with a healthy dose of exercise.



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THE ATHLETE'S KITCHEN:

Chocolate— Is It a Health Food?

by Nancy Clark, M.S., R.D., C.S.S.D., FACSM



"Chocolate! I try to stay away from it!" commented my client, a runner who described herself as having a rampant sweet tooth. For her, chocolate fits into the categories of junk food, guilty pleasure and ruiner of good intentions to lose weight. Yet, she also recognized there is potentially a happier side of the story. Ads for dark chocolate suggest chocolate is good for us. Chocolate comes from plants and contains the same health-protective compounds that are found in fruits and vegetables.

So what is the whole story on chocolate? Is it little more than an alluring form of refined sugar, saturated fat and empty calories? Or does chocolate (in moderation, of course) have positive qualities that might be beneficial for athletes?

Here are some nuggets of information about chocolate. I'll let you decide whether or not the health benefits of eating chocolate are greater than the health costs—and if you personally want to define chocolate as a "health food" within the context of your own sports diet.

The "Bad"

The bad news is that chocolate consists of primarily saturated fat and sugar. A Hershey's Milk Chocolate Bar (43 g) contains 210 calories, 24 grams sugar (46% of calories), 13 g total fat (55% of calories) and 8 g saturated fat, equivalent to a tablespoon of butter. Boo-hoo! But here's how you can rationalize including this popular treat in your overall well-balanced sports diet: The fat in chocolate does not raise bad cholesterol levels and the sugar (carbs) in chocolate fuels your muscles.

People tend to eat chocolate in bursts—a lot in a day, such as on holidays or premenstrually—or none at all. The question arises: would enjoying some chocolate every day help reduce an athlete's urge to binge-eat the whole bag of chocolate in a moment of weakness? That's a good question, and it's one that needs to be researched. We do know that deprivation and denial of food contributes to overeating. You know the "I'm starting my diet Monday morning, so Sunday is my last chance to eat chocolate." mentality. Next thing you know, there goes the whole bag!

I invite my clients to try taking the power away from chocolate by enjoying a little bit every day, such as for dessert after lunch. Ideally, daily chocolate could reduce it to being simply a commonplace plant food, just like bran cereal, an apple or carrot sticks. Give it a try?

The "Ugly"

Some athletes claim they are addicted to chocolate. (Perhaps chocolate addicts grew up in a household where the parents banned chocolate?) Now, as grown-ups, maybe they rebel by eating chocolate by the bagful. Or are they "super tasters"—and the flavor of chocolate is just irresistible? Perhaps they have a genetic difference that makes chocolate highly attractive. Someday, genetic testing may help us find the answer to that question.

The "Good"

- Chocolate is made from cocoa. Cocoa comes from a plant. It is a rich source of health-protective phytochemicals, just like you'd get from fruits, vegetables and whole grains. Two tablespoons natural cocoa power (the kind used in baking) offers the same antioxidant power as 3/4 cup blueberries or 1.5 glasses red wine.
- Of all the types of chocolate, dark chocolate is the richest source of phytonutrients. Unfortunately, dark chocolate has a slightly bitter taste and most people prefer the sweeter milk chocolate. Maybe we should raise today's children on dark chocolate, so they will they learn to prefer it.
- One phytochemical in cocoa is nitrate. Nitrate gets converted into nitric oxide, a chemical known to increase blood flow. Nitric oxide lowers blood pressure, a good thing for aging athletes who want to stay youthful and invest in their health.
- Another group of phytochemicals are called flavonoids. They are in many plant foods, including tea, apples and onions. Epidemiological surveys of large groups of people indicate those who regularly consume chocolate consume more of these health-protective flavonoids than non-chocolate eaters. This reduces their risk of heart disease. In the Netherlands, elderly

Athlete's Kitchen (continued from page 7)

men who routinely ate chocolate-containing products reduced their risk of heart disease by 50 percent and their risk of dying from other causes by 47 percent.

- Cocoa increases blood flow to the brain. If this means you can process information better and faster—like calculate your split times or help your kids with their math homework—wouldn't that be a great excuse to enjoy chocolate?!
- Many parents keep chocolate away from their children, thinking it makes them hyperactive. No research to date supports that claim. The party or special event that surrounds the chocolate likely triggers the hyperactivity.
- Chocolate is yummy! Most athletes love chocolate. Chocolate lovers don't want sugar-free or fat-free chocolate. They want the real stuff! That's because consumers buy benefits, not products. Being yummy is a huge benefit.
- During the recession in 2009, sales of Hershey's chocolates increased. Is that because worried people bought a moment of yummy, cheer-me-up chocolate? Or, did they simply settle for a bag of less expensive Hershey's Kisses instead of a box of pricey Godiva Chocolates? Regardless, chocolate seems to fit every mood, be it happy, sad, tired or celebratory.

- Flavanol-rich cocoa may help reduce muscle soreness. Studies with athletes who performed muscle-damaging downhill running and then consumed a cocoa-based carbohydrate and protein beverage experienced less muscle damage and felt less muscle soreness.
- Although the chocolate used in flavoring milk lacks the health protectors found in dark chocolate, the yummy flavor makes chocolate milk a popular recovery drink. The sweetened chocolate offers carbs to refuel muscles; the milk offers protein to build and repair muscle. Plus, milk boosts intake of calcium and vitamin D, needed for strong bones.

Despite all this good news about chocolate, it is still just a candy and not a life-sustaining food. Yet, it does provide pleasure, and pleasure is certainly part of a health and wellness program, right?

The trick is to enjoy dark chocolate as part of the 100 to 150 "discretionary" sugar calories that can be part of your daily sports diet. As for me, I'll enjoy my dark chocolate during a long hike or bike ride. Tastes better than most engineered sports foods and nicely fuels both my body and my mind!

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extremities to maintain core body temperature. Wearing appropriate clothing also helps the body conserve heat. There is scientific evidence that suggests prolonged and/or repeated cold exposure, as well as possibly expected fatigue from exercise, may impair the body's normal response of shivering and conserving heat with vasoconstriction when cold. This can put an individual at higher risk of hypothermia.

In addition, many individuals with exercise-induced bronchoconstriction develop narrowing of their airways in the cold, making it more difficult to breathe. Common symptoms are chest tightness, wheezing or coughing. Studies suggest that nearly one in five athletes may have some degree of bronchoconstriction. Certainly, it is not necessarily dangerous to run or exercise long in the cold. However, the human body likely performs better in a temperate climate than in a cold one. So, stay as warm as you can this winter.



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