GYM JABBER
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Physical Fitness For Children

It's no secret that many American children are unfit. Children as young as 8 years old have been found to have one or more significant risk factors for heart disease, including obesity and physical inactivity. This is very disturbing because the lifestyle these kids are adopting is the cause of the majority of adult disease. In addition, poor fitness in children can be accompanied by poor self-esteem. It has been suggested that the low levels of fitness in our children are caused by:

Television and video games

National studies suggest that kids spend more than 20 hours per week watching TV and playing video games. This has led to significant inactivity and diminished fitness.

Lack of physical education in schools

Illinois is the only state in the US that has mandatory physical education within their K-12 school curriculum. Most other states have eliminated daily P.E. and offer only one or two sessions per week, which is far below what is required to improve conditioning.

Fast food

Children below the age of 15 are the highest consumers of fast food products. Fast food is high in fat and sodium and in most cases provides convenient, inexpensive, non-nutritious food to our kids. Together with inactivity, fast food consumption is leading to an obesity epidemic among our children.

Athletic stress

Children are not having fun playing sports because of the pressure placed upon them by coaches and parents to perform well. As a result, children are choosing to drop out or not become involved in sports programs.

The "Athletic Participation Produces Fitness" myth

Parents tend to believe that participation in Little League or other sport programs provides all the exercise that their child needs to be fit and healthy. What parents fail to consider is that children are often inactive during a game or participate at a level that is insufficient to produce a conditioning effect.

Parental fear of exercise for children

Believe it or not, some parents still believe that aerobic exercise and strength training are detrimental to prepubescent children. The American College of Sports Medicine, National Strength and Conditioning Association and American College of Pediatrics have published favorable statements supporting appropriately supervised exercise for children.

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KSC Fitness Center Activities

Twice a month the KSC Fitness Centers will be offering Lunch and Learn Programs. Bring your lunch and learn fitness tips from the pros!

January: National Blood Donor's Month

"Fitting Exercise into Your Life"
Finding time for exercise can be a challenge, but we can help you make it fit!
January 8th at 12pm in HQS Room 2229
January 22nd at 12pm in O&C Room 2004

February: American Heart Month

"Love Your Heart"
Exercise guidelines to aid in fighting Heart Disease and its indicators.
February 12th at 12pm in HQS room 2229
February 26th at 12pm in O&C room 2004

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The following tips may help you encourage your kids to exercise:

*Set a good example by practicing good fitness habits yourself.
*Make the activity fun and entertaining. Kids will want to exercise longer and more often if they enjoy it.
*Give your kids active toys, jump ropes, balls, bikes, etc. Play with them together as a family.
*Exercise as a family. Choose one day per week that you all exercise together and stick to it - mark it on your calendar. Let the kids decide on the activity for the family each week.
*Plan active family outings and vacations.
*Observe what sports and activities appeal to your children, then encourage their development with lessons or by joining teams.
*Use stairs instead of elevators and escalators.
*Watch less TV! Spend your free time doing other things that require you to be active.
*If you do watch TV, challenge your kids to be active during commercials by jumping rope, skipping, hopping, etc.
* Give your kids rewards that are fitness related.

Source: "Eye On The Future", Neil Sol, ACSM's Health and Fitness Journal, May/June 1998
Space Coast Parent, "Healthy Lifestyles are a Family Affair", Peggy Middendorf, September 1998

Web Sightings

www.fda.gov/oc/opacom/kids/

The U.S. Food and Drug Administration recently launched its FDA Kids' Home Page. Offering a wide range of health-related topics such as the hazards of smoking and the importance of exercise, the web site is targeted at kids aged nine through twelve. Users can get an inside look at Yorick, a bionic skeleton comprised of electronic organs and an artificial heart. Kids - and grownups - will get a kick out of this fun and informative site.

Source: ACE Fitness Matters, Sept/Oct 1998

Did you know... Only 64 percent of boys and 50 percent of girls aged six to twelve can run/walk a mile in less than 10 minutes. Just 60 percent of boys and 30 percent of girls can do more than one chin-up.

★ Top Ten Excuses ★ Heard Around KSC For NOT Exercising

10. I don't have my gloves and the skin on my hands is very sensitive.
9. Someone is on my favorite machine.
8. I'm going to start on Monday.
7. I don't want to ruin my make-up.
6. Exercise is too hard.
5. I'm not in good enough shape to go to the gym.
4. I lost my driving privileges on KSC.
3. I hurt my _____ (any body part fits here).
2. I don't have the right kind of shoes.
★ 1. No matter how many sets I do, my arms never look like Jean's!

Ask Miss Muscle

Q: My spouse and I are interested in a sport or activity that we can do together. But with the days as busy as they are, we're having a difficult time coming up with ideas that don't take a great deal of planning and time. Any suggestions?

A: Valentine's Day is right around the corner, and Miss Muscle can't think of a better gift a couple could give each other than the promise of better health! Realizing that many couple-oriented activities are often impossible due to lack of time and a great deal of required planning, Miss Muscle suggests you and your spouse simply begin a walking program. Each Sunday, set aside a few hours for the following week that you can escape from the house, mark it on the calendar and stick to it! Not only will you better yourselves physically, but walking together can do wonders for the communication in your relationship. So get off the couch, forget about the housework for a while and take your love for a walk!

"There is more to life than increasing its speed."
-Mahatma Ghandi

There's No Place Like Healthy...

Lose 30 pounds in thirty days! Eat more protein and no carbohydrates and lose weight! 40-30-30, 20-60-20, hut-hut-hike! Ever feel like if you want to be healthy you have to eliminate all other activities from your life? Silly things like work, family, school and your social life would only be in the way of true health if you were to follow the media's yellow brick road to fitness. So here is a quick reference guide to the most popular fads in nutrition and one exercise scientist's interpretation of this maze.

Starting with the **Pritikin Plan**, the recommendation is a very low fat diet, high in complex carbohydrates, grains, fruits and vegetables plus very moderate levels of protein. The basic premise for this plan comes from trying to reverse Heart Disease. The plan works, for middle aged, type A, overweight and stressed out men. Does it work for the rest of us? No conclusive studies have been done.

Eat to Win was established by Robert Haas, a reputable nutrition coach for highly trained athletes. The diet advocates up to 70% carbohydrates, low fat and moderate protein. The assumption for this program comes from Haas' performance athletes who have highly functional bodies, who have no weight problems and for whom insulin sensitivity is not a problem. Do you fit in this category?

Cliff Sheats came out with **Lean Bodies** based on the idea that all diets are an attempt to manipulate the hormones insulin and glucagon, which are responsible for maintaining blood sugar levels. Sheats was one of the first to recommend cutting pasta and bread. He reasons that these foods are so highly processed and lacking nutritional merit that they raise blood sugar , which creates insulin spikes. He believes that a high calorie plan of 60% carbohydrates, 25% protein and 15% or less from fat will help drop weight and achieve leanness. He also suggests eating complex carbs more often than refined.

Following in the wake of Sheats, Barry Sears and Anne Louise Gittleman decided that if insulin and glucagon levels are optimal, fat will be the preferred fuel. This is the popular **40-30-30 Program** that recommends 40% of the diet come from low glycemic, high fiber carbohydrates, 30% from protein and 30% from fat. The plan is generally lower in calories but nutritionally dense. The diet is based on eicosanoid (the fat "mobilizer") production and explains that insulin has an inhibiting effect on "good" eicosanoid production. All of this simply indicates that lower levels of carbohydrates in the diet help maintain a more even level of nutrients in the bloodstream. Sears believes that "fat is not the culprit" and makes a strong scientific case for this higher fat and protein diet.

Michael Eades takes this one step further still in his **Protein Power diet**. This program is geared differently based on the level of obesity and metabolic resistance. The two plans offer 20 g of carbohydrates for the initial phase and 60 g for the maintenance. He states that many of the health concerns of our country-such as obesity, heart disease, elevated cholesterol and hypertension-have been blamed on high fat diets and are in fact highly related to hyperinsulimia. Note that 20 g of carbs comes out to 80 calories, which is 4-5% of a diet 1500-2000 calories. This puts the body in a state called ketosis or ketoacidosis. When the body is using fat for fuel the end result is ketone bodies, which are acidic. The problem is that the brain cannot function on fat nutrients, only on glucose. In the absence of glucose, brain function suffers. Also, the high levels of acid in the blood could put stress on the kidneys.

In the same field of play, Dr. Robert Atkins has received a lot of attention for his **Atkins Diet**, which is also a ketogenic plan. He believes an unbalanced or disturbed metabolism cannot be treated with a balanced diet and therefore puts his clients in a state of ketosis which is supposed to allow them to burn up their own fat stores without hunger or cravings. Again in this diet, the highest recommendation for carbohydrate intake is 18%. Thorough in his answers to critics, he maintains that this is not the dangerous state that nutritionists have made it out to be.

The last of the Big Seven is the **Carbohydrate Addict's Diet** by Heller and Heller. They postulate that a large percentage of the population is "carbohydrate addicted" or suffering from "hyperinsulimia". Higher than normal levels of insulin, a resistance to insulin in the cells and the tendency to store extra glucose in the fat cells make it impossible to lose weight with conventional methods. In their program, the Hellers proclaim that five or six small meals a day (as is commonly prescribed for weight loss) stimulates insulin levels and triggers hunger and cravings. They recommend three meals a day, with the first two identical to Atkin's Diet of high protein and vegetables. The third meal is a reward meal of whatever the client wants. You must finish within one hour of starting, begin with two cups of salad and eat equal portions of protein and carbs. If you take more potatoes you have to have more meat as well. The key component is the psychological guilt and blame cycle of the "addiction". The ketosis rate is lowered as the fat intake is more conservative.

So how does all of this relate to you? First of all, since I'm not a registered dietitian, I will never advocate anything other than seeing your doctor or speaking with a professional and registered dietitian. Following RDA guidelines and eating a balanced diet are always recommended. No two bodies are alike, so what works for your best friend or coworker may not work for you. Taking pieces from all of the

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RehabWorks

What is it?
A free musculoskeletal rehabilitation service for employees suffering from a work, non-work or sport-related injury.

Who is it for?
Any badged KSC or CCAS employee.

Why use it?
Convenient, on-site service that helps you heal while staying on the job.

How do I use it?
We accept referrals from KSC Occupational Health physicians, outside physicians, and transfers from physical therapy programs. We also accept self-referrals.

Where is it?
You can find us in room 1103 of the O&C building (facing the east parking lot).
Hours of operation are Monday through Friday, 0830 - 1700.

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RehabWorks

Overuse Vs. Traumatic Injuries

Have you stopped your running program because of pain? Are you having a hard time determining what is the cause of your running pain? There are two types of injuries that an individual may encounter while running; one caused by an acute trauma, the other resulting from overuse.

The Traumatic Injury

Traumatic injuries are violent and sudden, such as sprains, lacerations, torn ligaments, pulled muscles or broken bones caused by a fall. These types of injuries usually require immediate professional treatment. If the injury causes immediate pain, swelling, inability to use the injured body part or severe pain that does not subside in 30 - 40 minutes, the injury should be examined by an Athletic Trainer or a Physician. If the athlete hears or feels a crack, tear or pop and the pain persists, help should be sought.

The Overuse Injury

Overuse injuries are more common and develop over a long period of time from mild- or low-grade, repeated stress. Overtraining results in overuse injuries and sometimes these types of injuries can be associated with anatomical variation such as flat or high arches or an abnormally sized or positioned kneecap. The knees (i.e. Iliotibial Band Syndrome, Runner's Knee) and Achilles tendon (i.e. Tendinitis) are most adversely affected by overtraining. The pain resulting from overuse injuries is usually not severe and is often ignored by the athlete. It is more difficult to determine whether or not professional help is needed. If the pain persists for more than 10-14 days after following basic self-care treatments such as decreasing the level of activity, ice and heat, aspirin or ibuprofen, or stretching, professional advice is necessary.

Causes of Overuse Injuries

*Anatomical variations such as flat or high arches can create biomechanical problems that may lead to an overuse injury.

*More than half of all running injuries are due to training errors. Each run stresses the body. Daily high intensity training does not allow the body adequate time to adjust and recover. An imbalance of hard and easy workouts can also contribute to injury.

Self Care for Overuse Injuries

*Reduce mileage and intensity for 7 - 10 days; never run through pain. Evaluate training habits.

*If the pain is severe at the beginning of and during activity, the activity should be stopped completely. If the pain is present at the beginning of activity but lessens and does not return until a few hours later, then the level of activity should be reduced. Other aerobic activities should be considered to maintain cardiovascular fitness.

*Reduce inflammation by icing the area after activity and by taking aspirin or ibuprofen throughout the day. Encourage healing with a whirlpool, massage or ice and heat therapy.

Prevention of Overuse Injuries

*Follow the guidelines for self-care (Rest, Ice, Compression and Elevation).

*Be aware of the surfaces on which you are running. Change of surface can affect your running gait and impact the lower extremities.

*A conditioning program including stretching, strengthening exercises and cross-training.

*Proper shoe and sock selection.

By: Erik Nason, MS, ATC/L

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available literature to structure a program that suits individual needs and lifestyles is the best option for mapping out a nutrition plan you can stick with for a lifetime. Recognize that drastic changes will be hard to maintain and could be harmful to the body as well. Balance and variety are easy guidelines to work on, as well as moderation. If you do find yourself in the twilight zone when it comes to food, just click your heels and return to the basics. The body knows what it needs, you just have to listen!

Sources:1. Atkins, Robert, PhD. The Atkins Diet; 2.Eades, Michael. Protein Power; 3. Garcia, Oz. The Balance. 4. Haas, Robert. Eat to Win

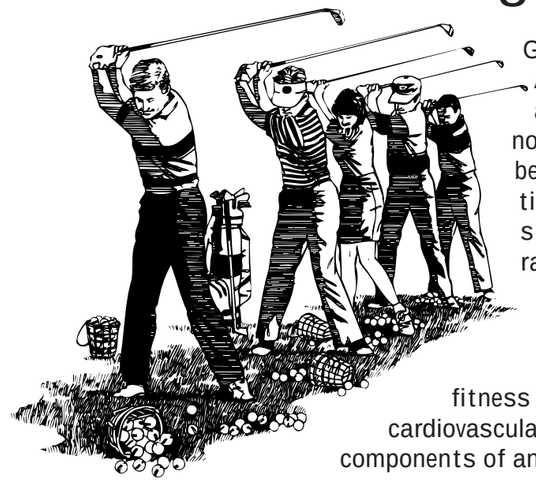
By: Susannah Johnson-Cooper

The Fitness Center staff would like to extend its thanks for your cooperation and patience during the expansion of the O&C facility. We appreciate your support and assure you that it will be worth the wait.

TO MINIMIZE PAPER COSTS,
PLEASE ROUTE THIS NEWSLETTER
TO ALL EMPLOYEES AT THIS MAIL STOP.

KSC FITNESS CENTER WEBSITE
1. Go to KSC Internal Home Page-click Employee Services
2. Click on KSC Fitness Centers
3. Click on link to KSC Fitness Centers

Gearing Up For Golf



Golf is rapidly becoming the sport of choice for many Americans. While some view the sport as slow-paced, golf actually requires a great deal of strength and stamina, not to mention skill. While you may not have to be in the best cardiovascular shape to play golf, your muscles, particularly those of the legs and upper torso, must be both strong and flexible to keep your handicap below an embarrassing level.

The Key Components

To be successful in golf there are three components of fitness that you should focus on: strength/power, flexibility and cardiovascular endurance. These also are the three most important components of any fitness program.

Strength and Power

Developing muscular strength and power is essential for generating club head speed, a determining factor in how far you can hit the ball. The box below lists specific exercises that will help you generate more power in your upper body as well as stabilizing strength in your lower body. One to three sets of eight to twelve repetitions of each exercise should be performed three days per week. Remember to rest a day between workouts.

A recent study found this regimen to be extremely effective. As similar studies have shown, strength training brings about significant improvements in lean body weight, reduced body fat, increased leg strength, increased joint flexibility and a reduction in systolic blood pressure. But more important, at least to the golfers in this study, was the significant improvement in club head speed. The 17 exercisers increased the speed of their swing by an average of 5 mph. The control group experienced no such improvements.

abdominal curl	low back extension
biceps curl	neck extension
chest cross	neck flexion
chest press	front lat pull
lateral raise	triceps extension
leg curl	weight assisted chin-up
leg extension	leg press

Flexibility

Flexibility is another important key to developing a full, fluid golf swing. Simply swinging the club is not enough, but you can increase the range of motion in your shoulders, trunk, low back and hamstrings with just a few minutes of daily stretching. But don't save your stretching until five minutes before you tee off. Flexibility exercises must be done every day. Always warm up your muscles before you stretch them to increase your range of motion and prevent injury.

Cardiovascular Conditioning

Finally, cardiovascular conditioning is essential to help you keep your energy up during a long round of golf. That conditioning can help you deal with the stress of making a crucial putt or of getting out of a sand trap. Try to fit in at least 20 minutes of walking, cycling or whatever aerobic activity you prefer, three times per week.

Improving your golf game requires a bit more than simply playing a lot of golf, but it doesn't mean you have to spend hours in the gym. Try the exercises outlined here and you'll not only come closer to par, but you'll also reap numerous health benefits, such as increased lean body weight, reduced body fat and increased strength and flexibility. Remember that the KSC Fitness Center staff is always willing to help you with an exercise program.

Source: ACE Fit Facts