



Benefits of Cross Training

By CHRISTINA “C.J.” STEVENS, MPH, CHES
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Have you been a runner for as long as you can remember? Maybe biking is your passion. Or perhaps you’re stuck in a rut of doing the same old weight lifting routine three days a week. You may be in great shape, but perhaps you haven’t seen much improvement lately or maybe you have a nagging pain that never seems to go away. If you don’t change your routine periodically, exercise becomes less effective and can even lead to injury. Maybe the answer to your fitness blues is cross training. This term can refer to an athlete training for more than one sport at the same time, or also characterize training that encompasses several different fitness components (e.g., endurance, strength, and flexibility) at one time. It can help fight boredom and is an ideal way to develop a balanced fitness program. Whether you are training as a competitive athlete or just trying to stay in shape and improve your overall health, cross training has several benefits:

Cross training leads to optimal effort
Maximal performance in any physical activity involves more than just one physical attribute, which leads many sports scientists to assert that cross training can lead to optimal effort. Varying modes of exercise helps to condition your entire body and may even enhance abilities you’ve been struggling to improve. For example, runners may find that strengthening the upper body can help reduce upper body muscle fatigue while running, or range of motion during weight lifting may be improved by including more stretching and flexibility training.

Additionally, including activities that you wouldn’t normally participate in can challenge your body and your mind, resulting in improved performance.

Cross training helps reduce risk of injury

Changing your fitness routine periodically can reduce the chance that you will experience an overuse injury, the result of repetitive stresses on the same parts of the body. Classic examples of overuse injuries include tennis elbow, Achilles tendonitis, and shoulder tendonitis. Overuse injuries are quite common and the symptoms begin slowly. The effects of aging can compound the problem, as tendons

become less durable, and collagen becomes less elastic. Not changing your workout to adjust for these changes can increase the likelihood of injury. Including flexibility as a mode of training in your standard routine can help make injuries less likely. If you aren’t sure what types of stretches to include, or how to properly warm up prior to physical activity, talk with a qualified athletic trainer, coach or sports medicine physician. These professionals can also help guide you when choosing exercises to address recurrent injuries before they become chronic problems.

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Hormone Replacement Therapy Update: FDA Releases Website to Provide Information for Women

By CORTNI HARALSON, MPH

Last year, the Women’s Health Initiative (WHI) study on combination hormone replacement therapy (HRT) caused a shock wave throughout the medical community. The study was brought to a halt because it showed that women taking the estrogen and progestin combination therapy had an increased risk of heart disease, breast cancer, stroke, and blood clots, outweighing the benefits of taking the medication. In May and June of this year, WHI found a heightened risk of demen-

tia, as well as no protection against the development of normal and abnormal declines in cognitive function among women 65 years and older taking HRT. Those taking HRT also showed no meaningful improvements in quality-of-life measures such as sleep, emotional health, general health, physical functioning and sexual satisfaction.

This left women with menopausal symptoms and women currently taking hormone replacement therapy confused

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Cross training allows for physical activity while injured

If you are experiencing pain or have injured yourself, it’s time to pull back; you won’t increase your endurance or do yourself any favors by continuing the activity when you’re in pain. But you don’t have to give up your whole fitness routine. When one body part or area is injured you can modify activities or switch to a different type of activity. For example, a runner with an injured ankle might swim during rehabilitation or perhaps a swimmer with an injured shoulder might turn to jogging or bicycling to maintain aerobic conditioning. This is a great way to remain active while an injury heals. Return to your normal activity level only when you are free of pain and you have restored full range of motion in the affected area.

Cross training keeps you mentally stimulated

The fun aspect of cross training is that you can pick and chose from activities you like. Tailoring your routine to your specific interests can help ward off boredom and keep you motivated.

The physical activity profile of LSAH participants can be gleaned from their responses in the Lifestyle Questionnaire (LSQ). This questionnaire has been used to collect lifestyle data from each class of astronauts and comparison participants since 1993, with an update in 1997. Of 223 astronaut and 820 comparison participant respondents, the most recent data show that 58.8% of the former and 72.4% of the latter report 2 or fewer types of exercise (as defined in the LSQ) performed in their usual routine (See Figure 1).

When broken down into exercise types, the data show that 69.8% of astronauts and 58.7% of comparison participants report running or jogging as their usual form of exercise (exercise types are not mutually

exclusive). More astronauts report weight lifting as an activity than comparison participants, while fewer astronauts report walking as an activity than comparison participants (56.5% to 28.5%, and 29.2% to 48.9%, respectively – see Figure 2). Note that the LSQ question on exercise type does not specify any flexibility exercise in its list of possible answers.

In terms of frequency, a higher percentage of astronauts reported more frequent exercise per week than comparison participants. Almost 29% of the astronauts reported exercising from five to seven days a week compared to 18% of comparison participants. Conversely, a higher percentage of comparison participants reported rarely exercising (occasionally to not at all) as compared to astronauts (31.8% to 11.2%, respectively, see Figure 3).

These data suggest that both astronauts and comparison participants may benefit from adding additional modes of exercise into their usual routine, as well as varying activities. A well-rounded fitness program has three main components: cardiovascular exercise (e.g., running, walking, swimming), strength training (e.g., weight training, plyometrics), and flexibility (e.g., yoga,

Figure 2. Exercise Types Included in LSAH Participants’ Exercise Routine

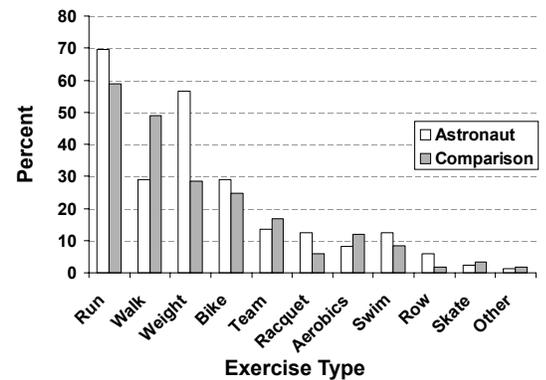


Figure 3. Exercise Frequency Reported by LSAH Participants

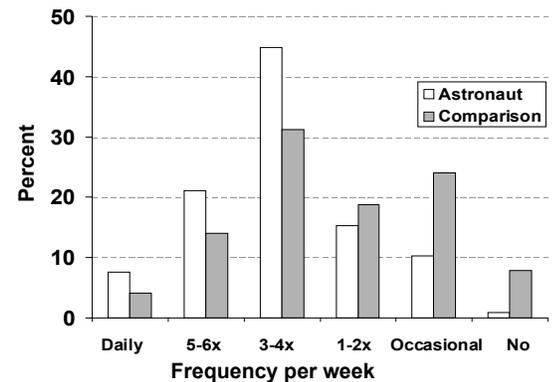
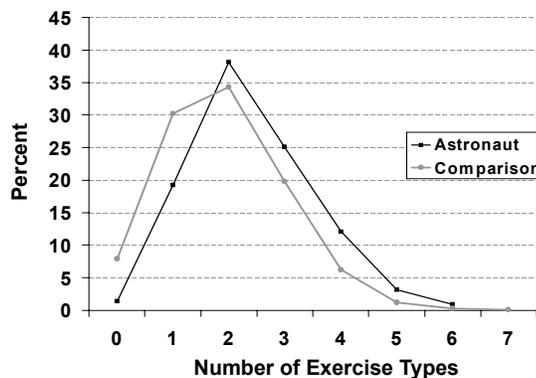


Figure 1. Number of Exercise Types Performed in LSAH Participants’ Exercise Routine



Pilates). Some examples of cross training include: running on weekdays and swimming on the weekends; alternate racquetball and aerobics on weekdays, and then walk on weekends. Stretching daily is ideal, but devoting one or two days in your routine to an activity like yoga can further your efforts immensely. If your goal is general fitness, any combination of activities will work. If you have a specific training goal in mind, you may want to consult with a fitness professional to determine a plan.

You can’t always work at maximum capacity. Remember to rest in between days of heavy exertion, and increase your training levels gradually. Don’t stagnate. Change it up! ■

Foot Care Basics

By CHRISTINA “C.J.” STEVENS,
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We don't often think about taking care of our feet. Many times, it isn't until they hurt that we seek information about the care and prevention of injury to our feet. Even then some believe that foot discomfort and pain such as plantar fasciitis, hammertoe, bunions, and athlete's foot, are normal and to be expected. Many foot ailments stem from neglect or abuse, but most foot problems and pain can be treated successfully. Foot ailments can have a significant impact on mobility, not only limiting activities but also possibly leading to knee, hip and lower back pain.

According to the American Podiatric Medical Association, there are some important, yet simple steps we can take to make sure our feet stay in good working condition:

Proper Footwear

As we get older our feet tend to spread, losing the fatty pads that provide cushion to the bottom of the feet. Excess weight gain can have an effect on bone and ligament structure. Because of these changes, it is important to remember to have your feet measured frequently as

their size may change. It may seem obvious to select running shoes for running, walking shoes for walking, etc., but it is important to ensure that even the shoes you wear on a daily basis should be appropriate for your activities. Remember these tips when deciding on shoes: try shoes on at the end of the day, wear the type of socks you'll most likely wear with the shoe, and try on both shoes. If the shoes don't feel comfortable right away, make another selection. Finally, there are some foot care considerations when you are 'footwear free'. Going barefoot is said to be good for the feet so when you are at home go ahead and remove your feet from the constraints of always wearing shoes. Just be sure to remember that going barefoot outside and in public places has its risks, such as picking up fungal infections, splinters and other foot injuries.

Cleansing and Care of Your Feet

Podiatrists have some simple suggestions on taking care of one's feet. Wash feet daily, taking care to dry them completely, especially between the toes. Trim or file toenails straight across. Never cut corns and calluses with a razor, pocketknife, or other sharp instrument. Self-treatment of even minor foot problems can be risky, so it's best to leave the 'surgery' to the professionals. Check with your family

doctor or podiatrist before trying over-the-counter foot care products.

Stretching, Strengthening, and Training

The human foot contains 26 bones, 33 joints, and a network of more than 100 tendons, muscles, and ligaments. The design and structure of these highly complex components of our bodies is what allows them to perform their function. And yet this is also what makes them so susceptible to injury. Walking is a great exercise for strengthening the feet. Additionally, stretching the foot and ankle not only helps prevent injury to the foot but also reduces the likelihood of developing injuries such as shin splints and tendonitis. Some ways to stretch the ankles and feet include pointing and flexing the entire foot repetitively, and rolling or circling the ankles, first in one direction then in the other. It can also be helpful to rise up onto the balls of the feet, and slowly lower back down to the floor.

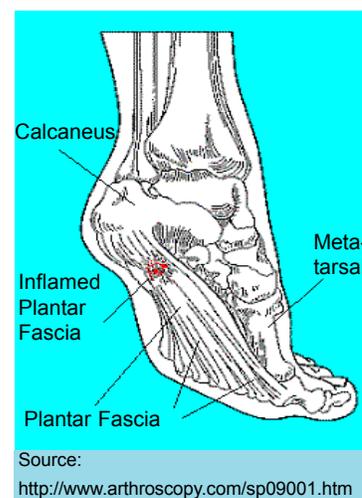
As with any other part of the human body, it is critical to remember: "Don't train through the pain!" If your feet hurt, this is an important message that must be heeded. Help your feet do their job by taking good care of them, and they'll last a lifetime. ■

What is Plantar Fasciitis?

By BABY DJOJONEGORO, MS,
MPH

It is a common condition, seemingly minor yet affecting the quality of life. The symptom is pain under the heel that flares up on getting up in the morning, subsides during the day, but reappears after a period of inactivity, such as sitting at the desk. Depending on the intensity, this pain can slow physical activity to a limp or halt.

What happens is the band of tissue under the feet, the plantar fascia, gets inflamed from chronic micro tearing. The fascia runs from the middle of the heel and branches out to the toes. It is an integral part of feet movement through the windlass mechanism: it stretches during the heel-down part of walking, and contracts during the toe-down part.



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Despite this constant movement, the fascia is not very elastic so that repetitive, constant, heavy, intense activity causes micro tears in the fascia which then gets inflamed. This inflammation, called plantar fasciitis, is felt as pain at the insertion of the fascia at the heel.

This condition is sometimes confused with heel spurs, which are calcium deposits on the heel. These deposits can form as a result of fascial injury. However, presence of heel spurs may not cause heel pain, while many plantar fasciitis sufferers do not have heel spurs.

Plantar fasciitis is often provoked by an increase in weightbearing activity (e.g., adding hill training to running activity) or weight (e.g., weight gain, pregnancy),

which are two major risk factors. Other risk factors include flawed foot/leg biomechanics (e.g., flat feet, reduced ankle dorsiflexion), aging (leading to reduced heel padding and reduced ankle flexibility), and insufficiently-cushioned shoes.

Though the exact number is unknown, it has been estimated that as much as 10% of the general population has suffered from plantar fasciitis. In the LSAH population, annual physical examination data show that 15 astronauts (4.8 %) and 29 comparison participants (3 %) have been diagnosed with or self-reported suffering from plantar fasciitis. Astronauts may show higher plantar fasciitis prevalence because they are more physically active than comparison participants (see Exercise Frequency figure, page 2).

Treatment of plantar fasciitis involves rest, stretching, alleviation of pain using anti-inflammatories and ice, and a lot of patience. The pain usually precludes activity, and this period can last from weeks to months. In the meantime, plantar fasciitis sufferers should start stretching to gain more flexibility in fascia, calf muscles and hamstrings, and do strengthening exercises for foot and ankle muscles. Added arch support in the form of orthotics is helpful as well. Chronic or severe cases may require other treatments such as extracorporeal shock wave therapy, steroid injection, or surgery. However, these treatments carry their own risks. In most cases the traditional therapy outlined above will be sufficient treatment, while continuation of stretching and strengthening exercises is important to prevent future plantar fasciitis episodes. ■

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and with a lot of questions. According to the Food and Drug Administration (FDA), HRT was still effective in reducing hot flashes, bone loss, and treating vaginal dryness, but people were still unsure about how to interpret the results of the study. The FDA advised that HRT could still be used but it needed to be at the lowest effective dose and for the shortest possible length of time. However, there was still a need to get information out to the public to minimize much of the confusion.

As a result of a Congressional directive this spring, the FDA has set up a website at www.fda.gov/womens/menopause to provide up-to-date information on menopause and HRT issues. It is available in English and Spanish and consists of a fact sheet and a purse guide. The fact sheet “Menopause and Hormones” gives general information about menopause symptoms and treatment issues, and answers questions about the risks and benefits of using hormone treatment. The purse guide lists the different websites of participating organizations where you can learn more,

and gives a list of questions to use when discussing options with your family physician. In the future, the FDA plans to release a broadcast campaign to inform women about using HRT as well.

This information is also available at the US Department of Health and Human Services website www.4woman.gov. Additional information on the Women’s Health Initiative study on hormone therapy can be found at www.nhlbi.nih.gov/whi and www.whi.org. ■

For your information

If you want a copy of your exam results, please complete and sign a release form while you are visiting the Clinic for your examination. The form is called *Privacy Act Disclosure Authorization and Accounting Record (DAAR)*, or NASA Form 1536.

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