By Jessica Heath and Neal Goulet
Spring is sprung, the ditty goes, the grass is riz. And like clockwork, someone is trying to shake off a winter’s worth or longer of inactivity by jumping back into an exercise program too aggressively. Often the result is an overuse injury. Just as predictable is how these injuries occur and how overall physical fitness can play a significant role in preventing them.
The American Orthopaedic Society for Sports Medicine, on its Stop Sports Injuries website, cited training errors as the most common cause of overuse injuries: “These errors involve rapid acceleration of the intensity, duration, or frequency of activity. Overuse injuries also happen in people who are returning to a sport or activity after injury and try to make up for lost time by pushing themselves to achieve the level of participation they were at before injury.”

GENERAL PHYSICAL PREPAREDNESS
Some people are prone to overuse injuries, with factors including body alignment, weak links owing to old injuries or incompletely rehabilitated injuries, type of shoe, terrain. Or it could be they just aren’t in good enough shape for the demands being put on their bodies.

Someone who has been a couch potato all winter will have a steeper mountain to climb than someone who maybe hasn’t been running but has taken long walks despite cold, snowy weather.

A catch-all term for one’s overall fitness level is GPP, shorthand for general physical preparedness, “or your ability to perform work,” wrote certified strength and conditioning specialist Jon-Erik Kawamoto. (By comparison, “specific physical preparedness,” or SPP, is the ability to handle the rigors of a particular sport.) Kawamoto said to think of GPP training “as creating a well-balanced, developed body ready for anything. The higher your fitness level, the more you can handle.” However, he lamented that between our sedentary lifestyles and poor eating habits, “we are losing our physical preparedness for life.”

Never mind the metaphor of climbing a mountain; he said that some of us have literally lost the ability to climb stairs. In fact, two-thirds of Americans are described as overweight or obese, including a growing number of children, creating a need for a sustained focus on increasing physical activity (and improving nutrition).
Ice vs. Heat

By Misty Seidenburg

DOES ICE HELP YOU TO HEAL FASTER?
With an acute (sudden) injury, inflammation is most people’s biggest concern. However, it is a critical component of the healing process. Too much inflammation can delay healing; ice can promote healing by reducing the amount of injury in the first 48 hours.

After exercise, many people experience delayed onset muscle soreness (DOMS). Ice has been shown to increase fluid mobilization and decrease pain when compared with active recovery alone.

WHEN SHOULD I USE ICE AFTER AN INJURY?
Ice is for acute injury (fewer than 48 hours) or acute exacerbations of a chronic injury. Symptoms can include swelling, warmth, redness and pain. If you have swelling, you have an acute injury.

Ice can also be useful immediately after surgery. It has been shown to improve weight-bearing as well as reduce the need for pain medication.

SHOULD I APPLY ICE OR HEAT WITH EXERCISE?
Heat should be applied before exercise to improve flexibility and stimulate blood flow. Ice should be used after to reduce swelling and pain.

That said, sometimes what’s best for you is what makes you feel best. What makes you most comfortable and, most important, relieves your pain? The bottom line is use the one that feels best to you.

Your preference is the tie breaker and probably the most important consideration. For instance, heat cannot help if you already feel unpleasantly flushed and don’t want to be heated. And ice is unlikely to be effective if you have a chill and hate the idea of being iced.

Q&A

Should I apply ice or heat with exercise?
Heat should be applied before exercise to improve flexibility and stimulate blood flow. Ice should be used after to reduce swelling and pain.

How long should I apply ice or heat?
Ice can be applied to the painful area with an ice pack wrapped in a thin towel to protect the skin for no longer than 20 minutes. An ice massage with water frozen in a paper cup can be applied to a small area of pain and discontinued when the area goes numb but no longer than six or seven minutes.

Heat can be applied using a heating pad or a moist towel for no longer than 20 minutes while keeping a close eye out for skin irritation, including reddening or blisters.

Treatment decisions should be made on an individual basis by weighing the benefits and risks of each with your healthcare provider.

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ICE vs. HEAT

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WHEN SHOULD I USE HEAT AFTER AN INJURY?

Heat is for relaxing muscles, decreasing chronic pain, and relieving physical stress. It is ideal for sore, stiff, nagging muscle and joint pain. It can improve nerve conduction, flexibility, local circulation, and contraction of muscles.

ICING: Puts you in the condition of compromised health and fitness that makes daily activities difficult, the risks can even be life threatening.

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By Branden Fleishman

PHYSICAL THERAPIST OR PHYSICIAN?

By Jason Williamson

Many overtraining aches and pains can be relieved with rest. But when should you contact a healthcare professional?

A PHYSICAL THERAPIST CAN TREAT:

• Pain that worsens gradually
• Pain presenting as an ache or with no history of direct injury
• Stiffness or aching during or after training or competition
• Pain that increasingly requires longer rest time
• Point tenderness
• Visible swelling that decreases at rest
• Pain or injury that results in missed training sessions
• A problem that persists

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WHEN A PHYSICIAN SHOULD BE SEEN:

• Pain is not relieved with position changes
• Return to activity is not possible after 7 to 10 days of rest
• Swelling persists for more than one week
• Contusion does not resolve in two weeks
• Signs of extreme weakness with pain
• Inability to fully weight bear on lower extremity because of leg buckling and.or pain

By Branden Fleishman

Physical therapists often are asked what the best types of stretches are and when they should be done. This raises the age-old question: static or dynamic stretches, which should I do?

STATIC

Static stretching consists of holding one position for 30 to 60 seconds in order to lengthen a muscle. This typically targets a specific muscle and has been shown to increase flexibility, promote healthy muscle tissue, and maintain or improve range of motion. These qualities make static stretching ideal for a post-activity cool-down.

DYNAMIC

Dynamic stretching focuses on controlled movement through the available range of motion of a joint. Unlike static stretching, which targets only one muscle at a time, dynamic stretches target muscle groups. The active motion increases blood flow to the muscles. This can result in greater muscle activation for improved speed, strength, power and body awareness toward greater athletic performance.

A warm-up for any physical activity should consist of several dynamic stretches targeting the full body. This prepares the joints for movement and muscles for maximum activation.

Stretching should be one of the main components of warm-up and cool-down with any type of physical activity. The combination of static and dynamic stretching, each used at the right time, can significantly reduce injury risk and improve athletic performance.

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RESEARCH ABSTRACT

Sudden Change in Running Distance May Lead to Injury

By Misty Seidenburg

INTRODUCTION

Running injuries are common, especially in novice runners. One-third of injured runners report changes to their running routines just prior to injury. These injuries are closely linked to training errors, including excessive mileage, rapid change in intensity, and sudden increases in running distance, and are thought to result from the inability of the body to adapt to changes and to repair tissue.

Historically, the “10 percent rule” for maximum training progression has been a guideline used by runners, coaches and healthcare professionals to prevent injuries; however, there has been little research to support the efficacy of this rule.

Specific injuries thought to be related to changes in distance include patellofemoral pain syndrome (PFPS); iliotibial band (ITB) syndrome; medial tibial stress syndrome (MTSS); patellar tendinopathy; gluteus medius; and greater trochanteric bursitis. Other lower-extremity injuries appear to be related to changes in pace or trauma.

The purpose of this study was to determine whether there is an association between a sudden change in weekly running distance and running-related injuries, and whether these changes in distance are related to specific types of injuries.

METHODS

The 873 participants were provided with a GPS watch and neutral running shoes and tracked for one year. The participants were asked to self-structure a running program. The researchers allowed them to determine when and where to run, with no restrictions on speed, duration, intensity, or change in weekly running distance.

Primary outcome measures included the first running-related injury to occur during the one-year period, defined as “any musculoskeletal complaint of the lower extremity or back caused by running that restricted the amount of running for at least one week.” If an injury occurred, the participant met with a physical therapist and the injury was categorized as being the result of overuse or trauma.

DISCUSSION

Novice runners who progressed their weekly distance by greater than 30 percent were more vulnerable to distance-related injuries when compared with runners who progressed less than 10 percent. Clinically, this knowledge should be used cautiously when developing a running program as the results of this study were explorative in nature.

The biomechanical rationale for this is currently unknown. However, longer distances may lead to decreased speed, more steps and increased cumulative joint loading, culminating in injury.

REFERENCE