

WKONA Quarterly Sports Medicine Newsletter

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Kinesiotape

Mariann Moore, PT

You probably first noticed Kinesiotape during the 2009 Summer Olympic games. It was hard to miss the bright pink, blue and black strips of tape on the Olympic athletes. While Kinesiotape has become more popular with its visibility on these high profile athletes, it is primarily used by nonathletic populations. Kinesiotaping is simply applying a piece of tape with the right amount of pressure in a specific direction to accomplish a desired result.

HISTORY of the Kinesiotaping Method

The Kinesiotaping Method was developed in the 1970's by Dr. Kenzo Kase, a chiropractor from Japan. After trying other tapes, he developed Kinesio Tex Tape that helped produce the results he desired. Kinesio Tex Tape is a latex-free cotton fiber tape with heat-activated backing that stretches only along its longitudinal axis. It can be stretched 40-60% of its resting length. Some benefits of the Kinesio Tex tape are it doesn't require pre-tape, is breathable, allows full range of motion, is water resistant, and has an extended application (usually 3-5 days).

WHO uses the Kinesiotaping Method

Kinesiotaping is used by a wide variety of professional providers including physical therapists, occupational therapists, certified athletic trainers, chiropractors, physicians and manual therapists. It is used to help treat a wide spectrum of dysfunctions.

WHAT is the Kinesiotaping Method

The Kinesiotaping Method is felt to cause physiological effects on body systems. The five main effects are skin, circulatory/lymphatic systems, fascia, muscle and joint. Some benefits of using this method are that it is economical, is easy to learn and apply, may be used over a long period of time and involves no medication. Kinesiotape can be worn during all activities, including swimming.



Kinesiotape application for plantar fasciitis

HOW the Kinesiotaping Method works

Since all layers of the human body are inter - connected, it is possible to affect change in deeper systems by applying Kinesiotape to the surface of the skin. Kinesiotape can reduce pain by alleviating pressure on pain receptors. When applied across the painful area with 25-50% tension, it can provide an almost immediate decrease in pain. Kinesiotape can increase the amount of space beneath the skin creating enhanced lymphatic drainage and flow. "Fans" are applied

over the swollen area with 10-25% tension to decrease edema. Better lymph drainage also means decreased pressure on neural receptors under the skin and, therefore, decreased pain. The increased space beneath the skin can also affect muscle health and function: relieves pain, increases range of motion, increases muscle performance, assists in tissue recovery and reduces fatigue. Depending on the application, Kinesiotape can improve muscle contractions in weakened muscle (facilitation) or stimulate relaxation of over contracted muscles (inhibition). Tape is applied from origin to insertion with 15-50% tension to help facilitate a muscle and from insertion to origin with 15-25% tension to help inhibit a muscle. This last application has been found to be very beneficial in reducing muscle spasms and pain. Kinesiotape can also be effective in improving joint biomechanics and alignment, reducing proprioceptive muscle guarding and pain, facilitating ligament and tendon function, and enhancing kinesthetic awareness.

Kinesiotape is a low cost, non-invasive, non medicinal way to treat pain, swelling, muscle and joint dysfunctions. For more information on Kinesiotaping, contact the Rehabilitation Department at Western Kentucky Orthopaedic & Neurosurgical Associates at 270-782-7800, option 4.

WKONA
*Where the athlete
goes to get back in
the game.*

Staying Hydrated In The Heat

Susie Bell MS, ATC

Hydration is the process of providing an adequate amount of liquid to body tissues. As spring and summer sports begin, and the temperature outside increases, it is critical to stay hydrated. Two benefits of staying hydrated are: maintaining athletic performance and decreased risk of suffering from a heat related illness. Heat related illnesses include heat stroke, heat exhaustion and heat cramps.



Heat stroke is the most serious heat-related illness. It occurs when the body becomes unable to control its temperature: the body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. Body temperature may rise to 106°F or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not provided. Signs and symptoms include: red hot and dry skin with no sweating; rapid, strong pulse; throbbing headache; dizziness; confusion, and possibly loss of consciousness.

Heat exhaustion is a milder form of heat-related illness that can develop after several days of exposure to high temperatures and inadequate or unbalanced replacement of fluids. Those most prone to heat exhaustion are elderly people, those with high

blood pressure, and those working or exercising in a hot environment. Warning signs of heat exhaustion include heavy sweating, paleness, muscle cramps, tiredness, dizziness, headache, weakness, nausea or vomiting, and fainting. The skin may be cool and moist; the pulse rate will be fast and weak. Breathing will be shallow and fast. Heat exhaustion may lead to heat stroke if left untreated.

Heat cramps are muscle pains or spasms – usually in the abdomen, arms, or legs – that may occur in association with strenuous activity. People who sweat a lot during strenuous activity are prone to heat cramps. This sweating depletes the body's salt and moisture. The low salt level in the muscles causes painful cramps. Heat cramps may also be a symptom of heat exhaustion. If you have heart problems or are on a low-sodium diet, seek medical attention for heat cramps.

The best time to consume fluids is before you are thirsty -- by the time you are thirsty, your body is already dehydrated. It's best to drink on a schedule when it is hot outside. Avoid drinks containing caffeine or alcohol while in the sun or heat. These types of drinks stimulate the production of urine thereby promoting dehydration. The best drinks are water, or one of the many flavored sports drinks that are on the market. Research clearly shows that a properly formulated sports drink like Gatorade combines flavor and sodium to encourage people to drink more than they would when they only have access to water. Sports drinks help to replace some of the electrolytes you lose through sweat and provide carbohydrate energy to working muscles. Adults need 17 to 20 ounces of fluid before beginning activity, as well as an additional 7 to 10 ounces every 10 to 20 minutes during activity. Your fluid needs don't stop when your activity is over -- you should consume 24 ounces of fluid within the first two hours after outdoor activity.

Children need 4 to 8 ounces of fluid before beginning outdoor activities and 5 to 9 ounces every 20 minutes while they are outside. Once kids return from outside play or activity, they also need to consume 24 ounces of fluids within the first two hours after they stopped their activities.



Remember to drink periodically throughout the day. Do not just drink when you are thirsty. Once you are thirsty, you are already dehydrated. Drink at least eight glasses of water a day and avoid caffeine and alcohol, which can dehydrate you further. These tips will help you stay in the game.

**You can reach
our office
Monday-Friday
8am-5pm
270-782-7800**

**Look for
tips
related to
Fall
Sports in
our 4th
quarter
newsletter
in October
2010!**