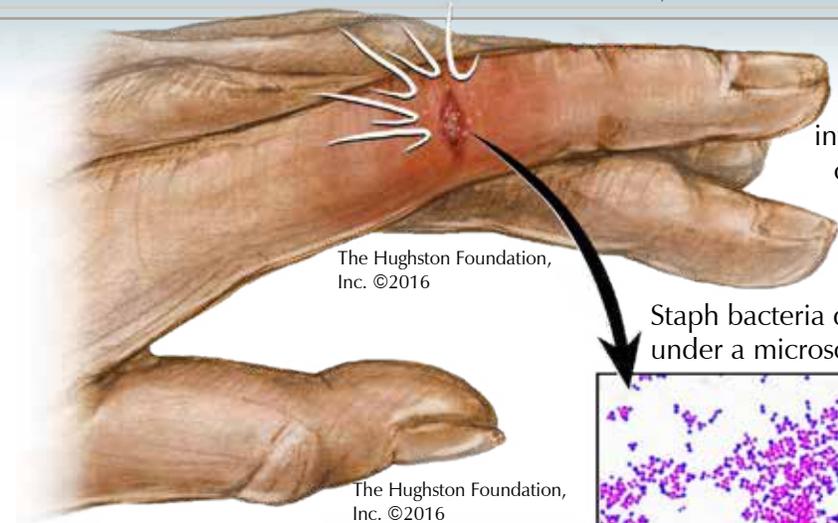




## Inside...

- Orthopaedic Imaging
- Dry Needling: What You Should Know
- Protein Powder: Help or Hype?
- Hughston Clinic



**Fig.** Staph infection in an open wound

The Hughston Foundation, Inc. ©2016

Staph bacteria dyed under a microscope

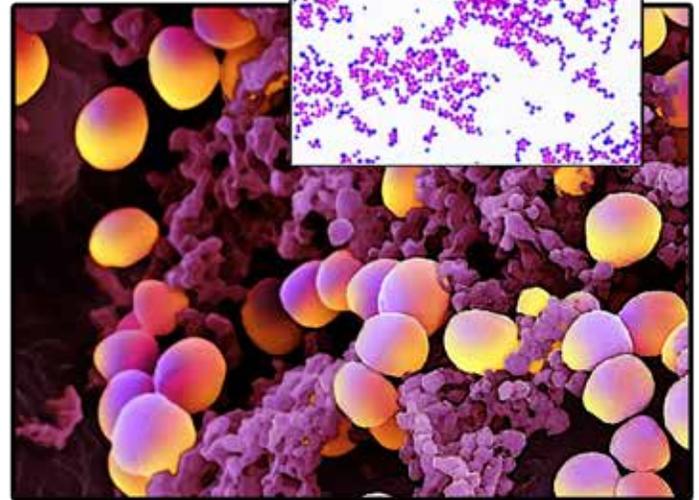
The Hughston Foundation, Inc. ©2016

## Staph Infections of the Skin

The bacterium *Staphylococcus aureus*—staph for short—is so named because when viewed through a microscope, it is berry-shaped and exists in grapelike clusters that have a golden yellow pigment. The root *staphyl(e)*, originally from ancient Greek, refers to a bunch of grapes; *coccus*, from Latin, refers to something spherical, like a berry; and *aureus*, also Latin, means golden. Staph is a gram-positive bacterium, meaning that it stains purple when tested because it has a single outer membrane rather than many, making it more permeable to antibiotics (**Fig.**). Staph infections are therefore often successfully treated with antibiotics; however, some strains are resistant to antibiotics and, consequently, more difficult to treat. Staph is also highly contagious and can be spread through hand-to-hand contact, airborne transmission, or contact with an object. Although most staph infections occur on the skin, they can also occur in the nasal and sinus passages, mouth, anus, and genital areas. If you have a fresh wound that comes in contact with an infected person or object, a staph infection can easily erupt and will often present itself as a boil or abscess (**Box 1**).

### Are you at risk for a staph infection?

If you suffer from influenza, diabetes mellitus, and pulmonary (lung) disorders, or your immune system is compromised in any way, you are more likely to contract staph infections of the skin. Additionally, if you become a hospital patient or are an athlete, you may be more frequently exposed to staph inside a healthcare or athletic facility.



### Box 1. Skin Infections Caused by Staph Bacteria

#### Boils

The boil is the most common type of staph infection. It consists of a pocket of pus that usually develops in a hair follicle or oil gland of the skin. The skin over the area will generally appear red and swollen. The pus will usually drain if the boil breaks open. Boils often occur in the armpit or groin regions.

#### Impetigo

This is a painful skin rash featuring large blisters that may ooze fluid and develop a honey-colored crust.

#### Cellulitis

This is an infection of the deeper skin layer characterized by redness and swelling on the outer skin. Sores or areas of oozing discharge may also develop. Cellulitis occurs most often in the lower legs and feet.

#### Staphylococcal scalded skin syndrome

In this condition, which affects mostly newborns and children, the toxins produced by a staph infection cause fever, skin rash, and sometimes blisters. As the blisters break open, the top layer of skin comes off, leaving a red, raw surface that resembles a burn.

The Hughston Foundation, Inc. ©2016

## Hospitals

Staph infections are commonly found in hospitals and healthcare clinics where they can constitute a major problem. For example, if proper sterilization techniques are not used, staph can easily spread throughout a hospital or healthcare facility. Additionally, humans tend to harbor staph bacteria in the mucous membranes of the nose and sinuses. As a way to prevent infection, some hospitals and healthcare clinics take nose swabs before surgery. If the swab comes back positive for staph, you will be treated with antibiotics before your doctor proceeds with surgery. Other hospitals have patients cleanse their entire skin surface with a chlorhexidine wipe and put Betadine gel in their nose the morning of surgery.

## Athletic facilities

Likewise, athletic facilities, such as health clubs and gyms, including weight rooms, wrestling rooms, and locker rooms, are all places where staph bacteria can grow and you can easily pick up an infection. Staph bacteria can be hard to destroy and can live on unclean equipment and facility surfaces long enough to be transferred to anyone who touches them. If you have an open wound on your body, this makes it easy to contract a staph infection. Likewise, if you have a cut that is not covered or treated properly and it becomes infected, the bacteria could easily spread to other people or to objects. As an athlete, frequent close contact with other athletes and poor locker room hygiene, such as the use of unwashed towels and uniforms, can make you susceptible to contracting staph infections (**Box 2**).

## Recognizing staph infections of the skin

In the initial stages, a staph infection often manifests as a small lesion that may look much like a pimple or mosquito bite. As the lesion enlarges, it becomes painful and inflamed. It may also contain pus. If the infection continues to spread, you may experience a mild fever. Skin infections caused by staph include boils, impetigo, and cellulitis.

## A common type of staph infection

A common and well-known form of staph is methicillin-resistant *Staphylococcus aureus* (MRSA). This is a specific strain of the bacterium that is resistant to many of the antibiotics used to treat staph infections. Once a staph infection is classified as MRSA, it is considered much more dangerous because without effective antibiotic treatment it can quickly worsen. The Centers for Disease Control states that approximately 100,000 people contract and receive treatment for MRSA each year.

## Treating staph infections

If you are worried that you may have contracted a staph infection of the skin, it is important to see your doctor promptly. The sooner the wound can be tested for bacteria the better. If not treated properly, a staph infection can spread quickly within the body and be transmitted to others.

The first route of treatment of the infection is usually antibiotics. You should receive a course of antibiotics as well as instructions on how to cover the wound with antibiotic ointment and a bandage. Your staph infection may return if it is not fully treated the first time or if it becomes antibiotic resistant. If the staph infection does return, your doctor may prescribe a second course of antibiotics. If the infection still does not clear up, you may need to be hospitalized for treatment with a more aggressive antibiotic regimen. At worst, you may need surgery to remove the infected tissue completely.

### Box 2. Staph Prevention Guidelines

There are a number of daily habits you can cultivate to lower your risk of contracting a staph infection:

- Wash your hands frequently
- Use hand sanitizer that is alcohol-based between hand washes
- Keep your wounds clean and covered
- Do not share your personal hygiene items
- Wash your clothes and bedding in hot water
- Avoid direct contact with an individual who has an infectious cut or wound
- Shower after athletic practices and after the gym
- Wash your uniforms and towels after each use
- Clean new wounds as soon as possible after injury
- See your doctor if a cut becomes infected (red, swollen, hot, tender, or contains pus or oozing fluid)

The Hughston Foundation, Inc. ©2016

## Keeping staph in check

Staph is a highly contagious infection that is spread primarily through hand-to-hand contact or through the air and can occur when you have a fresh wound that comes in contact with an infected object. If you start experiencing redness, swelling, and heat around a wound, you should see a physician right away and be tested for staph and put on a course of antibiotics, if appropriate. You should also receive instructions on how to keep a wound clean and covered. If you are an athlete, it is especially important to practice good hygiene and to keep all sporting equipment, clothing, and workout areas clean. To avoid a potentially dangerous situation and to shield those around you, it is crucial to act upon what may be a staph infection at the first signs of symptoms.

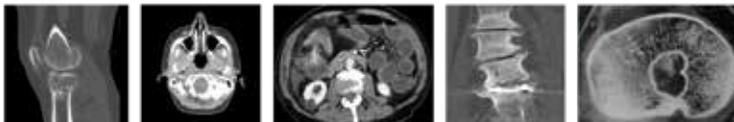
Marissa Turturro, ATC, and Amanda Guethlein, ATC  
Columbus, Georgia

## Orthopaedic Imaging



If you have a bone or musculoskeletal problem, your physician will usually begin the diagnostic process with x-rays. X-rays are an excellent screening tool for visualizing bone pathologies, such as fractures or degenerative joint disease. In many instances, however, either the presence or absence of findings will warrant a closer look, prompting your attending physician to order a computed tomography (CT), magnetic resonance imaging (MRI), or nuclear medicine scan. Each of these scans offers different advantages and disadvantages for you as a patient, and the type of imaging study or studies your physician orders will depend largely on your symptoms and health history.

### Computed tomography



The word tomography comes from the ancient Greek roots, *tom-*, meaning a cutting or slice, and *-graphy*, meaning imaging or writing, and thus refers to the imaging of internal cross-sections of the body. The term computed tomography (CT) or, sometimes, computed axial tomography (CAT), refers specifically to combined computer-processed x-ray images of internal cross-sections of the body taken from different angles. If you suffer an acute trauma, your doctor will typically order a CT scan to rule out fractures and dislocations. Although a CT scan may be recommended for you largely because of its ability to evaluate bony structures, special studies, such as a CT arthrography (joint imaging) or CT myelography (spinal cord, nerve root, and other soft tissue imaging), may be ordered to provide details about your soft tissue. By injecting a radiocontrast agent or medium (typically an iodine or barium compound) directly into the joint or spinal canal to make internal structures and bodily fluids more visible on imaging, such studies can offer detailed pictures.

One advantage of a CT scan over other types of scans is how quickly it can be performed. During a CT scan, a high-powered x-ray tube rotates around your body to generate the images. This generally takes only a few minutes and can be performed with a single breath hold. Another advantage of CT imaging is that it is safe even if you have had a metal device or certain types of hardware implanted in your body. In fact, if this is the case for you, your doctor should order a CT scan rather than other imaging modalities.

The major disadvantage of having a CT scan is that it uses ionizing radiation (the emission of electrical charges

and electromagnetic waves) to produce images and in the process exposes you to a higher dose of radiation than a conventional x-ray. Radiation exposure can harm cellular structures and processes and can directly or indirectly affect DNA. However, as CT scans are now performed more quickly, the amount of radiation to which you are exposed is less than you would receive as an airline passenger on a long flight. Furthermore, advances in CT scanning have resulted in higher resolution images and increased comfort for you as a patient.

### Magnetic resonance imaging

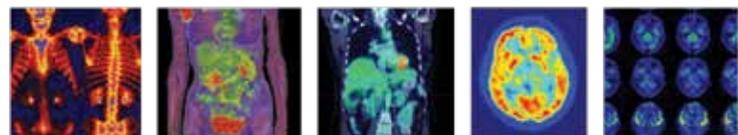


Unlike CT scans, which use x-rays, MRI scans use powerful magnetic fields along with radio frequency pulses to produce detailed images of bones as well as soft tissues such as muscles, tendons, ligaments, and cartilage. Since the images are produced by a magnetic field, you are not exposed to radiation, and this constitutes an advantage over a CT scan.

Additionally, MRI scans are superior for soft tissue imaging. As with soft tissue CT scans, administering contrast agents or mediums (usually a compound with the ability to alter the magnetic properties of nearby hydrogen atoms) through an IV has been found to enhance imaging. Moreover, the contrast setting of an MRI can be changed to highlight different types of tissues and any subtle differences between them. The imaging plane can also be changed without moving the patient.

The chief disadvantage of an MRI is that its powerful magnetic field can prove harmful if you have certain metal devices in your body such as pacemakers, cardiac monitors, spinal cord stimulators, and some types of surgical clips. Another disadvantage of this type of imaging is the time required to scan—typically around 30 minutes. Additionally, when you have an MRI, you are placed in a cylindrical tube that could make you feel uncomfortable or claustrophobic. Open MRI scanners are available, but their magnetic field is significantly weaker, and, consequently, they produce much less detailed images. Overall, despite their disadvantages, including the increased cost compared with CT scans, MRIs are still more commonly performed when a high degree of soft tissue detail is needed.

### Nuclear medicine



Nuclear medicine refers to a type of noninvasive, painless (apart from the placement of an IV) imaging procedure that

helps physicians diagnose and evaluate a host of medical conditions involving bones or soft tissue. As a diagnostic tool, nuclear medicine has been around for 60 years—longer than CT or MRI. In contrast to both CT and MRI scans, nuclear medicine imaging uses radioactive materials called radiopharmaceuticals or radiotracers. These drugs, which can be taken either orally or intravenously, contain radioactive isotopes (variants of elements that emit energy in the form of gamma rays and decay quickly). Consequently, with nuclear imaging, unlike x-rays and CT scans, the radiation that helps produce the images is emitted by your body rather than externally generated. This radiation can then be detected by a specialized camera or imaging device. From the data gathered, the device produces scintigrams (recordings of the scintillation or flashing from the radioactivity) that yield images of your bones. Areas that take up more or less of the radiopharmaceutical show up as either brighter or darker than normal on a scintigram and may indicate abnormalities in your bone.

The primary drawback of nuclear medicine imaging is that it exposes you to ionizing radiation. You could also have an allergic or injection site reaction to the radioactive material. On the other hand, nuclear medicine imaging offers a huge advantage over other types of scans: rather than merely picturing structures, nuclear scans can show how different areas or organs of the body are functioning on the molecular level. This means they have the potential to detect disease in its earliest stages. For instance, a bone scan can often pick up abnormalities inside your bone that may indicate cancer much earlier than a normal x-ray. It can also reveal a tiny fracture before it can be seen on an x-ray.

### Understanding your test

If you go to your doctor with a bone or musculoskeletal problem—for example, a stress fracture, torn tendon, or even complications from a hip or knee replacement—he or she may order a CT, MRI, or nuclear scan. The proper imaging modality will depend on your particular situation. Thus you should feel free to discuss any questions or concerns you may have about the diagnostic process or a particular test with the ordering physician or a radiologist (an expert at reading such images). You may also want to gather information on your own ahead of time. A website dedicated exclusively to MRI safety can be found at [www.MRIsafety.com](http://www.MRIsafety.com). Informing yourself about different types of diagnostic imaging is important so that you can feel confident that your doctor is prescribing the most appropriate imaging modalities for your condition and that the testing you have performed is safe.

Cameron C. Kersey, MD  
Columbus, Georgia

## Dry Needling: What You Should Know

Dry needling, also known as intramuscular stimulation, is the use of solid filiform or “noninjection” needles to stimulate specific reactions in an area of muscle tissue and the surrounding fascia, or membrane, in order to alleviate pain. Dry needling has been a viable treatment technique for myofascial (involving the muscle and surrounding connective tissue) pain since the 1940s. At that time, Janet G. Travell (1901-1997), a physician-researcher who specialized in treating patients with myofascial pain and served as President John F. Kennedy’s personal physician, discovered that dry needling is as effective as “wet needling”—the use of hollow-core hypodermic needles to inject a fluid, such as a local anesthetic or saline solution—in relieving myofascial pain. Thanks largely to researchers like Dr. Travell, the use of dry needling has become more popular, particularly in the world of physical therapy.

### How does dry needling differ from traditional acupuncture?

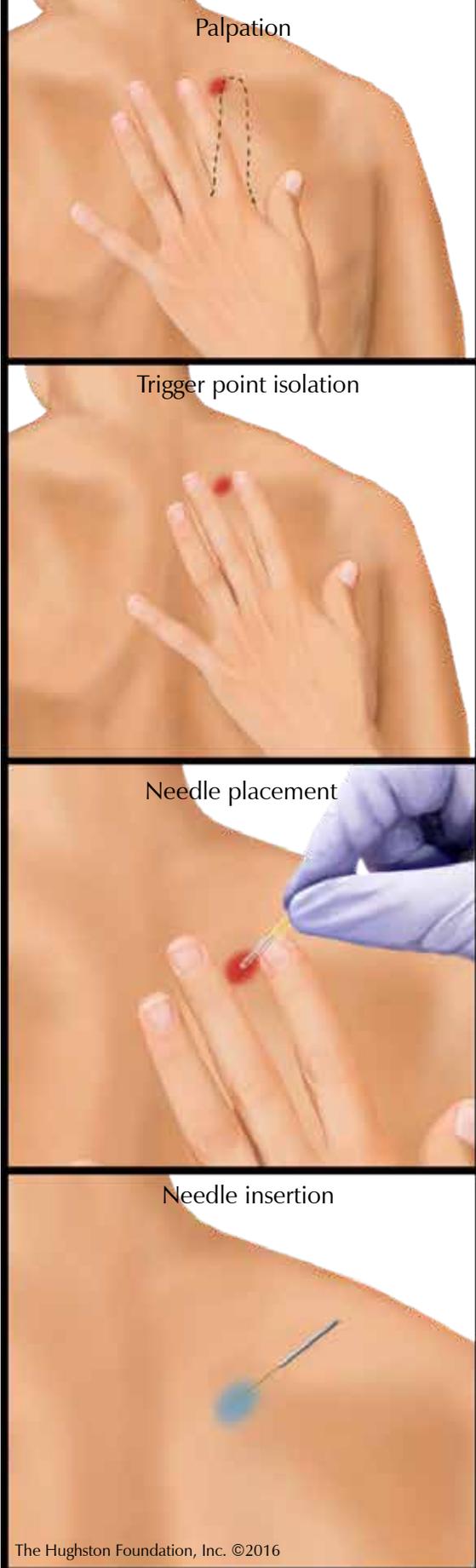
Dry needling neither shares acupuncture’s philosophy of treatment, which is based on traditional Chinese medicine (TCM) and aimed at treating the underlying causes of the pain, nor is it generally performed by an acupuncturist. (A recent *Hughston Health Alert* article entitled, “Acupuncture and Orthopaedic Pain Management,” Volume 27 (1), reviews the current traditional Chinese style of musculotendinous acupuncture used here in the West.) In contrast to TCM, dry needling is based on contemporary knowledge of musculoskeletal and neurological anatomy, pathophysiology, and evidenced-based research. Unlike TCM, dry needling targets discrete, hypersensitive spots in the fascia of the skeletal muscle known as trigger points (a term coined by Dr. Travell in 1942). Upon palpation, trigger points may feel like nodules or knots in the muscle fibers within a taut band. Large muscles may contain clusters of trigger points. Stimulating trigger points causes local tenderness and typically reproduces the patient’s pain. It may also elicit pain in other parts of the body, a phenomenon known as referred pain.

While dry needling is distinct from traditional acupuncture, it does employ similar needles and techniques. Additionally, the trigger points of dry needling often overlap with acupuncture points as these are closely related to nerves and motor points in muscles.

### Needles

Dry needling uses extremely fine, solid, stainless steel filiform needles that vary in length. The size selected for use depends on the depth of the tissue being treated. Needles should never be reinserted into a patient. Instead,

**Fig.** Dry needle placement technique



The Hughston Foundation, Inc. ©2016

single-use, presterilized, individually packaged disposable needles are recommended.

### Technique

To begin insertion, the needling location is palpated and the needle placed at the specific point. Next, using a plastic guide tube, it is tapped into place; the guide tube is then removed, and the needle inserted. Once a needle is in place, the practitioner can manipulate it and adjust its depth (**Fig.**). Most patients describe minimal to no pain with this technique and typically report the dry needling sensation as a “light pressure.” As with most types of medical treatments, dry needling is not without risks, but the application of good palpation skills and proper technique minimize these. Possible side effects from dry needling include soreness and bruising that can last from a few hours to a couple of days.

### Who performs dry needling?

Dry needling is usually performed by a physical therapist. Not all therapists, however, can offer their clients dry needling. In most states, a practitioner must have a certain amount of education and training in dry needling before he or she is certified to treat patients. Depending on state laws and practice acts, sometimes chiropractors, medical doctors, osteopathic physicians, naturopathic physicians, acupuncturists, and other practitioners are also trained in dry needling.

### One tool among many

Therapists perform an initial evaluation and then use the findings to determine the proper type of physical therapy treatment for the individual patient. While dry needling can be an important part of therapeutic treatment, it is only 1 of several modalities physical therapists might use to treat myofascial pain or musculoskeletal conditions. In fact, dry needling is rarely used as a stand-alone treatment, but is usually incorporated into a regimen which can include manual soft tissue mobilization, neuromuscular re-education, posture correction, range of motion exercises, stretching, and massage, as well as ultrasound and electrical stimulation.

### How does dry needling relieve pain?

The precise mechanism that makes dry needling an effective intervention for musculoskeletal pain remains unknown. Nevertheless, several theories have been formulated to explain its effectiveness by examining the response of the neuromuscular system to the introduction of a needle into the body. There are 3 types of responses: mechanical, chemical, and neurophysiological (having to do with the functions of the nervous system).

### Mechanical theory

Mechanically, when a needle is inserted into the body, it damages tissue, creating a controlled lesion. The body then produces an inflammatory response to this lesion and immediately begins to work to repair the damaged tissue as well as any previous lesions in the area.

### Chemical theory

Dry needling has been shown to increase the amount of chemicals at the nerve ending. The release of some of these chemicals is thought

to over stimulate the nerve. The hyperexcited nerve then elicits a local twitch response (LTR) from the muscle—a visible, involuntary spinal cord reflex in which the muscle fibers contract and cause a sensation much like a cramp. The LTR works to stabilize or reset the chemical balance at the nerve ending, causing any spontaneous electrical activity to subside. This in turn “resets” the muscle and releases the local trigger point.

### Neurophysiological theory

From a neurophysiological standpoint, dry needling has been shown to facilitate the release of chemicals that mediate the transmission of pain signals. Most likely, as it elicits LTRs, dry needling also activates the body’s production of endogenous opioids or pain-relieving, sleep-inducing substances, such as endorphins.

### Conditions treated

Regardless of how or why it works, clinical studies comparing the effects of dry needling with placebo treatments have demonstrated that it reduces pain and improves musculoskeletal function. It has proven effective in alleviating such conditions as spinal pain, tennis elbow, plantar fasciitis, Achilles tendinitis, and other tendinopathies. Moreover, dry needling can ease muscle spasms, muscle or band tenderness and tightness, and some hypertonic (having an abnormally high degree of tone or tension) muscle conditions. It can also help to control pain following trauma, sports-related injuries, and nonsurgical interventions. Overall, it has been shown that when dry needling is incorporated into a treatment plan, musculoskeletal function is restored much more quickly. Generally, patients can expect to see positive results from dry needling after 2 to 4 sessions.

### More research and more availability ahead

Despite good clinical results, many of the studies published on dry needling have lacked strong evidence because they contained small sample sizes, had high dropout rates, or were not randomized. Additional investigation and more controlled studies are thus needed to determine and document the true short- and long-term effectiveness of dry needling for various conditions.

As dry needling is still a relatively new tool, some physicians are unaware that it is available to patients. After further research has been done, dry needling should become more widely accepted as a form of physical therapy and more frequently offered as a viable treatment option.

*William Kuerzi, PT  
LaGrange, Georgia*

## Protein Powder: Help or Hype?

When you walk into any fitness center, you will most likely see people carrying around plastic blender bottles. These blender bottles are often filled with a mix of some type of protein powder and a liquid substance, usually milk or water. Protein powder is a nutritional supplement used by fitness enthusiasts as an ergogenic aid (an external influence to enhance performance). A variety of protein powders are now on the market and can be purchased at any nutritional center as well as some drug and grocery stores.

### What is protein?

Protein is a molecule composed of 1 or more long chains of amino acids (compounds involved in tissue building). Some, but not all, of the amino acids can be manufactured by the body. Those that cannot be produced by the body are known as essential amino acids. To obtain these, the body breaks down the protein in food. Proteins that contain all 10 essential amino acids are called complete proteins; proteins that contain only some of these amino acids are called incomplete proteins. A well-balanced diet provides all the amino acids essential for protein synthesis. When consumed in the diet or as a supplement, protein helps build, maintain, and repair the body’s tissues, including organs, muscles, skin, and hair.

Daily Protein Suggestions				
Weight	Minimum .34g/lb	Medium .5g/lb	Typical 1g/lb	Bodybuilder 1.3g/lb
100 lbs	34 g	50 g	100 g	130 g
140 lbs	48 g	70 g	140 g	182 g
180 lbs	61 g	90 g	180 g	234 g

The Hughston Foundation, Inc. ©2016

### Protein in the daily diet

The recommended daily caloric intake of protein is 10 to 35% of the total diet, and most Americans already get about 15% of their daily calories from protein. While the number of grams of protein a person needs to consume per day can vary depending on age, weight, and level of physical activity, generally 0.36 grams of protein per pound of weight, or 56 grams for the average sedentary man and 46 for the average sedentary woman, is sufficient. Children and adolescents require extra protein to support rapid growth and development. People who are very active also need more protein to help with muscle tissue repair compared to those with sedentary lifestyles. Additionally, individuals looking to gain muscle mass should consume foods high in protein, such as fish, chicken, lean beef, dairy products, tofu, beans, eggs, nuts, and seeds. To build muscle, the body needs an additional 10 to 14 grams of protein each day, but

consuming extra protein is not hard. For example, eating an ounce of cheddar cheese adds 7 grams and consuming 3 ounces of tuna adds 20 grams of protein to the diet.

### Two common types of protein powders

While a variety of different protein powders are available, 2 of the most common are whey- and soy-based protein powders.

#### Whey

Whey is a complete protein found in milk that is quickly absorbed into the body where it promotes both lean muscle growth and fat loss. The powder comes in 2 forms: whey concentrate and whey isolate. The concentrate is 70 to 85% protein; the remainder is made up of carbohydrates and fats. This form is the cheaper of the 2 protein powders. Whey isolate, by contrast, consists of 95% protein, with the remaining 5% carbohydrates and fats. As a milk byproduct, whey contains lactose, a form of glucose (sugar) found in milk that some individuals find difficult to digest.

Product	Protein concentration	Applications
Whey powder	11-14.5%	Used in breads, bakery and snack items, and dairy foods
Whey protein concentrate	25-89% (most commonly available as 80%)	The most common and affordable form of whey. Used in protein beverages and bars, bakery and confectionary products, dairy foods, and other nutritional food products
Whey protein isolate	90-95%	Used in protein supplementation products, protein beverages, protein bars, and other nutritional food products
Hydrolyzed whey protein concentrate	>80% (water used to break peptide bonds)	Used in sports nutrition products
Hydrolyzed whey protein isolate	90% (water used to break peptide bonds)	Highly digestible form containing easy-to-digest peptides that reduce risk for allergic reaction in susceptible individuals commonly used in infant formulas and sports nutrition products

The Hughston Foundation, Inc. ©2016

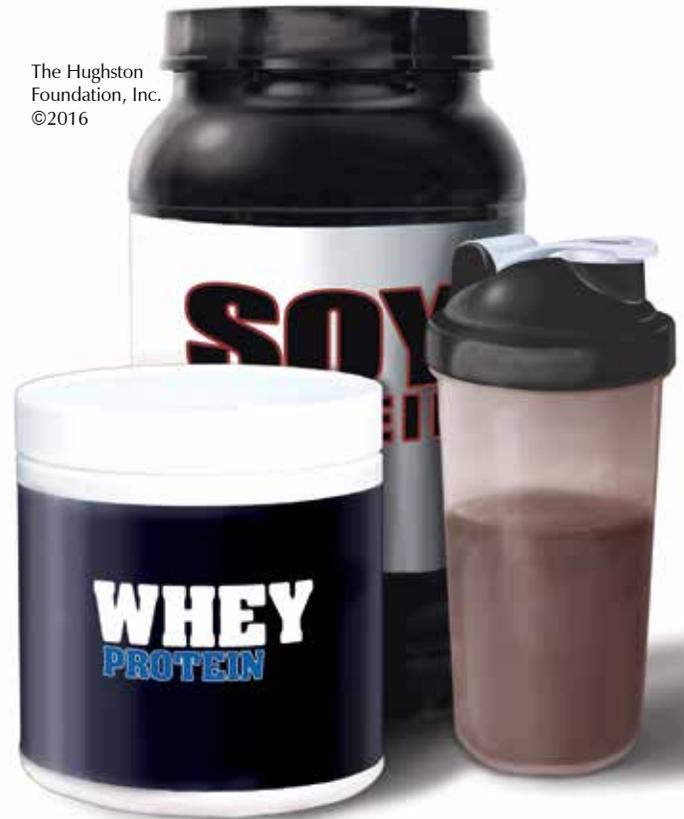
#### Soy

Soy protein is a complete protein made from soybeans that has been shown to improve overall and immune health. Since soy-based protein powder is derived from plants, it does not contain lactose, making it easier to digest for individuals who are lactose intolerant.

### Who can benefit from a protein powder?

Athletes and others trying to build muscle strength and mass may benefit from adding protein to their diet. This

The Hughston  
Foundation, Inc.  
©2016



is because exercising, such as lifting progressively heavier weights, causes microscopic tears in the muscle. As protein repairs muscle tears, consuming more protein should help muscles not only recover faster, but actually rebuild stronger after exercise. Whether or not an athlete should supplement with a protein powder may depend on the type of sport involved. Athletes who participate in strength and power-sports, such as football and power lifting, may benefit more than those who participate in endurance sports such as cross-country running.

#### Help or hype?

Taking supplements has been a growing trend in the fitness community. However, before taking a supplement of any kind, including protein powders, individuals must consider whether they will truly benefit based on their diet, activity level, and overall goals. Additionally, it is important to consider the safety of ingesting protein powders which may contain illegal or banned substances. Overall, it is always preferable to try to boost the dietary intake of a nutrient rather than supplementing. For most individuals, eating a well-balanced diet will provide an adequate amount of protein. Athletes and those seeking to gain muscle strength and mass may benefit from supplementing with protein powder, but for the majority of consumers, protein powders end up being more hype than help.

*Danielle Johnston, ATC, LAT, and Kirby Bertram, ATC  
Columbus, Georgia*



# Hughston Health Alert

The Hughston Foundation, Inc.  
6262 Veterans Parkway P.O. Box 9517  
Columbus, Georgia 31908-9517



2002-2015

NONPROFIT ORG  
US POSTAGE  
PAID  
COLUMBUS GA  
PERMIT NO 99

You may receive the *Hughston Health Alert* via e-mail by registering at: [www.hughston.com/health-alert-sign-up.aspx](http://www.hughston.com/health-alert-sign-up.aspx)



*It's our privilege  
to serve you*

**THE HUGHSTON  
DIFFERENCE**  
YESTERDAY.  
TODAY.  
TOMORROW.

Samuel G. Agnew, MD, FACS - Orthopaedic Trauma  
 Jeffrey O. Anglen, MD - Orthopaedic Trauma  
 Champ L. Baker Jr., MD - Arthroscopy & Sports Medicine  
 Champ L. Baker III, MD - Arthroscopy & Sports Medicine  
 Thomas N. Bernard Jr., MD - Orthopaedic Spine Surgery  
 Jared A. Brummel, DO - Sports Medicine & General Orthopaedics  
 J. Kenneth Burkus, MD - Orthopaedic Spine Surgery  
 Kevin J. Collins, MD - General Orthopaedics & Sports Medicine  
 Norman L. Donati Jr., MD - General Orthopaedics, Foot & Ankle  
 John D. Dorchak, MD - Orthopaedic Spine Surgery  
 Jason M. Evans, MD - Orthopaedic Trauma  
 Patrick J. Femicola, MD - Shoulder, Knee, Total Joint Replacement  
 Fred Flandry, MD, FACS - Trauma, Arthroscopy & Sports Medicine  
 John C. P. Floyd, MD, FACS - Orthopaedic Traumatologist  
 Ryan M. Geringer, DO - General Orthopaedics & Sports Medicine  
 Garland K. Gudger, MD - General Orthopaedics & Sports Medicine

Robert M. Harris, MD - Director of Orthopaedic Trauma  
 J. Matthew Heaton, MD - General Orthopaedics & Sports Medicine  
 John M. Iaquinto, MD - Orthopaedic Trauma  
 Kurt E. Jacobson, MD, FACS - Knee, Sports Medicine & General Orthopaedics  
 Emily M. Keener, DO - Orthopaedic Trauma  
 Philip J. Kregor, MD - Orthopaedic Trauma  
 David H. MacDonald, DO - Hand & Upper Extremities, Arthroscopic Surgery  
 James E. McGrory, MD - Orthopaedic Spine Surgery & Total Joint Replacement  
 William Min, MD, MS, MBA - Orthopaedic Traumatologist  
 William E. Neway, III, DO - Orthopaedic Trauma  
 Jesse L. Pace, DO - Arthroscopy, General Orthopaedics & Sports medicine  
 Douglas W. Pahl, MD - Orthopaedic Spine Surgery  
 David C. Rehak, MD - Hand, Wrist & Upper Extremities  
 Randall J. Ruark, MD - Hip & Knee Total Joint Replacement  
 Michael M. Tucker Jr., MD - Knee, Shoulder, Foot, Ankle & Sports Medicine  
 John I. Waldrop, MD - General Orthopaedics, Total Joint Replacement  
 Bruce H. Ziran, MD - Director of Orthopaedic Trauma

**Editor** - Thomas N. Bernard, Jr., MD  
**Managing Editor** - Dennise Brogdon  
**Senior Editor** - Chris Maisto, PhD, CMT  
**Art Director** - Belinda J. Klein, MA  
**Layout Editor** - Tiffany C. Davis, MS

#### Editorial Board

Champ L. Baker III, MD  
 Mark A. Baker, PT, CEO  
 William C. Etchison, MS  
 Andy J. Grubbs, Jr., MEd, ATC  
 Rob Hopkins, PT, SCS  
 Cholly P. Minton  
 Steve Young, PT

**LOCATIONS** : • Albany • Auburn • Columbus • Dothan, AL • Gwinnett • LaGrange • Moultrie •  
 Nashville, TN • Orange Park, FL • Sanford, FL • Thomaston • Thomasville • Valdosta

The Hughston Health Alert is a quarterly publication of the Hughston Foundation, Inc. The Foundation's mission is to help people of all ages attain the highest possible levels of musculoskeletal health, fitness, and athletic prowess. The content of the Hughston Health Alert, including text, graphics, images, and all other material considered "content," is published for educational purposes only. It is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Always consult your physician or other qualified healthcare provider about any questions or concerns you may have regarding a medical condition. You should never delay seeking professional medical advice, disregard medical advice, or change or discontinue medical treatment based on information found in the Hughston Health Alert or on the Hughston website. Moreover, the Hughston Health Alert does not recommend or endorse any specific physicians, products, tests, procedures, or opinions mentioned therein. Reliance on any information published in the newsletter or appearing on the website is solely at your own risk.

**Special written permission** is required to reproduce, by any manner, in whole or in part, the material herein contained.

Send inquiries to Medical Writing, The Hughston Foundation, Inc.,  
 P.O. Box 9517, 6262 Veterans Parkway, Columbus GA 31908-9517 USA.

Copyright 2016, The Hughston Foundation, Inc. ISSN# 1070-7778

SCAN ME for  
 more Hughston  
 Health Alert  
 articles.



6262 Veterans Parkway  
 P.O. Box 9517  
 Columbus GA 31908-9517

Appointments:  
 706-324-6661  
 1-800-331-2910



4401 River Chase Drive  
 Phenix City, AL 36867  
 Phone: 334-732-3000  
 Fax: 334-732-3020

[www.hughston.com](http://www.hughston.com)