Dr. Darin "Dutch" Workman

Part Two of a two part series on drummer/percussionist injuries. Dr. Workman addressed muscle, tendon, and ligament injuries and how to treat them in the December 2004 issue of 'Bandmasters Review.'

While treating drummers and percussionists over the past fifteen years, I have noticed some trends in the injuries they get. In addition, I developed a survey on drummer/percussionist injuries, and have kept an eye on the results for the last 6 years. I have found that the majority of injuries fall into the category of *soft tissue damage*. Soft tissue injuries have to do with damage to the *muscles*, *tendons*, *ligaments*, *and bursae*. In our case, these come on over long periods of abusing our bodies.

Bursae Injuries

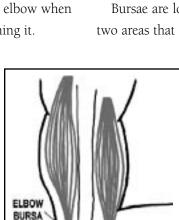
Common injuries in this category: *Elbow bursitis* – Swelling and/or pain at the tip of the elbow when moving and/or touching it.

Shoulder bursitis-

Burning, stabling pain in the shoulder that increases with movement.

Retrocalcaneal bursitis – Pain and swelling on the back of the heel.

Ischio-gluteal bursitis – Extreme unrelenting pain in the buttock, worse when sitting.



This figure shows an elbow bursa. Bursae are bags filled with lubricant positioned between two moving objects in the body in order to provide smooth movement without friction.

Bursae are a different type of animal than other soft tissues. They are various sized sacks of lubricating fluid that are situated between moving parts within the body in order to reduce wear, heat, and friction that would cause injury.

They are very slick and very durable, but they can be injured from a direct hit and/or constant motion of the area. The chances of a bursa being irritated is increased with pressure on the bursa, speed of movement, and/or the duration of the movement. Therefore, suddenly using heavier sticks or playing at faster speeds than you are used to can bring it on.

Bursae are located between two areas that rub together. They

reduce the

friction. They are found around the shoulder, knee, hip, etc. where most movement occurs. Misuse of the area as described above can cause irritation of the bursae resulting in inflammation (bursitis). If you have pain in a

joint during movement, bursitis is one possibility.

Once a bursa is irritated, the best thing to do is leave it alone and let it cool down. The average doctor will counsel the patient with bursitis to not move the area for 2-4 weeks. With a little imagination, you can usually get around that. Career players cannot afford to stop a movement that makes their living.

In most cases, altering the playing situation in some way allows the musician to continue playing, and at the same time lets the injury heal. A change in technique, positioning of the instrument, decreased intensity of playing by working with a sound man, etc. may be all that is needed to allow this to happen.

Nerve Impingement Injuries

Common injuries in this category: *Carpal tunnel syndrome* – Numb, tingling, or achy feeling in the hand and/or wrist; gets worse over time.

Intervertebral disc syndrome – Moderate to sever pain (usually neck or lower back) that typically continues down the arm(s) or leg(s).

Median nerve entrapment -

Tingling, pins & needles and/or numbness of the first three fingers.

Claudication – Pain, ache, cramp, tenderness in the leg when in use.

Sciatica – Tingling, burning, pain, and possible weakness down one or both legs.

The final type of injury I would like to address is when something puts pressure on a nerve causing what we call an "impingement" injury. Any pressure on a nerve causes a decrease in its ability to function, and is accompanied by the nerve complaining in some way (usually pain, tingle, burning, numbness, etc.). A good example of nerve impingement is when you strike your "funny bone" (the ulnar nerve) and a tingle or shock shoots down the arm.

A longer lasting nerve impingement sensation feels like getting a "dead arm" when you sleep on it too long. The arm usually starts with feeling numb, then when you get off the arm you feel tingling, pins and needles, and sometimes burning or aching. With time, it slowly returns to normal.

A nerve can be pushed on by many things in the body, but the most common for drummer/percussion players are: tight muscles, swelling of the nerve and/ or surrounding irritated tissues (tunnels, retinacula, etc.), and even pressure on the area from inefficient playing techniques. Nerves can also be affected if their blood supply is reduced, but for this article it is less of a concern.

There are a number of muscles that are positioned close to a nerve. If they go into spasm, they can cause pressure to the nearby nerve. This irritates the nerve and it cries out in one of the above-mentioned sensations. It will continue to do this until the pressure is removed, then it will gradually return back to normal. The amount of time it takes to return to normal increases with the amount of pressure that was on it, and the amount of time it was there. If left long enough, chances for full recovery can decrease.

It is important to consult a doctor in order to remove the cause of the pressure to the nerve. After that, your ability to play will improve as the normal feeling and function comes back to the nerve. This injury is more complex, and should be monitored by a doctor.

How to do Basic Massage

NOTE: This section is designed to teach the reader how to do a BASIC massage. It in no way gives the reader enough information to have the skills or knowledge of a professional. It gives beginner information that will enable one to do useful soft tissue work in a relatively safe way. Massage and soft tissue work is best done by an experienced professional like a certified massage therapist (CMT) or doctor of chiropractic (D.C.) with soft tissue work experience.

The benefits to the body of a good massage are not very well known to the general public. Likewise, the ability to give an effective soft tissue massage is highly underestimated. Massage is an art form requiring talent and practice, not to mention a good knowledge of the anatomy beneath the skin. It is important to know where the muscles are and the direction their fibers go. In addition, knowing the muscles that perform various functions that are hurting allows one to more effectively relieve that pain. Massage is a very simple thing to physically do, but at the same time, difficult to be effective at. It involves all of the senses. In particular, being able to feel what is under the skin is of great importance. The subtle changes that happen during the massage indicate what should be done next. They also show where and how hard to push. Only through focus and constant practice can one become a great masseuse.

IMPORTANT: If the area to be massaged has been injured, consult your physician before working on it.

Begin by finding the area of pain. Lightly rub the areas around it to feel all of the spots that might be involved. Once you have found them, begin doing a general massage of the area by rubbing lengthwise along the muscle fibers starting at one end of the muscle, and moving to the other end slowly (one

inch per second, moving towards the heart in most cases), with moderate pressure. It is best to use some kind of lotion in order to guide along the skin smoothly to "iron out" the muscle fibers.

While working the muscle, try to determine if the knots and sore spots smooth out. If they are, continue massaging along the muscle fibers, starting at the left side, and moving to the right. Once you have moved to the right edge of the muscle, go back to the left side and start again doing the same thing—repeat this 3-5 times. Each time you make a sweep over the muscle, the pain should decrease slightly, and the bumps should smooth out and flatten.

If the bumps are too hard and refuse to give way after doing this each day for 2-3 days, you can use a more aggressive technique that specifically works on the trigger points and spasms.

Here's how it works: Massage along the muscle area as above, and if you hit a trigger point, immediate pain will cause the patient to jump. The trigger point will be round shaped about the size of a marble (they are various sizes). Spasms are very different. They usually feel like a rope or cable within the muscle

going with the fibers. It is usually not painful unless you apply hard pressure to it.

If it is a *spasm*, single it out, and work on it as above, going along the fiber bottom to top, and left to right. However, you will need to apply more pressure than the usual on this area in order to get it to "release" or relax.

While you are doing this, the hands will probably

slide off of the spasm—usually causing pain. It is important that you stay on top of it as you move along the fibers. I call this "surfing out the spasm". Repeat the left to right process 3-5 times. It should begin releasing within 3-5 treatments if you are doing it each day. As it releases, you will feel less pain during the massage, and the spasm will slowly melt, becoming softer each time. If you are really paying attention to your body, you will probably notice more strength, coordination and endurance in that muscle.

When you find a *trigger point*, the pain will make the person jump (thus the term "trigger point").

Massage around it, and mark in

your mind its parameters. It will feel like a marble (of various sizes) within the muscle.

Begin moving in a left to right pattern along the muscle fibers as mentioned above, staying on the trigger point only. This is usually a very painful process, so less pressure is required. It is important that you move very slowly while working out the trigger point. This gives it a chance to release while you are working it. Gradually, the area will become



Move in long, smooth strokes, very slowlykeeping the hands on the body

Find the trigger points and spasms, and work them out.

Try to feel what the body is doing, and respond to it.

Find out what is causing the tightness, and change it.

less painful, and the trigger point should deflate over 3-5 treatments.

Stubborn trigger points respond well to static pressure. This technique requires more training to be really effective, so it may take a while for you to become good at it. Find the trigger point, and place both thumbs on top of it. Slowly increase pressure on the area, being careful not to roll off. It will usually be painful, but the pain should only reach a level that the patient can tolerate without fighting back (tightening up). They should be able to allow the muscle to relax during this process, or it will not be as effective. If they are tightening up, you will need to reduce pressure to the trigger point until the muscle stops fighting back.

Hold the pressure on the trigger point for 20-30 seconds. During this time, it will usually deflate, and at the same time the pain will fade. The key to this technique is being able to put the right amount of pressure on the trigger point. Too much, and it will just fight you back to protect itself. Too little, and it

will just laugh at you without releasing. As it starts to deflate, you can increase the pressure slightly to accelerate the process.

This can be repeated 2-3 times if needed, but if it is not responding, you will need to do general massage as described above for a day or two, and then try it again. If you cannot get it to release, or the soreness doesn't go away after a day or two, see your chiropractor or massage therapist.

Remember that the muscle spasms and trigger points appeared because you are doing something that irritates the body—something that it wasn't designed to do or wasn't ready to do as much of. Unless you change the thing you are doing to cause the problem, it will constantly return, and you will be chasing muscle spasms and trigger points the rest of your life. Fix the problem, and remove the spasms and trigger points. If they return, call a doctor who works with musicians, and have the problem corrected properly.

Dr. Darin "Dutch" Workman is a doctor of chiropractic practicing in Kingwood, Texas (Houston area). He works with performing and sports related injuries. He has also received his Bachelor of Human Biology degree and is a Certified Chiropractic Sports Physician. Dr. Workman has authored numerous injury and prevention articles over the years and is currently finishing a book on ergonomics, including the prevention and treatment of drumming injuries. He is the chairman of the Percussive Arts Society Health and Wellness Committee, and is a member of the Performing Arts Medical Association. For additional information, Dr. Workman can be reached at docworkman@juno.com.