

# **Bruises and Muscle Contusions**

## **Can Stretching Speed-Up the Recovery Process?**

Bruises, or muscle contusions, are one of those injuries that just about everyone has had at one point or another. In fact, bruises are the second most common sports injury after strains, and although not considered a serious injury, they can cause mild discomfort and create quite a nasty looking discoloration on the skin.

### **What is a Bruise and How do they Occur?**

Bruises are the result of your body colliding with a solid object, (or a solid object colliding with your body). When this occurs, the soft tissues under your skin (muscle fibers and connective tissue) are crushed but the skin does not break or rupture. When these soft tissues are damaged, blood from the ruptured capillaries leaks out under the skin and pools, causing the area to swell and form a red or purplish mark that can be sore and tender to touch. The symptoms associated with bruises are pain, swelling and restricted movement.

### **Types of Bruises**

Like muscle strains, bruises are usually graded into three categories and these are referred to as: first; second; or third degree depending on their severity.

A **first degree** bruise is the least severe. It is the result of a minor rupture of the capillaries and is accompanied by mild pain, some swelling and stiffness. There is usually very little loss of function as a result of a first degree bruise.

A **second degree** bruise is the result of a moderate rupture of the capillaries and increased bleeding. There is also increased swelling and pain associated with a second degree bruise and a moderate loss of movement at the injury site.

A **third degree** bruise is the most severe of the three. A third degree bruise is the result of a major rupture of the capillaries and will result in massive swelling, severe pain and instability around the injury site.

### **Who Bruises?**

Anyone can get a bruise, although people involved in contact sports are most at risk. But why do some people bruise more easily than others?

The severity of a bruise can depend on a number of things: like how tough a person's skin tissue is; the general health of the underlying muscles and soft tissue; medications you may be on; or your age. Age can be a major contributor because as we get older our blood vessels tend to become more fragile.

### **Immediate Treatment**

The immediate treatment of any soft tissue injury is vital. Proper care and treatment now will go a long way towards a full recovery later. It is likely that most first degree bruises will require very little treatment, however second and third degree bruises should be treated with the following.

Without a doubt, the most effective, initial treatment for bruises and contusions is the R.I.C.E.R. regime. This involves the application of **(R)** rest, **(I)** ice, **(C)** compression, **(E)** elevation and obtaining a **(R)** referral for appropriate medical treatment.

R.I.C.E.R. forms the first, and perhaps most important stage of injury rehabilitation, providing the early base for the complete recovery of injury. Where the R.I.C.E.R. regime has been used immediately after the occurrence of an injury, it has been shown to significantly reduce recovery time.

### **R.I.C.E.R.**

**R:** (rest) It is important that the injured area be kept as still as possible. This will help to slow down blood flow to the injury and prevent any further damage.

**I:** (ice) By far the most important part. The application of ice will have the greatest effect on reducing bleeding, swelling and pain. Apply ice as soon as possible after the injury has occurred.

How do you apply ice? Crushed ice in a plastic bag is usually best. Although blocks of ice, commercial cold packs and bags of frozen peas will all do fine. Even cold water from a tap is better than nothing at all.

When using ice, be careful not to apply it directly to the skin. This can cause "ice burns" and skin damage. Wrapping the ice in a damp towel generally provides the best protection for the skin.

How long? How often? This is the point where few people agree. Let me give you some figures to use as a rough guide and then I'll give you some advice from personal experience. The most common recommendation is to apply ice for 20 minutes every 2 hours for the first 48 to 72 hours.

These figures are a good starting point, but remember, they're only a guide. You must take into account that some people are more sensitive to cold than others. Also be aware that children and elderly people have a lower tolerance to ice and cold. Finally, people with circulatory problems are also more sensitive to ice. Remember to keep these things in mind when treating yourself or someone else with ice.

Personally, I recommend that people use their own judgment when applying ice to themselves. For some people, 20 minutes is way too much. For others, especially well conditioned athletes, they can leave ice on for much longer. The individual should make the decision as to how long the ice should stay on.

My personal recommendation is that people should apply ice for as long as it is comfortable. Obviously, there will be a slight discomfort from the cold, but as soon as pain or excessive discomfort is experienced, it's time to remove the ice. It's much better to apply ice for 3 to 5 minutes a couple of times an hour, than not at all.

**C:** (compression) Compression actually achieves two things. Firstly, it helps to reduce both the bleeding and swelling around the injury, and secondly, it provides support for the injured area. Use a wide, firm, elastic, compression bandage to cover the entire injury site.

**E:** (elevation) Simply raise the injured area above the level of the heart at all possible times. This will further help to reduce the bleeding and swelling.

**R:** (referral) If the injury is severe enough, it is important that you consult a professional physical therapist or a qualified sports doctor for an accurate diagnosis. They will be able to tell you the full extent of the injury.

Before we finish with the initial treatment and move onto the next phase of the rehabilitation process, there are a few things that you must avoid during the first 72 hours.

Be sure to avoid any form of heat at the injury site. This includes heat lamps, heat creams, spas, Jacuzzi's and saunas. Avoid all movement and massage of the injured area. Also avoid excessive alcohol. All these things will increase the bleeding, swelling and pain of your injury. Avoid them at all costs.

### **After the first 48 to 72 hours?**

Firstly, you must keep active! Don't listen to anyone who tells you to do nothing. Now is the time to start some gentle rehabilitation. Most of the swelling will have subsided after the first 48 to 72 hours and you are now ready to start light activity.

Light activity will not only promote blood circulation, but it will also activate the lymphatic system. The lymphatic system is vital in clearing the body of toxins and waste products, which can accumulate in the body following a sports injury. Activity is the only way to activate the lymphatic system.

Before we move on, a quick word of warning. Never, Never, Never do any activity that hurts the injured area. Of course you may feel some discomfort, but NEVER, NEVER push yourself to the point where you're feeling pain. Listen to your body. Don't over do it at this early stage of the recovery.

Next, you now need to start three vital treatments. The first is commonly used by physical therapists (or physiotherapists), and primarily involves increasing the blood supply to the injured area. The aim is to increase the amount of oxygen and nutrients to the damaged tissues. Physical Therapists accomplish this aim by using a number of activities to stimulate the injured area. The most common methods used are ultrasound and heat.

Ultrasound, or TENS (Transcutaneous Electrical Nerve Stimulation) simply uses a light electrical pulse to stimulate the affected area. While heat, in the form of a ray lamp or hot water bottle, is very effective in stimulating blood flow to the damaged tissues.

Secondly, to speed up recovery and repair the damage tissue it is vital that you start to massage the injured area and connecting muscles. While ultrasound and heat will help the injured area, they will not remove the scar tissue and other damaged tissue. Only massage will be able to do that.

Initially, the injured area may be quite tender, so start with a light stroke and gradually increase the pressure until you're able to use firm strokes. Concentrate your effort at the direct point of injury and use your thumbs to get in as deep as possible to break down the scar tissue.

Just a few final points before we move on. Be sure to drink plenty of fluid during your injury rehabilitation. The extra fluid will help to flush a lot of the waste products from your body.

Also, I recommend you purchase a special ointment to use for your massage called "Arnica". This special ointment is extremely effective in treating soft tissue injuries, like bruises, sprains and tears. You can purchase this ointment at most health food shops and pharmacies.

And lastly, gentle stretching should also be included as part of your heat and massage treatment. This will help to regain your range of motion and re-align the damaged

muscle fibers. While working on increasing the flexibility of the injured area, it's also important to increase the flexibility of the muscle groups around the injured area. Once your range of motion has returned to normal and movement of the injured area is pain free, you can start to implement some more active rehabilitation techniques like strength work, balance drills and sport specific training.

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