

Care of Casts and Splints

Why splints and casts?

Splints and casts support and protect injured bones and soft tissue, reducing pain, swelling, and muscle spasm. In some cases, splints and casts are applied following surgery.

Splints or "half casts" provide less support than casts. However, splints can be adjusted to accommodate swelling from injuries easier than enclosed casts. Your doctor will decide which type of support will be best for you.

Types of splints and casts

Casts are custom-made and applied by your doctor or an assistant. Casts can be made of plaster or fiberglass. Splints or half casts also can be custom-made, especially if an exact fit is necessary. Other times, a ready-made splint will be used. These off-the-shelf splints are made in a variety of shapes and sizes, and are much easier and faster to use. They have Velcro straps which make the splints easy to adjust, and to put on and take off. Your doctor will explain both how to use your injured arm or leg while it is healing and how to adjust your splint to accommodate swelling.

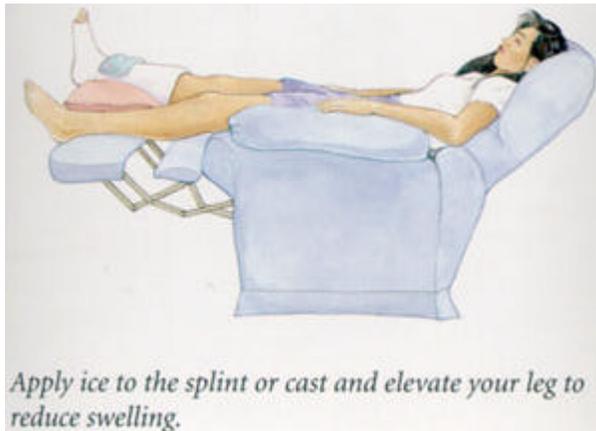
What materials are used in splints and casts?

Fiberglass or plaster materials form the hard supportive layer in splints and casts. Fiberglass is lighter in weight, longer wearing, and "breathes" better than plaster. Plaster is less expensive than fiberglass and for some uses shapes better than fiberglass. Both materials come in strips or rolls which are dipped in water and applied over a layer of cotton or synthetic padding covering the injured area. X-rays to check the healing process of an arm or leg within a splint or cast penetrate or "see through" fiberglass better than plaster.

How are splints and casts applied?

Both fiberglass and plaster splints and casts use padding, usually cotton, as a protective layer next to the skin. The splint or cast must fit the shape of the injured arm or leg correctly to provide the best possible support. Generally, the joint above and below the fractured bone also is covered by the splint or cast. Frequently, a splint is applied to a fresh injury first and, as swelling subsides, a full cast may be used to replace the splint. Sometimes, it may be necessary to replace a cast as swelling decreases and the cast "gets too big." Often as a fracture heals, a splint may be applied again to allow easy removal for therapy.

Getting used to the splint or cast



Apply ice to the splint or cast and elevate your leg to reduce swelling.

If your treatment is to be successful, you must follow your doctor's instructions carefully. *The following information provides general guidelines only, and is not a substitute for your doctor's advice. Swelling due to your injury may cause pressure in your splint or cast for the first 48 to 72 hours. This may cause your injured arm or leg to feel snug or tight in the splint or cast. To reduce the swelling:*

- Elevate your injured arm or leg above your heart by propping it up on pillows or some other support. You will have to recline if the splint or cast is on your leg. Elevation allows clear fluid and blood to drain "downhill" to your heart.
- Move your uninjured, but swollen fingers or toes gently and often.
- Apply ice to the splint or cast. Place the ice in a dry plastic bag or ice pack and loosely wrap it around the splint or cast at the level of the injury. Ice that is packed in a rigid container and touches the cast at only one point will not be effective.

Warning signs following splint or cast application

After application of a splint or cast, it is very important to elevate your injured arm or leg for 24 to 72 hours. The injured area should be elevated well above the heart. Rest and elevation greatly reduce pain and speed the healing process by minimizing early swelling. If you experience any of the following warning signs, contact your doctor's office immediately for advice.

- Increased pain, which may be caused by swelling, and the feeling that the splint or cast is too tight.
- Numbness and tingling in your hand or foot, which may be caused by too much pressure on the nerves.
- Burning and stinging, which may be caused by too much pressure on the skin.
- Excessive swelling below the cast, which may mean the cast, is slowing your blood circulation.
- Loss of active movement of toes or fingers, which requires an urgent evaluation by your doctor.

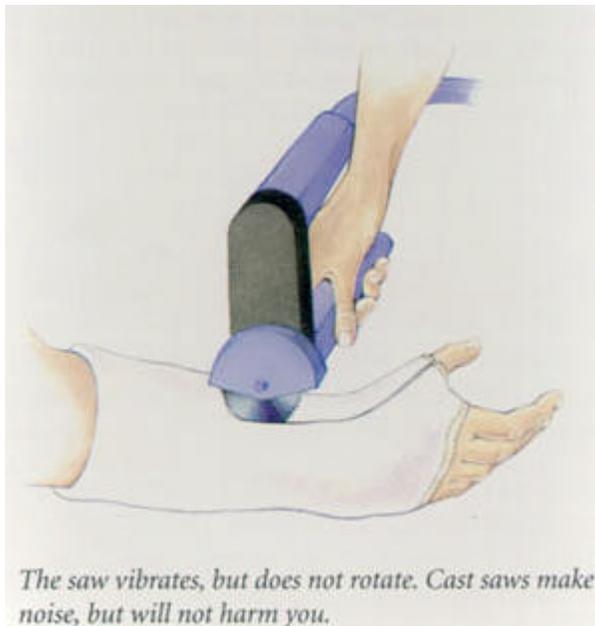
Taking care of your splint or cast

After you have adjusted to your splint or cast for a few days, it is important to keep it in good condition. This will help your recovery.

- Keep your splint or cast dry. Moisture weakens plaster and damp padding next to the skin can cause irritation. Use two layers of plastic or purchase waterproof shields to keep your splint or cast dry while you shower or bathe.

- Do not walk on a "walking cast" until it is completely dry and hard. It takes about one hour for fiberglass, and two to three days for plaster to become hard enough to walk on.
- Keep dirt, sand, and powder away from the inside of your splint or cast.
- Do not pull out the padding from your splint or cast.
- Do not stick objects such as coat hangers inside the splint or cast to scratch itching skin. Do not apply powders or deodorants to itching skin.
- If itching persists, contact your doctor.
- Do not break off rough edges of the cast or trim the cast before asking your doctor.
- Inspect the skin around the cast. If your skin becomes red or raw around the cast, contact your doctor.
- Inspect the cast regularly. If it becomes cracked or develops soft spots, contact your doctor's office.

Proper cast removal



Never remove the cast yourself. You may cut your skin or prevent proper healing of your injury. Your doctor will use a cast saw to remove your cast. The saw vibrates, but does not rotate. If the blade of the saw touches the padding inside the hard shell of the cast, the padding will vibrate with the blade and will protect your skin. Cast saws make noise and may feel "hot" from friction, but will not harm you - their "bark is worse than their bite."

Use common sense. You have a serious injury and you must protect your cast from damage so it can protect your injury while it heals. After initial swelling has subsided, proper splint or cast support will usually allow you to continue your daily activities with a minimum of inconvenience.

Take care of your cast and it will take care of you.

Your orthopedist is a medical doctor with extensive training in the diagnosis and nonsurgical and surgical treatment of the musculoskeletal system, including bones, joints, ligaments, tendons, muscles and nerves. This brochure has been prepared by the American Academy of Orthopaedic Surgeons and is intended to contain current information on the subject from recognized authorities. However, it does not represent official policy of the Academy and its text should not be construed as excluding other acceptable viewpoints.