

# Cast and Splint Care

Splints and casts are supports that are used to protect injured bones and soft tissues. A cast completely encircles the limb with a hard, rigid outer shell. A splint provides rigid support along just the side(s) of the limb, with soft or open areas in between. Splints are often used in the immediate post-operative or injury phase, when there is a greater chance of swelling. A splint can better allow for swelling. Your doctor will decide which type of support is most appropriate for you and your arm condition.

## Materials

Casts are made with plaster or 'fiberglass' to form the hard supportive layer, and a soft lining of cotton or similar material for padding. Fiberglass is lighter, more durable, and "breathes" better than plaster. Plaster is less expensive and shapes better than fiberglass for some uses. Both materials come in strips and rolls, and are dipped in water to start the setting process. Most casts have a layer of padding underneath the hard material. X-rays can be taken through casts, but they do block some of the x-ray detail.

Splints can be made with these same materials or with plastic, fabric, or padded aluminum. They can be custom-made or pre-made. They come in a variety of shapes and sizes to meet specific needs. They often have Velcro straps, which makes them easier to take on and off.

For fiberglass casts, water-compatible padding does exist; ask your doctor if they have it available. Not all injuries can be treated with a waterproof cast. Waterproof casts can be submerged. It is best to avoid water from lakes, rivers and oceans when wearing a waterproof cast because your skin can become irritated if dirt or sand gets inside the cast. When you come in contact with chlorinated water or dirty water, rinse the cast with fresh water when you are done swimming. Allow the inside of the cast to drain as much as possible after it gets wet. If you have a cast that goes past your elbow, be sure to drain the area around the elbow well. The rest of the water will evaporate. Sweat will not harm the cast liner, but consider rinsing the cast with clean water after excessive sweating.

## Swelling

Swelling due to your injury or surgery is usually the worst during the first 2 or 3 days. Swelling can cause pressure in your splint or cast, making it feel tighter. To help avoid or reduce swelling, you should put your hand and arm above your heart by propping it up on pillows or some other support if possible. Elevation helps gravity to drain the blood and fluid that causes swelling out of your hand and arm. Elevation can also decrease pain. If swelling increases too much, a cast or splint can become too tight.

The following signs and symptoms should be watched for and, if they occur, you should contact your doctor promptly for advice:

- worsening pain
- numbness and tingling in your hand or fingers, which may indicate excessive pressure on the nerves
- burning and stinging, which may result from too much pressure on the skin
- excessive swelling of the hand, which may mean the veins are being blocked
- loss of active movement of your fingers, which may indicate muscle damage

Sometimes a cast may need to be changed if the cast is too tight or if it gets too loose when the swelling goes down.

## Cast and Splint Care

Keep your cast/splint clean and dry. Being in contact with damp padding can irritate your skin. Plaster gets softer and weaker when it gets wet. Use plastic bags or a waterproof cast cover to keep your splint or cast dry when bathing. Seal the bag with tape or rubber bands. Elevate your hand in the shower above your head, because otherwise water can still run under the seal and into your cast. Do not keep it constantly covered because moisture may build up from normal sweating. Do not let dirt, sand, or other materials get inside of your splint or cast. If you feel itchy, do not place anything inside your cast because you can injure your skin; instead, ask your doctor for advice. Never trim the cast or splint by yourself. If there are rough edges or if your skin gets irritated around the edges of the cast, notify your doctor,

Figure 1: Short-arm (below elbow) cast

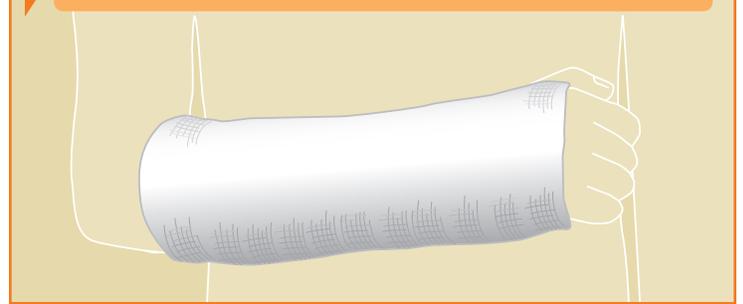


Figure 2: Long-arm (above elbow) cast

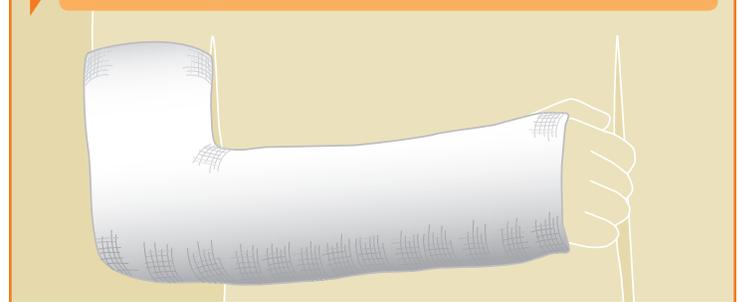


Figure 3: Finger splint

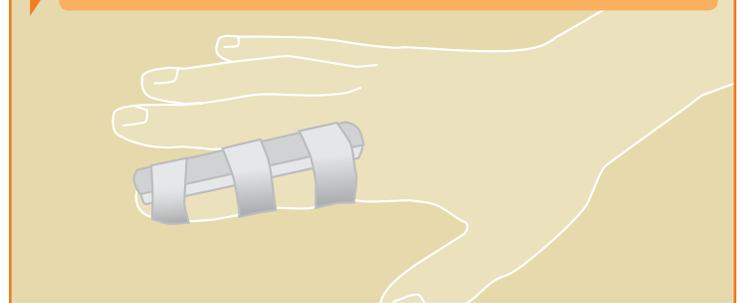
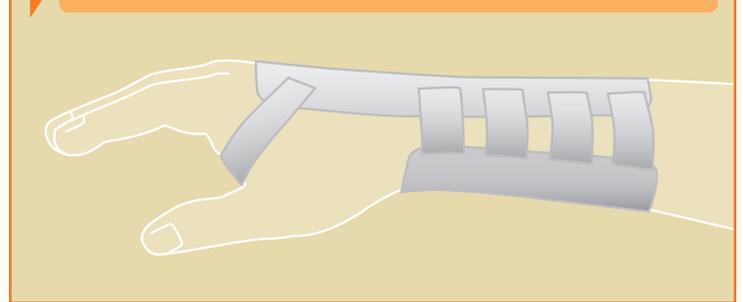


Figure 4: Wrist splint



who has the proper tools to fix it. If the cast or splint develops cracks or soft spots, contact your doctor to see if it needs to be repaired or changed.

## Cast Removal

Never try to remove a cast yourself; you may cut your skin or prevent proper healing of your injury. A cast should be removed only by a professional with the proper tools and training. Casts are removed with a special type of saw that will not cut your skin.

Remember, a cast is there to protect you while your injury heals. It is only a temporary inconvenience, with the goal of helping you recover.