



### What are casts and splints?

Casts and splints 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-op or injury phase, when there is a greater chance of worsening swelling. A splint can better accommodate for any swelling. Your doctor will decide which type of support is most appropriate for you and your hand condition.

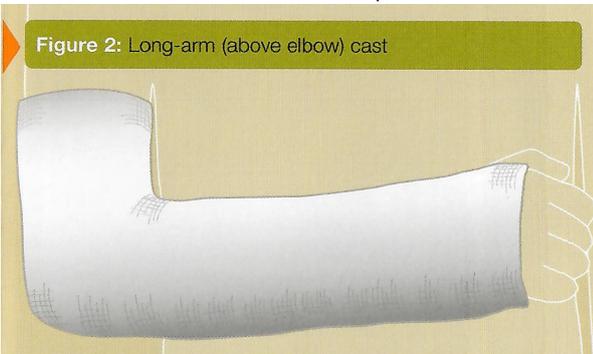
Figure 1: Short-arm (below elbow) cast



### How are casts and splints made?

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

Figure 2: Long-arm (above elbow) cast



less expensive and shapes better than fiberglass for some uses. Both materials come in strips or in rolls and are dipped in water to

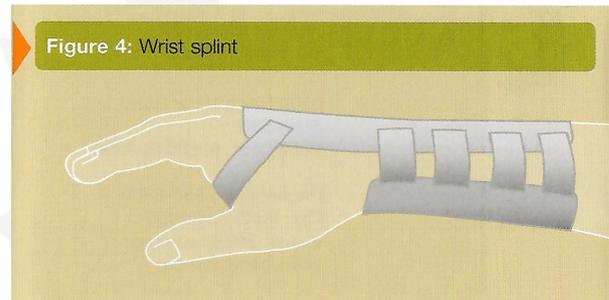
start the setting process, and then applied over a layer of soft padding. X-rays penetrate fiberglass better than plaster, hence x-rays taken through a fiberglass cast show better detail of the bone than those taken through a plaster cast.

Figure 3: Finger splint



Splints can be made with these same materials or with plastic or aluminium with soft padding. They can be custom-made, or they may be prefabricated, and come in a variety of shapes and sizes, depending on the specific need. They often have Velcro straps, which makes them easier to apply and remove.

Figure 4: Wrist splint



### What if I have swelling?

Swelling due to your injury or surgery usually peaks during the first 2 or 3 days, which may cause pressure in your splint or cast, making it feel tighter. To help reduce swelling, you should elevate your hand and arm above your heart by propping it up on pillows or some other support. Elevation allows gravity to



drain the blood and fluid that cause swelling "downhill" out of your hand and arm, greatly reducing pain and promoting healing. 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 gets too loose when the swelling goes down.

### How do I care for my cast or splint?

Keep your cast/splint clean and dry. Your skin can get irritated by being in contact with damp padding, and 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. Do not keep it constantly covered, or else excessive moisture may build up inside from normal sweating. Don't let dirt, sand, or other materials get inside of your splint or cast. If you feel itching, don't try to scratch it with a coat hanger or similar object under the cast, as you may cut

yourself; ask your doctor for advice. Do not try to trim the cast or splint by yourself. If there are rough edges or your skin gets irritated around the edges of the cast, notify your doctor, 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.

### How is a cast removed?

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 in which the blade vibrates, but does not spin or rotate, so it will not cut your skin. Cast saws can be noisy and may generate some heat from the friction of the blade, but they will not harm you.

Remember, a cast is there to protect you while your injury heals. It is only a temporary inconvenience, with the long-range goal of getting optimal recovery and function.

*The above material has been modified from content available at the American Society for Surgery of the Hand (ASSH) website. It is copyrighted by ASSH and its use is permitted for members.*