First Aid merit badge 4A. Describe the signs of a broken bone. Show first-aid procedures for handling fractures, including open (compound) fractures of the forearm, wrist, upper leg, and lower leg using improvised materials.

First Class 8B. Demonstrate bandages for: a sprained ankle and an injured collarbone.

A splint is a bandage that immobilizes a broken bone. Sometimes this is done by using rigid objects such as sticks or boards. For some injuries, however, this isn't possible and the only option is to tie the broken limb to the body.

**BROKEN BONES**

A broken bone can be identified by a number of symptoms:

- An unusual bend in a limb.
- Swelling or bruising in a limb or joint.
- Tenderness or pain at a specific point along a bone.
- Inability to move a limb or joint.
- Hearing or feeling a bone snap.

Broken bones fall into two categories: simple and compound.

A simple fracture is one where the bone is broken and both broken ends are beneath the surface of the skin. Simple fractures can be dangerous if they are moved; the ends of the broken bones are sharp and will cut through blood vessels and tissue caught between them.

A compound fracture is one where the bone is broken and one or both broken ends are sticking out of the skin. Compound fractures can be dangerous because they can become easily infected.

To treat a compound fracture, dress and bandage the exposed bone like any other puncture wound, then apply a splint as with a simple fracture. Do not attempt to push the bone beneath the skin.

Broken bones, both simple and compound, require immediate medical attention.

**SPLINTING**

When applying a splint, do not attempt to straighten the break. This will only cause further injury and more pain. Instead, simply apply the splint to the break the way it is.

When using rigid material:

- Always use long enough pieces to reach the joints beyond the break. For example, when splinting a forearm, the material should be long enough to touch both the wrist and the elbow. This helps keep the material in place and prevents too much pressure from being applied to the wound.
- Always put padding between the rigid material and the body to keep the victim comfortable.
- Tie knots between the rigid material and the body (in mid-air) when possible. This makes them easier to untie. If this is not possible, tie knots over the rigid material.

To splint the forearm, surround the break with rigid material and snugly bandage it to the arm with wide cloth strips. A newspaper or magazine, curled into a "U" shape, works very well.

Splint the wrist in the same way. The entire forearm should be immobilized.
To splint the elbow, use enough rigid material to go from the armpit to the hand. The entire arm should be immobilized. Do not attempt to straighten or bend the elbow; splint it in position.

To splint the upper leg, use long pieces of rigid material that will reach from the ankle to the armpit. Above the hips, tie long straps around the torso to hold the top of the splint in place.

To splint the lower leg, use rigid material long enough to go from the knee to the foot. The foot should be immobilized and unable to turn. Be sure to use lots of padding, especially around the ankle.

**Sprained Ankles**

Splinting a sprained ankle is difficult. The objective is to restrict the ankle’s movement and provide some constriction to prevent swelling. A long cloth band can be wrapped around the ankle to do this. Be very careful not to tie the bandage too tight and be sure to check it frequently. Check blood flow by squeezing the victim’s toenails and watching the color refill. Compare to the victim’s other foot.

To tie the bandage, do the following:

When done, it should look something like this:

**Slings**

Splinted arms should always be put in a sling if the victim is conscious and upright. A sling will make the victim more comfortable and help prevent further injury.

To make a sling, tie two corners of a triangular bandage together to make a loop. Put the loop over the victim's head and place their arm in the sling so the point of the triangular bandage is towards their elbow.
If there is enough material, tie a "pig's tail" in the end to keep the victim's elbow from falling out.

Slings can be easily improvised. Long-sleeve, button-down shirts make excellent slings (tie the arms together). Shirts, towels or sheets can be used. The important point is to immobilize the splint and make the victim comfortable.

**Broken Collarbones**

A broken collarbone is impossible to splint. Instead, the arm and shoulder should be immobilized with a sling and a band wrapped around the torso.