



## Fractures

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There are different types of fractures that could occur while hiking or looking for rock specimens in the desert. The closed fracture is one that occurs when the broken bone does not go through the skin. The more serious open fracture occurs when the broken bone protrudes through the skin making a risk for infection. A partial fracture involves a break through part of the bone and the bone is still in alignment. A complete fracture occurs when the break goes entire across the bone thus making it more unstable. A compound fracture occurs when the bone breaks into fragments making this a very serious injury.

The symptoms of a fracture includes: pain, swelling, deformity, abnormal motion, and tenderness. Be aware that a fall can result in multiple fractures at the ankle plus the leg and hip. The immediate treatment of a fracture is to stabilize the area to prevent further damage and injury to the nerves and muscles. If an open fracture has occurred, place a sterile bandage over the open site. If no sterile bandages are available, use a clean cloth. A splint is applied to immobilize the joint above and below the fracture site. Splint materials can be metal or plastic splints purchased for such an accident. Splints can also be made of a magazine (for wrist or lower arm), spoons (for fingers), pieces of wood, ----. Observe the fractured site and the areas of the body for adequate circulation as fractures sites swell for 24 to 48 hours. The signs of adequate circulation include: warm skin, and strong pulses. Signs of poor circulation include cool or cold skin, no or weak pulses, skin that is pale, gray, or blue in color. Circulation checks should be made as frequently as every 15 minutes to the location beyond the area of the splint. If impaired circulation occurs, loosen the material used to hold the splint in place and re-check for adequate circulation. The person should be taken to the hospital for further examination, x-rays, and treatment.

### Prevention of fractures:

- Be physically fit to prepare for hiking or field trips.
- Wear hiking shoes, or boots, avoid sandals and worn tennis shoes.
- Avoid jumping into or over depressed areas.
- Use care when walking on loose gravel or smooth rocks.
- Maintain good balance by evenly distributing weight in backpacks and buckets.
- Use rock hammers and pry bars with care.
- Walk in pairs or groups and be aware of surrounding rock collectors.