

Cauliflower Ear

Athletes involved in any contact sport can suffer a contusion to the ear which may result in a "cauliflower" ear (also called auricular hematoma). It is a deformity of the outer ear most commonly seen in wrestling, rugby, boxing, football and judo. Cauliflower ear occurs after someone gets a blow or repeated blows to the ear, enough for a large blood clot (lump of blood) to develop under the skin or for the ear's skin to be stripped away from the cartilage (the flexible material that gives the ear its shape). The body normally absorbs excess fluid or blood at an injury site over time, but not always in the ear because of its special structure. The cartilage of the ear has no blood supply except that supplied by the ear's skin. When the the cartilage receives little or no blood flow because of tearing of the skin, bruising or a blood clot, it eventually dies and is replaced by scar tissue. An acute cauliflower ear is often painful and causes swelling. If left untreated, it results in deformation of the ear which may last for life.

Unfortunately, most athletes do not seek care until the bleeding and swelling have stabilized and resulted in deformity. By not seeking medical care immediately, they increase their risk of infection, recurrence, scarring and deformity. After a cauliflower ear has formed and hardened, it will not recover its normal shape without surgery. But if it is caught and treated early enough, a person usually will not get a lifelong deformity.

In high school and college wrestling the rules require the use of protective headgear but problems still occur. Not wearing headgear or wearing poorly fitting headgear is a big factor in causing cauliflower ear. (Freestyle and Greco-Roman do not require headgear for juniors and prohibit use on the international level.)

TREATMENT

At first, the swelling will be soft and mushy fluid. It is at this early stage that immediate treatment can help decrease or avoid permanent scarring. If the fluid is allowed to solidify it will cause significant permanent disfiguration.

Immediate care should include ice and a head wrap (elastic gauze with packing material in front and behind ear, applying moderate pressure). This wrapping should not cause a headache, block vision, or cover the other ear. After that, the next step is one of the following: drainage (aspiration) and compression, drainage and splinting with various materials, or incision and drainage with clot removal. Sometimes stitches are needed if there is a tear in the skin. Your doctor may prescribe antibiotics to prevent an infection.

Drainage and Compression: A doctor can drain the blood from the ear either with a syringe or through a cut and then help the skin reconnect to the cartilage by applying pressure with a tight bandage.

Drainage and Splinting: Splinting is a medical procedure that keeps pressure on the area of hematoma formation. Sometimes sutures through the ear keep special gauze in place, or sometimes special materials (pediplast or silicone) are molded to the ear. After a splint is place, the ear should be rechecked by your doctor at seven days. Sutures typically stay in for 14 days, but may be removed if redness or tenderness occurs. The risk of recurrence decreases the longer the splint stays in place. Wrestlers may to return to wrestling 24 hours after splint application.

Incision and Drainage with Clot Removal: This is a surgical procedure for more serious cauliflower ears, and should only be done by an Ear, Nose and Throat surgeon (also called an ENT or otolaryngologist) or a plastic surgeon.

The best protection from recurrence is to wear properly fitting headgear. Recurrence should be managed immediately and aggressively, with either aspiration and resplinting for one more week or referral to surgeon for incision, drainage and resplinting. *Severe infections can occur in cauliflower ears and should be treated immediately with open drainage by a surgeon and intravenous antibiotics.*

DO:

- ◆ Apply direct pressure with a sterile gauze sponge. Apply pressure by simply pinching the site. Keep the pressure on for at least six minutes.
- ◆ Wait 24 hours before returning to the mats.
- ◆ Wrap must remain in place for at least 24 hours. Tape any ear splints made from the doctor in the ear during practice.
- ◆ Keep the ear dry for 24 hours and apply antibacterial ointment (like Bacitracin® or Neosporin®) twice a day.
- ◆ Ice the ear a few times each day for 10 - 15 minutes at a time (and especially after practice) for three weeks. Be sure there is a towel or other barrier between the ice and the ear to avoid frostbite. When icing the ear it should not be dark in color or be painful.
- ◆ Make a donut-shaped pad from athletic foam or plastizote and tape it to the inside of the headgear (athletic foam is usually available from the trainers). *Use this for the rest of the season.* Headgear must be properly fitted to your head, so have your coach check both the foam pad and the fit of your headgear.
- ◆ Use duct tape for head wrap to apply pressure during practice. (It is better than athletic tape because it stays sticky even with sweat.)
- ◆ When wrapping the ear, leave the uninvolved ear exposed.

DON'T:

- ◆ Don't pick or press on the ear.
- ◆ Don't use loose or poorly-fitting headgear.
- ◆ Don't delay getting treatment thinking it will keep you from returning to the mats.

CALL YOUR DOCTOR IF:

- ◆ You develop a headache or fever.
- ◆ You develop any redness, tenderness, pus drainage, swelling or increased pain.
- ◆ You have any change in hearing.

References: 1. "Management of Wrestler's Cauliflower Ear", HealthSouth of Southern Nevada, www.geocities.com/hsathletictraining, 2002
2. Sandra E. Lane, MD; Gary L. Rhame, DO; Randall L. Wroble, MD, "A Silicone Splint for Auricular Hematoma", *The Physician and Sportsmedicine*, 26(9), September 1998