HUMAN BITES
Protocol for the client with a Human Bite

Definition
Human bites are usually caused by one person biting another, although they may result from a situation in which one person comes into contact with another person's teeth. In a fight, for example, one person's knuckles may meet another person's teeth, and if the impact breaks the skin, the injury would be considered a bite.

Background
Human bites account for only a minority of bite wounds seen in the Emergency department, however many cases likely never come to medical attention. The hands are the most common site for human bites, usually occurring over the knuckles. Other sites include the ear, nose, forearm, breast and scalp. The most common complication of human bites is infection, and this is often made worse due to a delay seeking treatment.

Microbiology: Common organisms include Streptococcus species, Staph aureus, Eikenella corrodens, several anaerobic and gram-negative organisms. It is also possible to transmit Hepatitis B, Hepatitis C and VERY rarely HIV.

History
Human bite wounds are often denied when the patient is questioned, so it is important to be suspicious especially in the case of a closed fist injury. Important aspects of the history include:

- Time of the incident
- How the incident occurrede
- Other medical problems – eg. Diabetes, immunocompromised – HIV
- Tetanus status – when was their last tetanus booster?

Physical Exam
It is important to fully assess the wound to determine the extent of the injury. Look at the depth of the injury and see if there is any bone or muscle exposed. Look for any loss of function of the injured area. For example, in a closed fist injury it is important to determine if there has been any tendon or muscle damage. You can do this by having the client make a fist and then fully open it and see that all the fingers move well and are strong. Check that there has been no nerve damage by making sure they can feel you touching their hand and don’t have any numbness.

Investigations
If there is any suspicion of bony injury, an x-ray can be ordered to determine the presence and extent of the injury.
When there is suspicion of a bite wound infection (see below - this would not usually appear until a few days after the injury), a culture may be ordered however treatment is usually given empirically.

Management - All bites wounds that break the skin must be reported to Public Health at 613 724-4224 (after hours- 580-2400)

Early:
Good early wound care is the single most important factor in preventing later wound infections. Wounds should be thoroughly cleansed and irrigated with LARGE amounts of saline. This is
best done with a 19-guage needle on a 20cc syringe to get enough pressure to adequately irrigate the wound. At times it is necessary to remove dead or severely damaged tissue that won’t be able to heal. This will decrease the risk of infection.

The decision to close the wound with stitches (suturing) depends of the risk of infection as well as cosmetic factors. A wound that is at high risk of infection (see below) should not be sutured and should simply be covered with a clean dressing and followed closely. A wound in an area with good blood supply (eg. face, scalp) that is uncomplicated can be usually be sutured safely. When in doubt, contact a doctor for advice.

Tetanus shot should be given if not received in the last 5 years.

**Late:**
Late management of bite wounds involves monitoring closely for **signs of infection** which include the following:
- Pain, swelling, redness, or warmth around the area
- Red streaks extending from the area
- Pus draining from the area
- Swollen lymph nodes in the area close by (eg. bite wound to the hand may have swollen lymph nodes in the underarm)
- Fever or chills with no other known cause

**Criteria increasing the likelihood of wound infection:**
- A wound not seen and cared for by 12 hours after the incident
- Wounds to the hands and feet
- Wounds near joints (eg. on knuckles)
- A wound in an immunocompromised patient (HIV, chronic alcoholism, diabetes, etc.)
- A patient more than 50 yrs old
- A patient with prosthetic joints/ heart vavles (these are more likely to become infected even if they are not near the bite wound)

**The use of Antibiotics:**
The value of prophylactic antibiotics after a bite wound is a highly debated topic. It is generally felt that a fresh, low risk, uninfected bite wound does not need prophylactic antibiotics. However, because most clients served by Inner City Health fall into the high risk category, they should all receive prophylactic antibiotics. Possible antibiotics include:
- Amoxacillin-clavulinic acid 500/125mg po TID for 7-10 days (first line) OR
- Clindamycin 300mg po QID plus Cipro 500mg po BID for 7-10 days OR
- Doxycycline 100mg po BID

Reasons to contact a physician or send the client to the Emergency department:
- Open fracture
- Penetrating injury of tendons/joints
- Infections in high risk patients (eg. immunocompromised)
- Infection not responding to oral antibiotics