



HEALTH PROTECTION AGENCY NORTH WEST

Guidance for the Management of Human Bite Injuries

**Guidance for healthcare professionals on dealing with injuries
where teeth break the skin**

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There are other national guidelines available.
This is recommended for use in the North West.

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1. INTRODUCTION

- 1.1 Bites from humans are relatively common in some settings and these often become infected. Human bites frequently occur in care settings for children or people with learning disabilities. Injuries may also occur during fights where teeth break the skin. Most of these human bites occur on the fingers or hands.
- 1.2 Bite wounds may be contaminated with pathogens, even if there are no clinical signs of infection. Bacteria that often contaminate human bites include streptococci, *Staphylococcus aureus*, *Haemophilus* spp, *Eikenella corrodens* and *Bacteroides* spp and other anaerobes. Transmission of viruses (e.g. hepatitis B, hepatitis C, HIV, HTLV-1) following human bites is much less common.
- 1.3 If medical attention is delayed (e.g. more than 12 hours after the injury), localised cellulitis, lymphangitis and regional lymphadenopathy may be present. Individuals who are immunocompromised are at risk of developing particularly severe infections.

2. AIM

- 2.1 The aim of this guidance document is to ensure that appropriate, prompt advice, treatment and follow-up is taken by individuals who have been involved in a human bite.
- 2.2 Ensure that appropriate measures are taken to protect those that are at risk as a result of human bites.

3. INITIAL ASSESSMENT

- 3.1 Initial risk assessment should include assessing whether the bite:
 - has broken the skin;
 - documenting who was bitten & by whom;
 - the timing and nature of the bite;
 - any known immunosuppression;
 - any known antibacterial allergies.

If the bite is particularly severe, the patient may require urgent first aid treatment (e.g. to control bleeding) before a detailed clinical risk assessment. Consideration should be given to the possibility of existing infections or other medical conditions in both parties. **Medical advice should be sought for human bites which break the skin.**

- 3.2 Full clinical assessment should be undertaken to examine for signs of infection, foreign bodies, damage to blood vessels, nerves, tendons, joints or bones and lymphadenopathy.

- 3.3 If a part of the body has been torn off, for example part of an ear, it should be stored in a plastic bag wrapped in clean tissue and surrounded by ice for transport to hospital, although management does not typically include reapplication of removed tissue.

4. INITIAL WOUND CARE

- 4.1 Where **the bite has broken the skin** the management of a bite wound should:
- Encourage the wound to bleed, unless it is bleeding freely;
 - Irrigate the wound thoroughly with warm, running water;
 - Cover the wound with a waterproof dressing;
 - **Seek medical attention.**
- 4.2 If the bite is on the hand the arm should be elevated.
- 4.3 If the biter has blood in the mouth they should swill it out well with tap water and spit out (do not swallow).
- 4.4 Seek attention from the local Accident & Emergency Department, or the local Walk-in Centre facility where appropriate.

5. WORKPLACE-RELATED INCIDENTS

- 5.1 People whose work or other activities put them at increased risk of human bites should be risk assessed, offered hepatitis B vaccination where appropriate and have their tetanus vaccination status reviewed. They should be made aware of required immediate action following a bite.
- 5.2 In all cases an accident / incident report should be completed. Each organisation should ensure that it has appropriate arrangements in place for the reporting and recording of untoward incidents.
- 5.3 Where a wound occurs in the workplace, staff should inform their manager. Staff experiencing a bite that breaks the skin **must** report these as potential blood borne virus exposure to the appropriate Occupational Health Department for follow up.
- 5.4 When the incident involves service users the injured person should be referred to an appropriate medical practitioner e.g. their own GP or the local accident & emergency department / Walk-in Centre depending on the severity of the injury.

6. TREATMENT

- 6.1 Prevention of tetanus:

For people whose immunisation schedule is not up to date, or whose immune status is unknown, a dose of the appropriate tetanus containing vaccine should be given at the time of treatment for the injury, and further doses given as required to complete the five-dose schedule.

Up to date information is available in the 'Green Book' on the Department of Health website - put website link here.

For adults Td/IPV is currently the recommended vaccine for those requiring further doses of tetanus toxoid.

Immunoglobulin may be indicated for those who are vaccine naïve.

6.2 Blood borne viruses (BBVs):

A risk assessment should be made and, where appropriate, hepatitis B vaccine / immunoglobulin (see table below) and / or HIV post-exposure prophylaxis (PEP) should be offered.

6.3 The risk assessment should take the following into account:

- The vaccination status of the victim;
- Whether the source is known to be HIV positive, hepatitis B surface antigen (HBsAg) positive or hepatitis C positive;
- Whether the victim is known to be HIV positive, HBsAg positive or hepatitis C positive;
- Whether the source is available and willing to be tested. Ideally the status of the biter should be investigated. For most community situations the status of the source will not be known and it will not be practicable to obtain blood for testing.

6.4 HIV: Guidance needs to be given for people who have been bitten by someone known to be HIV positive. In these circumstances expert advice should be sought immediately (e.g. from a consultant in infectious diseases or a virologist) about whether PEP should be considered. The risk of transmission of HIV through a bite is unknown but is likely to be extremely small.

6.5 Currently there is no recommended PEP for hepatitis C, which appears to be transmitted more easily than HIV. However, a patient exposed to hepatitis C will need Hepatitis C PCR testing at 4 – 6 weeks following the exposure and sequential testing for sero-conversion; if found to be positive an appropriate referral will be required.

6.6 HBV Prophylaxis for Reported Exposure Incidents

HBV status of person exposed	Significant exposure		
	HBsAg positive source	Unknown source	HBsAg negative source
≤ 1 dose HB vaccine pre-exposure	*Accelerated/ **hyper-accelerated course of HB vaccine HBIG x 1	*Accelerated/**hyper-accelerated course HB vaccine	Initiate course of HB vaccine
≥ 2 doses HB vaccine pre-exposure (anti-HBs not known)	One dose of HB vaccine followed by second dose one month later	One dose of HB vaccine	Finish course of HB vaccine
Known responder to HB vaccine (anti-HBs > 10 miU/ml)	Consider booster dose of HB vaccine	Consider booster dose of HB vaccine	Consider booster dose of HB vaccine
Known non-responder to HB vaccine (anti-HBs <10 miU/ml 2-4 months post-immunisation)	HBIG x 1 Consider booster dose of HB vaccine	HBIG x 1 Consider booster dose of HB vaccine	No HBIG Consider booster dose of HB vaccine

*An accelerated course of vaccine consists of doses spaced at 0, 1 and 2 months. A booster dose may be given at 12 months to those at continuing risk of exposure to HBV

**A hyper-accelerated course of vaccine may be offered by some Occupational Health Depts. This consists of doses at 0,7,21 days with booster dose at 6 or 12 months

6.7 Testing policy – including consent

The following summarises the follow up tests that the injured person will need to have and when they should have them.

- 6.7.1 Explicit valid consent must be obtained from the biter and victim, or from their legal representative if appropriate, for all tests.
- 6.7.2 If blood cannot be obtained from the source, treat their status as unknown unless there is very good reason to do otherwise, e.g. they have an AIDS-defining illness.
- 6.7.3 Consent needs to be obtained both for taking and testing blood and for checking results against archived samples.
- 6.7.4 A 10ml clotted sample should be obtained from the victim for archiving in the laboratory. Where practicable a sample should be obtained from the source for testing for HBsAg, HIV and hepatitis C.

6.7.5 If the source patient has not been tested and the risk is assessed as significant then test as follows:

Time	Hepatitis C	Hepatitis B	HIV
10ml clotted sample for archiving at time of incident			
6 Weeks	PCR	HBsAg	Antigen/Antibody combined test
3 Months	PCR & Antibody	HBsAg	Antigen/Antibody combined test
6 Months	Antibody	HBsAg Anti-HBc antibody (anti-HBs antibody)*	Antigen/Antibody combined test if PEP was given

* HB Surface antibody only needed at 6 months if vaccination only started at injury

6.7.6 If any of the tests are positive, then appropriate public health advice should be given together with referral to specialist services made.

7. ANTIBACTERIAL THERAPY

- 7.1 Antibacterial prophylaxis should be prescribed for all human bite wounds under 72 hours old if no other signs of infection.
- 7.2 If the injury is over 72 hours old and there are no signs of infection then antibacterial prophylaxis is probably not of value.
- 7.3 The recommended antibacterial therapy is a seven day course of Co-amoxiclav. Clindamycin plus cotrimoxazole, or a quinolone are alternatives for penicillin-allergic patients.

8. REFERENCES:

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<http://www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/fs/en>