

Human and animal bites: antimicrobial prescribing

i Assessment
Assess the bite and manage the wound
Be aware of any safeguarding issues

Prescribing considerations

- **Bites in high-risk areas** are those which involve the hands, feet, skin overlying joints or skin overlying cartilaginous structures
- **Bites at higher risk of infection** include: cat bites; bites which penetrate bone, joint, tendons or vascular structures; deep, puncture or crush wounds; contaminated bites; bites on the face or genitals or in an area of poor circulation; bites near a prosthetic joint implant
- **People at risk of a serious wound infection** include those with diabetes, asplenia, chronic liver disease, immunosuppression, heart valve disease, a prosthetic heart valve or joint, or people who are very young or frail
- Give oral antibiotics first line if possible. Review IV antibiotics by 48 hours and consider switching to oral antibiotics if possible

Microbiological sampling

Take a swab for microbiological testing if there is discharge
Review antibiotic based on results.
Change if needed using a narrow-spectrum antibiotic if possible

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Human and animal bites



Infected bites
Offer an antibiotic



Uninfected bites

Do not routinely offer antibiotic prophylaxis if the skin is not broken or the skin is broken but there has been no bleeding

- Offer antibiotic prophylaxis for human bites that have broken the skin and caused bleeding, or are in a high-risk area
- Consider antibiotic prophylaxis for other human bites particularly if the person is at risk of a serious wound infection
- Offer antibiotic prophylaxis for animal bites that have broken the skin and caused bleeding, and are at higher risk of infection
- Consider antibiotic prophylaxis for other animal bites that have broken the skin and caused bleeding, if they are in a high-risk area or if the person is at risk of a serious wound infection



Refer to hospital if there are signs of a serious illness (such as severe cellulitis, abscess, osteomyelitis, septic arthritis, necrotising fasciitis, sepsis, or lymphadenopathy after a cat bite) or a penetrating wound involving bones, joints, tendons or vascular structures

Consider referring or seeking specialist advice if the person:

- is systemically unwell or has lymphangitis
- has infection after prophylactic antibiotics
- cannot take oral antibiotics or has infection that is not responding to oral antibiotics
- has a bite in an area of poor circulation
- is at risk of a serious wound infection because of an existing medical condition

Seek advice from a specialist for bites from a wild or exotic animal

Give advice about possible adverse effects of antibiotics and seeking medical help if an infection:

- develops or worsens rapidly or significantly at any time
- does not start to improve within 1 to 2 days of starting treatment

Reassess if symptoms or signs of infection:

- develop or worsen rapidly or significantly at any time
- do not start to improve within 1 to 2 days of starting treatment
- the person becomes systemically unwell or has severe pain out of proportion to the infection

When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

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Choice of antibiotic for prophylaxis and treatment: adults aged 18 years and over

Antibiotic ¹	Dosage and course length for prophylaxis and treatment ²
First-choice oral antibiotic	
Co-amoxiclav	250/125 or 500/125 mg three times a day. Give for 3 days for prophylaxis. Give for 5 to 7 days ³ for treatment
Alternative first-choice oral antibiotics for penicillin allergy or if co-amoxiclav unsuitable (guided by microbiological results if available)	
Doxycycline <i>with</i>	200 mg on first day, then 100 or 200 mg daily. Give for 3 days in total for prophylaxis. Give for 5 to 7 days ³ in total for treatment
Metronidazole	400 mg three times a day. Give for 3 days for prophylaxis. Give for 5 to 7 days ³ for treatment
Azithromycin (in pregnancy) <i>with</i>	500 mg once a day. Give for 3 days for prophylaxis. Give for 3 days ³ for treatment
Metronidazole	400 mg three times a day. Give for 3 days for prophylaxis. Give for 5 to 7 days ³ for treatment
First-choice intravenous antibiotic (if unable to take oral antibiotics or severely unwell) ^{4,5}	
Co-amoxiclav	1.2 g three times a day
Alternative first-choice intravenous antibiotics for penicillin allergy or if co-amoxiclav unsuitable (guided by microbiological results if available) ^{4,5}	
Cefuroxime (caution in penicillin allergy) <i>with</i>	750 mg to 1.5 g three or four times a day
Metronidazole	500 mg three times a day
Ceftriaxone (caution in penicillin allergy) <i>with</i>	2 g once a day
Metronidazole	500 mg three times a day
Consult local microbiologist if cephalosporin not appropriate.	
<p>¹See BNF and MHRA advice for appropriate use and dosing in specific populations, for example, hepatic impairment, renal impairment, pregnancy and breast-feeding, and administering intravenous (or, where appropriate, intramuscular) antibiotics.</p> <p>²Oral doses are for immediate-release medicines.</p> <p>³A longer course may be needed based on clinical assessment of the wound, for example if it has resulted in significant tissue destruction or has penetrated bone, joint, tendons or vascular structures.</p> <p>⁴Give oral antibiotics first line if the person can take oral medicines, and the severity of their symptoms does not require intravenous antibiotics.</p> <p>⁵Review intravenous antibiotics by 48 hours and consider switching to oral antibiotics if possible.</p>	

Human and animal bites: antimicrobial prescribing

Choice of antibiotic for prophylaxis and treatment: children and young people under 18 years

Antibiotic ¹	Dosage and course length for prophylaxis and treatment ²
First-choice oral antibiotic	
Co-amoxiclav ³	1 to 11 months, 0.25 ml/kg of 125/31 suspension three times a day; 1 to 5 years, 0.25 ml/kg or 5 ml of 125/31 suspension three times a day; 6 to 11 years, 0.15 ml/kg or 5 ml of 250/62 suspension three times a day; 12 to 17 years, 250/125 or 500/125 mg three times a day Give for 3 days for prophylaxis. Give for 5 to 7 days ⁴ for treatment
Alternative first-choice oral antibiotics for penicillin allergy or if co-amoxiclav unsuitable (guided by microbiological results if available)	
For human and animal bites in young people aged 12 to 17 years	
Doxycycline <i>with</i>	200 mg on first day, then 100 or 200 mg daily. Give for 3 days in total for prophylaxis. Give for 5 to 7 days ⁴ in total for treatment
Metronidazole	400 mg three times a day. Give for 3 days for prophylaxis. Give for 5 to 7 days ⁴ for treatment
Azithromycin (in pregnancy) <i>with</i>	Body weight 46 kg and above; 500 mg once a day. Give for 3 days for prophylaxis. Give for 3 days ⁴ for treatment
Metronidazole	400 mg three times a day. Give for 3 days for prophylaxis. Give for 5 to 7 days ⁴ for treatment
For human bites in children under 12 years	
Clarithromycin <i>with</i>	1 month to 11 years: under 8 kg, 7.5 mg/kg twice a day; 8 to 11 kg, 62.5 mg twice a day; 12 to 19 kg, 125 mg twice a day; 20 to 29 kg, 187.5 mg twice a day; 30 to 40 kg, 250 mg twice a day. Give for 3 days for prophylaxis. Give for 5 to 7 days ⁴ for treatment
Metronidazole	1 month, 7.5 mg/kg twice a day; 2 months to 11 years, 7.5 mg/kg three times a day (maximum per dose 400 mg). Give for 3 days for prophylaxis. Give for 5 to 7 days ⁴ for treatment
For animal bites in children under 12 years	
Azithromycin <i>with</i>	6 months to 11 years: 10 mg/kg once a day (maximum per dose 500 mg); or 6 months to 11 years: 15 to 25 kg, 200 mg once a day; 26 to 35 kg, 300 mg once a day; 36 to 45 kg) 400 mg once a day; Give for 3 days for prophylaxis. Give for 3 days ⁴ for treatment
Metronidazole	1 month, 7.5 mg/kg twice a day; 2 months to 11 years, 7.5 mg/kg three times a day (maximum per dose 400 mg). Give for 3 days for prophylaxis. Give for 5 to 7 days ⁴ for treatment
First-choice intravenous antibiotic (if unable to take oral antibiotics or severely ill) ^{5,6}	
Co-amoxiclav	1 to 2 months, 30 mg/kg twice a day; 3 months to 17 years, 30 mg/kg three times a day (maximum per dose 1.2g)
Alternative first-choice intravenous antibiotics for penicillin allergy or if co-amoxiclav unsuitable (guided by microbiological results if available) ^{5,6}	
Cefuroxime (caution in penicillin allergy) <i>with</i>	1 month to 17 years, 20 mg/kg three times a day (maximum 750 mg per dose), can be increased to 50 to 60 mg/kg three or four times a day (maximum per dose 1.5 g)
Metronidazole	1 month, loading dose 15 mg/kg, then (after 8 hours) 7.5 mg/kg three times a day; 2 months to 17 years, 7.5 mg/kg three times a day (maximum per dose 500 mg)
Ceftriaxone (caution in penicillin allergy) <i>with</i>	1 month to 11 years (up to 50 kg), 50 to 80 mg/kg once a day (maximum 4 g per day); 9 to 11 years (50 kg and above) and 12 to 17 years, 1 to 2 g once a day
Metronidazole	1 month, loading dose 15 mg/kg, then (after 8 hours) 7.5 mg/kg three times a day; 2 months to 17 years, 7.5 mg/kg three times a day (maximum per dose 500 mg)

Consult local microbiologist if cephalosporin not appropriate. For children under 1 month antibiotic choice should be based on specialist advice.

¹See [BNFC](#) and [MHRA](#) advice for use and dosing in hepatic and renal impairment, pregnancy and breast-feeding, and administering intravenous (or intramuscular) antibiotics.

²Oral doses are for immediate-release medicines.

³Co-amoxiclav 400/57 suspension may also be considered to allow twice daily dosing (see [BNFC](#) for dosing information).

⁴A longer course may be needed based on clinical assessment of the wound, for example if it has resulted in significant tissue destruction or has penetrated bone, joint, tendons or vascular structures.

⁵Give oral antibiotics first line if the person can take oral medicines, and the severity of their symptoms does not require intravenous antibiotics.

⁶Review intravenous antibiotics by 48 hours and consider switching to oral antibiotics if possible.