Human and animal bites: antimicrobial prescribing

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Assessment

Assess the type and severity of the bite, including:

- what caused the bite
- the site and depth of the wound
- whether it is infected

Assess the risk of tetanus, rabies or a bloodborne viral infection and take appropriate action

Manage the wound with irrigation and debridement as necessary

Be aware of potential safeguarding issues

Seek specialist advice from a microbiologist for bites from a wild or exotic animal (including birds and non-traditional pets)

Consider seeking specialist advice from a microbiologist for domestic animal bites (including farm animal bites) you are unfamiliar with

Prescribing considerations

If indicated, give oral antibiotics first line if possible

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

Microbiological sampling

If there is a discharge (purulent or non-purulent), take a swab for microbiological testing to guide treatment

Review antibiotic choice based on swab results

Human and animal bites

Treating an infected bite

Offer an antibiotic

Antibiotic prophylaxis for an uninfected bite

Type of bite	Bite has not broken the skin	Bite has broken the skin but not drawn blood	Bite has broken the skin and drawn blood
Human bite	Do not offer antibiotics	Consider antibiotics if it is in a high-risk area or person at high risk	Offer antibiotics
Cat bite	Do not offer antibiotics	Consider antibiotics if the wound could be deep	Offer antibiotics
Dog or other traditional pet bite	Do not offer antibiotics	Do not offer antibiotics	Offer antibiotics if it has caused considerable, deep tissue damage or is visibly contaminated (for example, with dirt or a tooth) Consider antibiotics if it is in a high-risk area or person at high risk

High-risk areas include the hands, feet, face, genitals, skin overlying cartilaginous structures or an area of poor circulation

People at high risk include those at risk of a serious wound infection because of a co-morbidity (such as diabetes, immunosuppression, asplenia or decompensated liver disease)

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 24 to 48 hours of starting treatment

Reassess if:

- symptoms or signs of infection develop or worsen rapidly or significantly at any time
- there is no improvement within 24 to 48 hours of starting treatment
- the person becomes systemically unwell
- there is severe pain that is out of proportion to the infection

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

Consider referral or seeking specialist advice if, for example, the person:

- is systemically unwell
- has an infection after prophylactic antibiotics
- cannot take, or has an infection that is not responding to, oral antibiotics

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

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Prophylaxis and treatment	Antibiotic, dosage and course length for prophylaxis (3 days) and treatment (5 days)
First-choice oral antibiotic	**Co-amoxiclav**: 250/125 mg or 500/125 mg three times a day
Alternative first-choice oral antibiotics for penicillin allergy or if co-amoxiclav is unsuitable	**Doxycycline**: 200 mg on first day, then 100 mg or 200 mg daily **With** **Metronidazole:** 400 mg three times a day
Alternative first-choice oral antibiotics in pregnancy for penicillin allergy or if co-amoxiclav is unsuitable	Seek specialist advice
First-choice intravenous antibiotic (if unable to take oral antibiotics or severely unwell)	**Co-amoxiclav**: 1.2 g three times a day
Alternative first-choice intravenous antibiotics for penicillin allergy or if co-amoxiclav is unsuitable If a cephalosporin is not appropriate, seek specialist advice	**Cefuroxime** (caution in penicillin allergy): 750 mg three times a day (increased to 750 mg four times a day or 1.5 g three or four times a day if infection is severe) **With** **Metronidazole**: 500 mg three times a day **Ceftriaxone** (caution in penicillin allergy) 2 g once a day **With** **Metronidazole**: 500 mg three times a day

See the BNF and summary of product characteristics for appropriate use and dosing in specific populations, for example, for hepatic or renal impairment, in pregnancy, when breastfeeding and when administering intravenous (or, if appropriate, intramuscular) antibiotics.

A 5-day course is appropriate for treating most human or animal bites, but course length can be increased to 7 days (with review) based on clinical assessment of the wound, for example, if there is significant tissue destruction or it has penetrated bone, joint, tendon or vascular structures.

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

Prophylaxis and treatment	Antibiotic, dosage and course length for prophylaxis (3 days) and treatment (5 days)
Choice for children under 1 month	Seek specialist advice
First-choice oral antibiotic for children aged 1 month and over	**Co-amoxiclav**: 1 month to 11 months: 0.25 ml/kg of 125/31 suspension three times a day 1 year to 5 years: 0.25 ml/kg or 5 ml of 125/31 suspension three times a day 6 years to 11 years: 0.15 ml/kg or 5 ml of 250/62 suspension three times a day 12 years to 17 years: 250/125 mg or 500/125 mg three times a day Co-amoxiclav 400/57 suspension may also be considered to allow for twice-daily dosing
Alternative first-choice oral antibiotic for children under 12 years for penicillin allergy or if co-amoxiclav is unsuitable	**Co-trimoxazole** (off-label use; see the BNF for Children for information on monitoring): 6 weeks to 5 months: 120 mg or 24 mg/kg twice a day 6 months to 5 years, 240 mg or 24 mg/kg twice a day 6 years to 11 years, 480 mg or 24 mg/kg twice a day For off-label use, follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's good practice in prescribing and managing medicines and devices for information.
Alternative first-choice oral antibiotics for young people aged 12 to 17 years for penicillin allergy or if co-amoxiclav is unsuitable	**Doxycycline**: 200 mg on first day, then 100 mg or 200 mg daily **With metronidazole**: 400 mg three times a day
Alternative first-choice oral antibiotics in pregnancy for penicillin allergy or if co-amoxiclav unsuitable	Seek specialist advice
First-choice intravenous antibiotic (if unable to take oral antibiotics or severely ill)	**Co-amoxiclav**: 1 month 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 is unsuitable If a cephalosporin is not appropriate, seek specialist advice	**Cefuroxime** (caution in penicillin allergy): 1 month to 17 years: 20 mg/kg three times a day (maximum 750 mg per dose), which can be increased to 50 mg/kg to 60 mg/kg three or four times a day (maximum per dose 1.5 g) **With 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): 1 month to 11 years (up to 50 kg): 50 mg/kg to 80 mg/kg once a day (maximum 4 g per day) 9 years to 11 years (50 kg and above) and 12 years to 17 years: 1 g to 2 g once a day **With 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)

See the BNF for Children and summary of product characteristics for appropriate use and dosing in specific populations, for example, for hepatic or renal impairment, in pregnancy, when breastfeeding and when administering intravenous (or, if appropriate, intramuscular) antibiotics.

A 5-day course is appropriate for treating most human or animal bites, but course length can be increased to 7 days (with review) based on clinical assessment of the wound, for example, if there is significant tissue destruction or it has penetrated bone, joint, tendon or vascular structures