Cellulitis and erysipelas: antimicrobial prescribing

NICE National Institute for Health and Care Excellence

Cellulitis and erysipelas

Background

Ensure the appropriate treatment by excluding other causes of skin redness (inflammatory reactions or non-infections causes such as chronic venous insufficiency)

Antibiotics

When choosing antibiotics, take account of:

- the severity of symptoms
- the site of infection
- the risk of uncommon pathogens
- any microbiological results and MRSA status, if known

Give oral antibiotics first line if possible. Review IV antibiotics by 48 hours and consider switching to oral antibiotics if possible

Do not routinely offer **antibiotic prophylaxis** to prevent recurrent cellulitis or erysipelas.

Discuss any trial of antibiotic prophylaxis to ensure shared decision making, and choose:

- phenoxymethylpenicillin 250 mg twice a day, or
- erythromycin 250 mg twice a day for penicillin allergy

Review at least every 6 months

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- Offer an antibiotic
- Consider marking extent of infection with a single-use surgical marker pen
- Consider a swab for microbiological testing, but only if skin broken and risk of uncommon pathogen
- Manage underlying conditions such as diabetes, venous insufficiency, eczema and oedema

Advise:

- **possible adverse effects of antibiotics**
- **skin will take time to return to normal after finishing the antibiotics**
- **seeking medical help if symptoms worsen rapidly or significantly at any time, or do not start to improve in 2 to 3 days**

Reassess if:

- **symptoms worsen rapidly, or do not start to improve in 2 to 3 days**
- **the person is very unwell, has severe pain, or redness or swelling beyond the initial presentation**

Take account of other possible diagnoses, any underlying condition, symptoms or signs of a more serious illness or condition, any microbiological results and previous antibiotic use

Consider a swab for microbiological testing if not done already. Review antibiotic when any microbiological results available, and change if infection not improving, using narrow spectrum antibiotics where possible

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Refer to hospital if there are symptoms or signs of a more serious illness or condition such as orbital cellulitis, osteomyelitis, septic arthritis, necrotising fasciitis or sepsis

Consider referring or seeking specialist advice if the person:

- is severely unwell or has lymphangitis
- has infection near the eyes or nose
- may have uncommon pathogens
- has spreading infection not responding to oral antibiotics
- cannot take oral antibiotics (to explore giving IV antibiotics at home or in the community if appropriate)

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

Antibiotic[1]	Dosage and course length[2]	
First choice antibiotic (give oral unless person unable to take oral or severely unwell)[3]		
Flucloxacillin	500 mg to 1 g four times a day orally[4] for 5 to 7 days[5]	**or** 1 to 2 g four times a day IV[6]
Alternative first choice antibiotics for penicillin allergy or if flucloxacillin unsuitable (give oral unless person unable to take oral or severely unwell)[3]		
Clarithromycin	500 mg twice a day orally for 5 to 7 days[5]	**or** 500 mg twice a day IV[6]
Erythromycin (in pregnancy)	500 mg four times a day orally for 5 to 7 days[5]	
Doxycycline	200 mg on first day, then 100 mg once a day orally for 5 to 7 days in total[5]	
First choice antibiotic if infection near the eyes or nose[7] (consider seeking specialist advice; give oral unless person unable to take oral or severely unwell)[3]		
Co-amoxiclav	500/125 mg three times a day orally for 7 days[5]	**or** 1.2 g three times a day IV[6]
Alternative first choice antibiotics if infection near the eyes or nose[7] for penicillin allergy or if co-amoxiclav unsuitable (consider seeking specialist advice; give oral unless person unable to take oral or severely unwell)[3]		
Clarithromycin ***with***	500 mg twice a day orally for 7 days[5]	**or** 500 mg twice a day IV[6]
Metronidazole	400 mg three times a day orally for 7 days[5]	**or** 500 mg three times a day IV[6]
Alternative choice antibiotics for severe infection		
Co-amoxiclav	500/125 mg three times a day orally for 7 days[5]	**or** 1.2.g three times a day IV[6]
Cefuroxime	750 mg to 1.5 g three or four times a day IV[6]	
Clindamycin	150 to 300 mg four times a day (can be increased to 450 mg four times a day) orally for 7 days[5]	**or** 600 mg to 2.7 g daily IV in two to four divided doses, increased if necessary in life-threatening infection to 4.8 g daily (maximum per dose 1.2 g)[6]
Ceftriaxone (only for ambulatory care[8])	2 g once a day IV[6]	
Antibiotics to be added if MRSA infection suspected or confirmed (combination therapy with an antibiotic listed above)[8]		
Vancomycin[9,10]	15 to 20 mg/kg two or three times a day IV (maximum 2 g per dose), adjusted according to serum vancomycin concentration[6]	
Teicoplanin[9,10]	Initially 6 mg/kg every 12 hours for three doses, then 6 mg/kg once a day IV[6]	
Linezolid (if vancomycin or teicoplanin cannot be used; specialist use only)[10]	600 mg twice a day orally	**or** 600 mg twice a day IV[6]

[1] See BNF for use and dosing in specific populations, for example, hepatic and renal impairment, pregnancy and breast-feeding, and administering intravenous (or intramuscular) antibiotics.
[2] Oral doses are for immediate release medicines.
[3] Give oral antibiotics first-line if the person can take oral medicines, and the severity of their symptoms does not require intravenous antibiotics.
[4] The upper dose of 1 g four times a day would be off-label. Prescribers should follow relevant professional guidance, taking full responsibility for the decision, and obtaining and documenting informed consent. See the GMC's Good practice in prescribing and managing medicines for more information.
[5] A longer course (up to 14 days in total) may be needed based on clinical assessment. However, skin does take time to return to normal, and full resolution at 5 to 7 days is not expected.
[6] If intravenous antibiotics are given, review by 48 hours and consider switching to oral antibiotics if possible for the appropriate course length.
[7] Infection around the eyes or the nose (the triangle from the bridge of the nose to the corners of the mouth, or immediately around the eyes including periorbital cellulitis) is of more concern because of risk of a serious intracranial complication.
[8] Other antibiotics may be appropriate based on microbiological results and specialist advice.
[9] See BNF for information on therapeutic drug monitoring.
[10] See BNF for information on monitoring of patient parameters.

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

Antibiotic[1]	Dosage and course length[2]	
Children under 1 month - antibiotic choice based on specialist advice. For children and young people 1 month and over, see below		
First choice antibiotic (give oral unless person unable to take oral or severely unwell)[3]		
Flucloxacillin[4]	1 month to 1 year, 62.5 mg to 125 mg four times a day orally; 2 to 9 years, 125 mg to 250 mg four times a day orally; 10 to 17 years, 250 mg to 500 mg four times a day orally - **all for 5 to 7 days**[5]	**or** 1 month to 17 years, 12.5 mg to 25 mg/kg four times a day IV (maximum 1 g four times a day)[6]
Alternative first choice antibiotics for penicillin allergy or if flucloxacillin unsuitable (give oral unless person unable to take oral or severely unwell)[3]		
Co-amoxiclav (not in penicillin allergy)[12]	1 to 11 months, 0.25 ml/kg of 125/31 suspension three times a day orally 1 to 5 years, 0.25 ml/kg or 5 ml of 125/31 suspension three times a day orally 6 to 11 years, 0.15 ml/kg or 5 ml of 250/62 suspension three times a day orally **All for 5 to 7 days[5] (dose doubled in severe infection)** 12 to 17 years, 250/125 or 500/125 mg three times a day orally for 5 to 7 days[5]	**or** 1 to 2 months, 30 mg/kg twice a day IV[6] 3 months to 17 years, 30 mg/kg three times a day IV (maximum 1.2 g three times a day)[6]
Clarithromycin	1 month to 11 years: Under 8 kg, 7.5 mg/kg twice a day orally for 5 to 7 days[5]; 8 to 11 kg, 62.5 mg twice a day orally for 5 to 7 days[5]; 12 to 19 kg, 125 mg twice a day orally for 5 to 7 days[5]; 20 to 29 kg, 187.5 mg twice a day orally for 5 to 7 days[5]; 30 to 40 kg, 250 mg twice a day orally for 5 to 7 days[5] 12 to 17 years: 250 to 500 mg twice a day orally for 5 to 7 days[5]	**or** 1 month to 11 years, 7.5 mg/kg twice a day IV (maximum 500 mg per dose)[6] 12 to 17 years, 500 mg twice a day IV[6]
Erythromycin (in pregnancy)	8 to 17 years, 250 mg to 500 mg four times a day orally for 5 to 7 days[5]	
First choice antibiotic if infection near the eyes or nose[7] (consider seeking specialist advice; give oral unless person unable to take oral or severely unwell)[3]		
Co-amoxiclav[12]	See above; for 7 days	See above
Alternative first choice antibiotics if infection near the eyes or nose[7] for penicillin allergy or if co-amoxiclav unsuitable (consider seeking specialist advice; give oral unless person unable to take oral or severely unwell)[3]		
Clarithromycin	See above	See above
with (if anaerobes suspected) Metronidazole	1 month, 7.5 mg/kg twice a day orally for 7 days[5]; 2 months to 11 years, 7.5 mg/kg three times a day orally (maximum per dose 400 mg) for 7 days[5]; 12 to 17 years, 400 mg three times a day for 7 days[5]	**or** 1 month, loading dose 15 mg/kg, then (after 8 hours) 7.5 mg/kg three times a day IV[6]; 2 months to 17 years, 7.5 mg/kg three times a day IV (maximum per dose 500 mg)[6]
Alternative choice antibiotics for severe infection[8]		
Co-amoxiclav[12]	See above	See above
Cerfuroxime	1 month to 17 years, 20 mg/kg three times a day IV (maximum 750 mg per dose), can be increased to 50 to 60 mg/kg three or four times a day IV (maximum 1.5 g per dose)[6]	
Clindamycin	1 month to 17 years, 3 to 6 mg/kg four times a day orally (maximum per dose 450 mg) for 7 days[5]	**or** 1 month to 17 years, 3.75 to 6.25mg/kg four times a day IV, increased if necessary in life-threatening infection to 10 mg/kg four times a day IV (maximum per dose 1.2 g); total daily dose may alternatively be given in three divided doses (maximum per dose 1.2 g)[6]
Antibiotics to be added if MRSA infection suspected or confirmed (combination therapy with an antibiotic listed above)[8]		
Vancomycin[9,10]	See BNFC for dosing information	
Teicoplanin[9,10]	See BNFC for dosing information	
Linezolid (specialist use only)[10,11]	See BNFC for dosing information	

See adult table for footnotes 1 to 3 and 5 to 10. [4]If solution not tolerated, consider capsules. [11]Not licensed for under 18s, so use off label. [12]Consider 400/57 suspension for twice daily dosing.