trial of pentoxifylline or placebo, four-layer or single-layer compression, and knitted viscose or hydrocolloid dressings for venous ulcers. *J Vasc Surg*. 2007 Jan; 45(1):134-141. Available from: http://www.ncbi.nlm.nih.gov/pubmed/17210398.

RATIONALE: A report of a randomised trial, which found that patients with venous leg ulcers treated with four-layer compression are significantly more likely to heal than those treated with an adhesive single-layer bandage.

10. Palfreyman SJ, Nelson EA, Michaels JA. Dressings for venous leg ulcers: systematic review and meta-analysis. *BMJ*. 2007 Aug; 335(7613):244. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1939774/.

RATIONALE: A systematic review and meta-analysis reviewing the evidence of the effectiveness of dressings applied to venous leg ulcers. This review explicitly states that multi-layer component compression bandaging is the most effective in the treatment of venous leg ulcers. It also suggests that there is some evidence that cadexomer iodine can aid healing so may be considered as a topical antiseptic.

11. Hill KE, Davies CE, Wilson MJ, Stephens P, Harding KG, Thomas DW. Molecular analysis of the microflora in chronic venous leg ulceration. *J Med Microbiol*. 2003 Apr; 52:365-369. Available from: http://www.ncbi.nlm.nih.gov/pubmed/12676877.

RATIONALE: A review article stating that routine microbiological sampling of venous leg ulcers without clinical signs of infection is often pointless. It also outlines the potential bacteria found in clinically infected venous leg ulcers and suggests that antibiotics are only recommended in the presence of locally spreading cellulitis or other signs of infection.

12. Public Health England (PHE). UK standards for microbiological investigations: investigation of skin, superficial and non-surgical wound swabs. 2014 May. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/391745/B_11i5.2.pdf.

RATIONALE: A PHE document outlining the standards required for bacteriological investigation and processing of skin, superficial and non-surgical wound swabs. This document suggests that routine swab cultures are of questionable clinical value if there is no sign of infection. It also states that specimens should be collected before antimicrobial therapy is started, and provides details on how to optimise results from a wound swab. The guideline describes how to take a microbiological sample and the importance of using appropriate transport medium and transporting the specimen to the microbiology laboratory as soon as possible.

13. Bowler PG, Duerden BI, Armstrong DG. Wound microbiology and associated approaches to wound management. *Clin Microbiol Rev*. 2001 Apr; 14(2):244-269. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC88973/.

RATIONALE: A highly detailed paper stating that only clinical infection should prompt a practitioner to sample a wound for microbiological analysis, as routine biopsy specimens are impractical in the management of venous leg ulcers. This paper outlines the importance of correct procedure in collecting and transporting microbiological specimens

and including all clinical and patient details on a sample. It is also stated that the majority of open wounds are polymicrobial, but only some of these bacteria cause clinical infection. If infection is present, treatment with topical and systemic antibiotics is crucial, and there is some evidence for the potential benefits of cadexomer iodine as a topical antiseptic.

14. Davies CE, Hill KE, Newcombe RG, Stephens P, Wilson MJ, Harding KG et al. A prospective study of the microbiology of chronic venous leg ulcers to re-evaluate the clinical predictive value of tissue biopsies and swabs. *Wound Repair Regen*. 2007 Jan-Feb; 15(1):17-22. Available from: http://www.ncbi.nlm.nih.gov/pubmed/17244315.
    RATIONALE: A prospective study, which states that no consistent association has been made between colonisation and infection of open leg wounds. This paper also determines that wound biopsies do not contribute significantly to the patient management of venous leg ulcers.

15. Gardner SE, Frantz RA, Saltzman CL, Hillis SL, Park H, Scherubel M. Diagnostic validity of three swab techniques for identifying chronic wound infection. *Wound Repair Regen*. 2006 Sep-Oct; 14(5):548-557. Available from: http://www.ncbi.nlm.nih.gov/pubmed/17014666.
    RATIONALE: A study examining the diagnostic validity of three different swab techniques in identifying chronic wound infection. This paper states that all secondary wounds are colonised by many types of bacteria, but this does not mean that they are infected. Of the 83 wounds analysed in this paper, 30 (36%) were infected. The authors conclude that swab specimens obtained using Levine's technique had the highest accuracy.

16. O'Meara S, Al-Kurdi D, Ologun Y, Ovington LG, Martyn-St James M, Richardson R. Antibiotics and antiseptics for venous leg ulcers (Review). *Cochrane Database Syst Rev*. 2014 Jan; 1:1-156. Available from: http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD003557.pub5/pdf/standard.
    RATIONALE: An updated Cochrane review of 45 randomised controlled trials, established to determine the effects of systemic, topical antibiotics and antiseptics on the healing of venous leg ulcers. The authors state that the evidence does not currently support the routine use of systemic antibiotics in venous leg ulcers, especially with the increasing problem of bacterial resistance in the community. There is, however, some evidence in support of cadexomer iodine as a topical preparation. This review suggests that all wounds are colonised by bacteria and, at a certain level, some bacteria can cause significant infection and delay healing. The authors conclude that antibacterial preparations should only be used in cases of clinical infection, as bacterial colonisation alone is not considered adverse to healing.

17. Eron LJ, Lipsky BA, Low DE, Nathwani D, Tice AD, Volturo GA, Gould K, editor, Reeves D, editor. Managing skin and soft tissue infections: expert panel recommendations on key decision points. *J Antimicrob Chemother*. 2003 Nov; 52(1):3-17. Available from: http://jac.oxfordjournals.org/content/52/suppl_1/i3.full.pdf.
    RATIONALE: A review paper written by an expert panel, in which the authors state that the first dose of antibiotic therapy should be administered as soon as culture specimens

are obtained. The authors list the likely colonising and infecting pathogens for specific types of skin and soft tissue infections. The importance of considering patient characteristics when determining the correct antibiotic dosing is also underlined. This paper suggests flucloxacillin and clindamycin as the recommended antimicrobial therapy for class 2 and 3 skin and soft tissue infections.

18. Barber S, Lawson PJ, Grove DI. Evaluation of bacteriological transport swabs. *Pathology*. 1998 May; 30(2):179-182. Available from: http://www.ncbi.nlm.nih.gov/pubmed/9643502.
RATIONALE: A study evaluating various transport swabs for their ability to preserve bacteria for 24 and 48 hours. The authors conclude that swabs using Amies plus charcoal medium have better recovery rates than those using Amies medium alone.

19. Clinical Resource Efficiency Support Team (CREST). Guidelines on the management of cellulitis in adults. 2005 Jun. Available from: http://www.acutemed.co.uk/docs/Cellulitis%20guidelines,%20CREST,%2005.pdf.
RATIONALE: An expert consensus outlining the most common infective organisms as streptococci and *Staphylococcus aureus*. The consensus is that people with Class I disease (no signs of systemic toxicity and no uncontrolled comorbidities) can usually be managed on an outpatient basis with oral antibiotics. Flucloxacillin 500mg QDS (or clarithromycin 500mg BD for those with penicillin allergy) are suitable oral antibiotics because they cover both staphylococci and streptococci. Clindamycin 300mg QDS is also recommended as a further alternative for people who do not respond to treatment, or have more severe disease. This document states that most cases of uncomplicated cellulitis can be successfully treated within 1-2 weeks of therapy. Consider outpatient antimicrobial therapy (OPAT) with intravenous treatment in those with Class II disease (systemically unwell or co-morbidity). Patients can usually be switched to oral treatment after 3-5 days when signs and symptoms are improving (decreased temperature, change in white cell count, and decreasing erythema and induration). Those with Class III disease (significant systemic upset, acute confusion, tachycardia, tachypnoea, hypotension or unstable co-morbidities) or Class IV disease (patients with sepsis syndrome or severe life threatening infections) should be admitted urgently.

20. British Lymphology Society. Consensus document on the management of cellulitis in lymphoedema. 2015 Apr. Available from: http://thebls.com/documents/1.pdf.
RATIONALE: An expert consensus document on the management of cellulitis in lymphoedema. The authors state that flucloxacillin 500mg should be prescribed in the presence of clinical infection (eg pus formation, folliculitis or crusted dermatitis). They also state that if the patient is allergic to penicillin, clarithromycin 500mg or clindamycin 300mg should be prescribed. Doxycycline 200mg is recommended as an alternative if the patient is penicillin-hypersensitive and taking statins (eg simvastatin or atorvastatin). Finally, the authors state that advice should be sought from a local microbiologist if the infection fails to respond to these recommendations.

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Abbreviations

BD = Twice daily

BMI = Body mass index

G = Gram(s)

Mg = Milligram(s)

MRSA = Methicillin-resistant *Staphylococcus aureus*

OPAT = Outpatient antimicrobial therapy

QDS = Four times daily