

# Surgical Wounds



**This guidelines summary has been developed for health professionals caring for clients with surgical wounds. Assessment and management of surgical wounds should be undertaken by health professionals with expertise in the area.**

For this summary, all recommendations have had their levels of evidence classified as follows:

Level I	Evidence from a systematic review or meta-analysis of at least two level II studies
Level II	Evidence from a well designed randomised controlled trial (for interventions), or a prospective cohort study (for prognostic studies)
Level III	Evidence from non-randomised studies with some control or comparison group (pseudo-randomised controlled trial; non-randomised experimental trial, cohort study, case-control study, time series studies with a control group; historical control study, retrospective cohort study)
Level IV	Evidence from studies with no control or comparison group
EO	Consensus statements provided by a National or International Panel of experts in the area.

**This is a summary of recommendations from the following sources, which should be accessed for further details as required:**

1. The Canadian Association of Wound Care. Best Practice Recommendations for the Prevention and Management of Surgical Wound Complications. 2017. <https://www.woundscanada.ca/docman/public/554-bpr-prevention-and-management-of-surgical-wound-complications/file>
2. World Health Organization. Global Guidelines for the Prevention of Surgical Site Infection. 2016. <http://apps.who.int/iris/bitstream/handle/10665/250680/1/9789241549882-eng.pdf?ua=1>
3. National Collaborating Centre for Women's and Children's Health. Surgical site infection: prevention and treatment of surgical site infection. 2008: RCOG Press.
4. Wounds Australia. Standards for Wound Prevention and Management. 3rd ed. Cambridge Media: Osborne Park, WA; 2016.
5. Norman G et al. Antibiotics and antiseptics for surgical wounds healing by secondary intention. Cochrane Database of Systematic Reviews 2016, CD011712.
6. Dumville JC et al. Dressings for the prevention of surgical site infection. Cochrane Database of Systematic Reviews 2016, CD003091.
7. Franz MG et al. Guidelines to aid healing of acute wounds by decreasing impediments of healing. Wound Repair Regen 2008; 16: 723-48.
8. Webster J et al. Negative pressure wound therapy for surgical wounds healing by primary closure. Cochrane Database of Systematic Reviews 2019, 3:CD009261.



## Assessment

1. Complete a holistic assessment to identify factors that may affect surgical wound healing in the pre-operative, intra-operative and post-operative phases <sup>1</sup> (EO)
2. Assess surgical wounds using a standardised wound assessment tool (e.g. OASIS-C) <sup>1</sup> (II)
3. Risk factors which may impact wound healing or increase complications include:
  - advanced age <sup>2,3</sup> (II)
  - smoking <sup>1</sup> (I)
  - high BMI (overweight) <sup>1,2</sup> (I)
  - diabetes mellitus (poor glycaemic control) <sup>1</sup> (I)
  - malnutrition <sup>1,3</sup> (IV)
  - radiotherapy within 90 days prior to surgery <sup>3</sup> (II)
  - use of steroids <sup>3</sup> (II)
  - longer pre-operative length of stay <sup>2</sup> (II)
  - type of surgical wound (e.g. clean, contaminated) <sup>1,3</sup> (II)
  - longer duration of procedure <sup>1,2</sup> (II)
4. Determine the effectiveness of interventions on healing and reassess if healing is not occurring at the expected rate <sup>1</sup> (EO)
7. Do not use topical antimicrobial agents for surgical wounds that are healing by primary intention to reduce the risk of surgical site infection (SSI) <sup>3</sup> (II)
8. There is no robust evidence in favour of any particular antimicrobial treatment of surgical wounds healing by secondary intention for healing or infection outcomes <sup>5</sup> (I)
9. It is uncertain whether covering surgical wounds healing by primary intention with wound dressings, or any specific type of dressing, reduces risk of surgical site infection <sup>6</sup> (II)
10. Do not use an advanced dressing over a standard dressing on closed surgical wounds for the purpose of preventing surgical site infection <sup>2</sup> (II)
11. Cleanse surgical wounds healing by primary intention with sterile saline up to 48 hours after surgery <sup>1,3</sup> (II)
 

Consider showering or washing with potable tap water of closed incisions after a risk assessment <sup>4</sup> (I)
12. Debride devitalised or infected tissue using methods appropriate for the client and health professional <sup>1,4,7</sup>

*\*Debridement should only be undertaken by health professionals with expertise in the area* (II)
13. Choose an appropriate dressing for moisture balance to promote surgical wound healing <sup>1</sup> (EO)
14. Negative pressure wound therapy may reduce risk of infection for primary incision and open surgical wounds <sup>1,8</sup> (III)

## Management

5. Develop and implement a plan of care, including client, family and carers <sup>1</sup> (EO)
6. Use an appropriate aseptic technique for changing or removing wound dressings <sup>4</sup> (EO)



## Prevention

15. Develop a plan to reduce risk factors for poor surgical wound healing<sup>1</sup> (EO)
16. Advise clients to avoid tobacco smoking at least three to four weeks before elective surgery and in the postoperative period<sup>7</sup> (I)
17. If needed (according to circumstance), consider use of surgical prophylactic antibiotics within 120 minutes before incision to decrease surgical site infection risk<sup>1,2</sup> (III)
18. Optimise glucose control for both those with diabetes and those without diabetes in the perioperative phase to reduce the risk of SSI<sup>2,7</sup> (III)
19. Ensure optimal levels of nutrition for healing<sup>4,7</sup> (IV)
20. Educate the client, family and carers to optimise surgical wound healing<sup>1,4</sup> (EO)