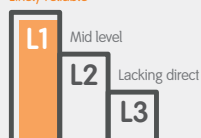


NPWT significantly reduces the rate of Surgical Site Infections and occurrence of Seroma in surgical incisions

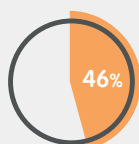
There is a steady growth in the number of RCTs investigating NPWT on surgical incisions. This meta-analysis combines 10 studies, including three studies that were not published, in a variety of surgical indications. Three studies used PICO° and the other seven used competitor products.

Likely reliable



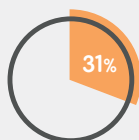
Evidence

- Randomised Controlled Trials are Level 1 evidence.
- Meta-analysis is a formal statistical technique that combines multiple studies to generate a weighted average that is based on the size of each study. The aggregation of RCTs gives a higher statistical power than from any individual study.



Surgical Site Infection rate was almost halved by NPWT compared to standard care

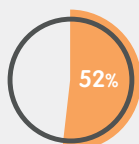
- 46% decrease (relative risk 0.54)



Wound dehiscence rate was decreased by almost a third compared to standard care

- 31% decrease (relative risk 0.69)

Not statistically significant



Seroma formation was more than halved by NPWT compared to standard care

- 52% decrease (relative risk 0.48)

COMMENTS:

This is a unique meta-analysis study as it considers unpublished but completed RCTs when the investigator provided suitable data.

- It excludes underpowered pilot RCTs
- 3 of the 10 studies use PICO°

Fully commercially-independent study which is building the respectability of the NPWT evidence base in a respected journal.

The rate, type and consequence of wound complications are dependent on the type of surgical indication and the risk factors of the patient.

Closed surgical incision management is a fast moving field and new Randomised Controlled Trials are being published frequently.

- Search cut-off date was August 2015

Authors:	Nana Hyldig, Birke-Sorensen, Kruse, Vinter, Joergensen, Soerensen, Mogensen, Lamont & Bille
Title:	Meta-analysis of Negative-Pressure Wound Therapy for Closed Surgical Incisions
Aim of the study:	Meta-analysis of randomised controlled trials comparing NPWT compared to standard care on closed surgical incisions and impact on wound complications
Study Type:	Meta-analysis and review
Wound Type:	Closed surgical incision
Speciality/Indication:	Mixed surgery, including orthopaedic (arthroplasty and trauma), cardiothoracic, breast
Products:	NPWT, including PICO° (3 out of 10 studies)
Number of patients:	1089 patients with 1311 incisions in 10 RCTs: (NPWT 664; Standard care 647)
Reference:	British Journal of Surgery (2016) Vol 103 (issue 5): 477-486 Article first published online 16 MAR 2016 DOI: 10.1002/bjs.10084
Comments:	Open access video commentary on BJS website peer-reviewed journal PubMed listed impact factor 5.542 – http://onlinelibrary.wiley.com/doi/10.1002/bjs.2016.103.issue-5/issueoc