WHAM evidence summary: plain water sitz bath for wound healing

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CLINICAL QUESTION

What is the best available evidence for water sitz baths for promoting healing for anorectal conditions and/or following anorectal procedures?

SUMMARY

Sitz bathing is an intervention involving immersion of the perineal and anal region in (usually) warm water. *Level 1* evidence[1-3] suggested that sitz baths are associated with good healing outcomes, but no convincing healing benefit over no sitz bathing. *Level 1* evidence[4, 5] comparing warm sitz baths to cold sitz baths/ice packs for wound healing or symptom control was not conclusive. *Level 1* evidence[1, 4-6] showed that individuals receiving a warm sitz bath experienced a reduction in post-operative pain over time, but this was not substantially different to the pain reduction experienced by individuals who had no sitz bath,[1-3, 7] or those who received cold treatments.[4] However, *Level 1* evidence[2] did show a positive effect in managing post-defaecation pain. *Level 1* evidence[1, 5] also showed that a warm sitz bath is associated with higher patient satisfaction. *Level 5* evidence[8, 9] from clinical practice guidelines developed by expert surgical groups suggests that sitz bath can be safely considered according to patient and/or clinician preferences following anorectal procedures.

CLINICAL PRACTICE RECOMMENDATIONS

All recommendations should be applied with consideration to the wound, the person, the health professional and the clinical context.

Warm water sitz baths with no additives could be considered for individuals with anorectal conditions or following anorectal procedures for patient comfort and satisfaction (Grade B).

SOURCES OF EVIDENCE: SEARCH AND APPRAISAL

This evidence summary was conducted using methods published by the Joanna Briggs Institute.[10-12] The summary is based on a systematic literature search combining search terms related to sitz bath and anorectal conditions/procedures. This evidence summary was limited to plain water sitz baths without additives (e.g., antiseptics or natural remedies). Searches were conducted in the Embase, PubMed® and Hinari databases and in the Cochrane Library for evidence conducted in humans published up to July 2026 in English. Levels of evidence for intervention studies are reported in Table 1.

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BACKGROUND

Sitz bathing is a longstanding non-pharmacological intervention used in the management of anorectal disorders and following anorectal surgery. It generally involves immersing the perineal and anal region in warm water for a short period, with proposed benefits including pain relief, reduction in sphincter spasm and support for wound healing. Several mechanisms could explain potential benefits. Warm water may cause local vasodilation and increased blood flow, potentially improving tissue perfusion and reducing congestion. Thermal stimulation of perianal receptors may trigger anal sphincter reflexes, decreasing internal sphincter pressure and spasm and thereby reducing pain.[18] Mechanical cleansing may remove faecal material and other irritants, contributing to an environment conducive to healing, and improving patient satisfaction and comfort.[5]

CLINICAL EVIDENCE

Several systematic reviews[13-16] (*Level 1*) reported the effectiveness of sitz baths without additives for promoting healing from anorectal conditions and/or procedures. None of the reviews reported a meta-analysis, and the various reviews provided narrative reports of the same RCTs. For this evidence summary, data from the original RCTs is reported. Table 2 summarises the clinical trial evidence.

Wound-related outcome measures

Three RCTs[1-3] explored warm sitz bath compared to no sitz bath for postoperative management after anorectal procedures. In the first RCT[1] (at high risk of bias) warm sitz bath conducted twice daily for individuals with acute anal fissures was associated with a high rate of complete healing at four weeks, but not a superior outcome versus no sitz bath (85.1% healed versus 84% healed).[1] In the second study[2] (at moderate risk of bias) a similar result was reported for warm sitz bath conducted twice daily for individuals following anal sphincterotomy (95% healed at four weeks versus 93% for no sitz bath).[2] A third study (moderate risk of bias)[3] explored warm sitz bath versus no sitz

Table 1. Levels of evidence for clinical studies

Level 1 evidence	Level 2 evidence	Level 3 evidence	Level 4 evidence	Level 5 evidence
Experimental designs	**Quasi-experimental designs**	**Observational – analytic designs**	**Observational – descriptive studies**	**Expert opinion/ bench research**
Level 1.a Systematic review of RCTs[13-16] Level 1.c RCT[1-4, 6] Level 1.d Pseudo-RCT[5]	Nil	Nil	Nil	Level 5.1b Expert consensus[8, 9] Level 5.c Expert opinion[17-20]

bath for healing following haemorrhoidectomy. At four weeks post-operatively, most individuals had completely healed, with no differences between the two groups (95% healed in sitz bath group versus 94% in control group)[3] (*Level 1*).

Two RCTs compared warm baths to cold treatments.[4, 5] One RCT[4] at moderate risk of bias explored warm water sitz bath plus standard care versus ice pack treatment plus standard care following haemorrhoidectomy. Wound healing was measured on the REEDA (Redness, Edema, Ecchymosis, Discharge, Approximation of wound edges) assessment tool at seven days post-operative. The ice pack treatment was associated with more favourable REEDA scores compared to sitz baths (2.56 ± 1.89 versus 3.27 ± 2.12, p = 0.02). The study also evaluated wound swelling, determined subjectively by two independent colorectal surgeons. At 24 hours postoperative, 76.8% of the ice pack treatment group had no/mild swelling versus 56.0% of the sitz-bath group (p=0.03). In this study, the sitz bath was performed eight times daily (20 minutes per session) for the first three postoperative days[4] (*Level 1*). One pseudo-RCT[5] at high risk of bias explored sitz bath with analgesia and high fibre diet for treating non-operative acute anal fissures. Two treatment groups were formed; one receiving a warm (>30°C) sitz bath and one receiving a cold (<15°C) sitz bath. A third control group received analgesia and high fibre diet alone. At day 7, mean scores for improvement in symptoms (measured on a 0–5 visual analogue scale [VAS]) were 4.00 for warm sitz bath, 2.47 for cold sitz bath and 1.78 for control; p<0.001)[5] (*Level 1*).

An RCT[6] at high risk of bias compared warm water sitz bath to electronic bidet following haemorrhoidectomy. Bathing was performed once daily for seven days (although participants were able to continue treatment thereafter at their own preference). At four-week follow-up, there was no significant difference in complete wound healing for sitz bath group versus electronic bidet group (97.6% versus 97.1%, p = 0.893)[6] (*Level 1*).

A consensus-based guideline[8] indicated that warm water sitz bath achieved greater complete healing for haemorrhoidal disease versus anorectal cream (p < 0.005) for women who are pregnant (*Level 5*).

Wound-related pain

Individuals receiving a warm sitz bath for anorectal conditions/ procedures experienced reduction in pain over time.[1, 4-6]

Most studies[1-3, 7] showed little to no difference in pain management between warm sitz bath and no sitz bath. In comparing warm sitz bath to no sitz bath Gupta found no differences for post-haemorrhoidectomy care (no difference in mean VAS scores at seven days, p = 0.12),[3] for treating anal fissures (no difference in pain on a numerical rating scale at one week or 4 weeks, p > 0.05)[1] or for post operative pain following sphincterotomy (no difference in global pain score at seven days, p = 0.284).[2] One RCT[7] at moderate risk of bias established a modest immediate reduction in pain (coefficient B −0.81, 95% CI −1.44 to −0.18; p = 0.01) associated with initiation of warm sitz baths within six hours of haemorrhoidectomy versus delaying sitz bath until 24 hours postoperative. This difference in pain on a 0–10 numerical rating scale is not clinically relevant (*Level 1*). However, a larger clinical effect was observed for reduction in post-defecation pain on a VAS for individuals receiving a warm sitz bath following sphincterotomy (3.75 versus 8.91, p < 0.0001)[2] (*Level 1*).

In one study,[5] mean pain scores (measured on a 0–10 VAS) decreased from 7.07 on day one to 2.80 on day seven. This compared with 4.67 for a group receiving cold sitz bath and 5.47 for a control group receiving no sitz bath[5] (*Level 1*). In another study, mean pain score within 24 hours of undertaking warm sitz baths was 2.1 on a VAS, which was a was significant reduction compared to the immediate post-operative rating (p ≤ 0.01), but not significantly different from a comparator group that received ice packs (p = 0.19)[4] (*Level 1*). Similarly, there was no difference in pain rating between individuals treated with warm sitz bath versus electronic bidet (p = 0.453); both groups had large reductions in pain in the first week postoperatively[6] (*Level 1*).

Patient satisfaction

In one study,[5] mean satisfaction scores (measured on a 0–5 VAS) favoured warm sitz baths over cold sitz baths or no sitz baths (3.93 versus 2.47 versus 1.82; p < 0.0001).[5] In another RCT,[1] there was higher levels of satisfaction (0 < 0.001) in individuals being treated for anal fissure with a warm sitz bath versus those receiving no sitz bath (*Level 1*).

CONSIDERATIONS FOR USE

- If a sitz bath is used, the water should cover the perineum and lower pelvis. Consider the best strategy to allow submersion (e.g., use of a sitz bath or bidet).[18] Experts suggest using a regular domestic showerhead or spray

Table 2. Summary of the Level 1 clinical evidence

Study	Intervention (number participants)	Comparison treatment (number participants)	Type of procedure/ condition	Sitz bath regimen	Outcome measures
Chen et al (2025)[4]	Warm sitz bath plus standard care (n=85)	Ice packing plus standard care (n=85)	Haemorrhoidectomy for grade III or IV haemorrhoids	Warm at 37–40°C for 20 minutes, 8 times daily for the first 3 postoperative days.	• Pain • Wound healing • Swelling
Dubhashi et al (2016)[5]	Warm sitz bath: plain warm water plus analgesics and high-fibre diet (n=15)	Cold sitz bath: plain cold water plus analgesics and high-fibre diet (n=15) Control: analgesics and high-fibre diet (n=30)	Acute anal fissure; conservative/ non-operative management	• Intervention: warm water at >30°C for 15 minutes, twice daily • Control: cold water at <15°C for 15 minutes, twice daily	• Pain • Wound symptoms • Patient satisfaction
Gupta (2006)[1]	Lukewarm water sitz bath plus high fibre diet advice (n=25)	No sitz bath plus high fibre diet advice (n=25)	Acute anal fissures	Lukewarm water (equivalent to what the patient would prefer for a whole-body bath) for 10 minutes, twice daily (after defaecation and before bedtime) for 4 weeks	• Complete wound healing • Pain (post defaecation and postoperative)
Gupta (2007)[2]	Lukewarm water sitz bath plus high fibre diet advice (n=23)	No sitz bath plus high fibre diet advice (n=23)	Anal sphincterectomy	Lukewarm water (equivalent to what the patient would prefer for a whole-body bath) for 10 minutes, twice daily (after defaecation and before bedtime) for 4 weeks	• Complete wound healing • Pain
Gupta (2008)[3]	Lukewarm water sitz bath (n=25)	No sitz bath (n=25)	Open haemorrhoidectomy for grade III or IV haemorrhoids	Lukewarm water (equivalent to what the patient would prefer for a whole-body bath) for 10 minutes, twice daily (after defaecation and before bedtime) for 4 weeks	• Complete wound healing • Pain
Kwon et al (2025)[6]	Warm tap-water sitz bath (n=41)	low-force electronic bidet using warm tap water (n=34)	Closed or semi-closed haemorrhoidectomy	Warm water at 38°C for 3-5 minutes, once daily for 7 days	• Pain • Complete wound healing
Liao et al (2024)[7]	Early (6 hours after surgery) plain warm water sitz bath (n=32)	Delayed/ usual initiation (postoperative day 1) of the sitz bath (n=32)	Open haemorrhoidectomy for grade III or IV haemorrhoids	Warm water at 41–43°C for 5 minutes, 3 times daily	• Pain

bidet is an acceptable alternative for hygiene purposes,[19, 20] which was supported by one of the clinical trials reported above.[6]

- Use water at 30–42°C for a warm sitz bath. Soak for between 3–5 minutes[6, 8] and 20 minutes.[4, 8, 18, 21]
- If using cold water only soak for 3–5 minutes.[18]
- Do not use additives unless instructed by a medical practitioner.[18, 21]
- The area should be rinsed of faecal matter and wound exudate before soaking in the sitz bath (e.g., using a gentle stream of water).[8, 18, 21]
- Following bathing, pat the area dry with care,[19, 21]

Potential adverse events

- Experts suggest that more frequent or longer soaking might be associated with maceration or wound infection.[19, 20, 22] However one clinical study in which soaking was eight times daily showed no increase in adverse events and complications.[4]
- In one RCT, approximately 10% (2/27) of individuals who received a warm sitz bath experienced an erythematous perineal rash that resolved when ceasing the bathing regimen.[1]
- Individuals with impaired sensation are at higher risk of burns.[23] Advise individuals to test the water temperature (e.g., with wrist or elbow) before soaking.

CONFLICT OF INTEREST

The author declares no conflicts of interest in accordance with International Committee of Medical Journal Editors (ICMJE) standards.

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ABOUT WHAM EVIDENCE SUMMARIES

WHAM evidence summaries are consistent with methodology published in Munn Z, Lockwood C, Moola S. The development and use of evidence summaries for point of care information systems: A streamlined rapid review approach, Worldviews Evid Based Nurs. 2015;12(3):131-8.

Methods are outlined in resources published by the Joanna Briggs Institute[10-12] and on the WHAM Collaborative website: http://WHAMwounds.com. WHAM evidence summaries undergo peer-review by an international, multidisciplinary Expert Reference Group. WHAM evidence summaries provide a summary of the best available evidence on specific topics and make suggestions that can be used to inform clinical practice. Evidence contained within this summary should be evaluated by appropriately trained professionals with expertise in wound prevention and management, and the evidence should be considered in the context of the individual, the professional, the clinical setting and other relevant clinical information.

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