

# WHAM evidence summary: Use of yoghurt for managing malodorous wounds

**Keywords** Wound odour, malodorous wound, yoghurt

**For referencing** Watts R and Solomons T. WHAM evidence summary: Use of yoghurt for managing malodorous wounds. WCET® Journal 2021;41(4):22-24

**DOI** <https://doi.org/10.33235/wcet.41.4.22-24>

## CLINICAL QUESTION

What is the best available evidence in the effectiveness of treating yoghurt for managing malodorous wounds?

## SUMMARY

Malodour can occur in chronic wounds (e.g., tumours, pressure injuries and venous ulcers). The combination of anaerobic bacterial colonisation, biofilm and necrotic tissue produces the odour. Unless the odour and exudate from malodorous wound(s) are significantly reduced they might have both physical and psychological impacts on the individual with a wound, including embarrassment, depression and social isolation<sup>1</sup>. Despite a detailed literature search, no evidence has been found that supports the use of yoghurt for reducing malodour in chronic wounds. Research on the effectiveness of probiotics may provide evidence in this field in the future.<sup>2</sup>

## Clinical practice recommendations

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

There is insufficient evidence on the effectiveness of yoghurt products to make a graded recommendation on their use in reducing odour in chronic wounds.

## Sources of evidence: search and appraisal

This summary was developed using methods published by the Joanna Briggs Institute (JBI)<sup>3-7</sup>. The summary is based on a

systematic literature search in English combining search terms that describe malodorous wounds and yoghurt (yoghurt OR live bacillus acidophilus) AND (wound odour OR malignant fungating wound\* OR malodorous wound\*). Searches were conducted in Embase, Medline, the Cochrane Library, CINAHL, Scopus, Epistimonikos and Google Scholar for dates up to August 2021. Studies were assigned a level of evidence (see Table One) based on JBI's hierarchy<sup>3-7</sup>. Recommendations are made based on the body of evidence and are graded according to the system reported by JBI<sup>3-7</sup>.

## BACKGROUND

Over time, numerous solutions have been employed in treating the problem of wound odour, some with success<sup>8</sup>. However, research into comparative effectiveness of different strategies to manage wound odour is lacking. One author refers to 'trial and error' being the process of assessing the most effective or ineffective treatments.<sup>9</sup> It is only recently that controlled trials have been implemented to provide some certainty of effectiveness<sup>10</sup>. The results of these studies have now been combined in several systematic reviews<sup>11-13</sup>.

With commercial development of various treatments, wound malodour can be managed promptly. However, in low resource contexts, wound odour management strategies such as specialised dressings and pharmaceutical products can be beyond the financial reach of the health service or the individual.

Consequently, cheaper alternative methods of treatment have been sought. While some have evidence supporting their use, others have proved unsuccessful in attaining significant clinical benefit, and some are yet to be formally studied. Yoghurt falls into the latter category.

## EVIDENCE

Although several journal articles in the 1980s and 1990s mentioned plain live yoghurt in treating wound malodour and exudate, their reports do not provide a research plan nor any

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Table 1. Levels of evidence

Level 1 evidence: Experimental designs	Level 2 evidence: Quasi-experimental designs	Level 3 evidence: Observational – analytic designs	Level 4 evidence: Observational – descriptive studies	Level 5 evidence: Expert opinion / bench research
Nil	Nil	Nil	Nil	Nil

data. Among those who considered the use of yoghurt in this period were Benbow, Welch, Schulte, and Haughton and Young with their personal speculations as to how the yoghurt might work<sup>14-17</sup> to reduce wound odour.

Haughton and Young declared that yoghurt should not be used due to the possibility of infection from *Lactobacillus*, leading to this treatment being ceased in many clinical settings despite there being no evidence supporting the claim<sup>15</sup>. The laboratory development of a unique probiotics-based milk peptide plus hydrogel may challenge this idea. Recent work promoting wound healing via the use of probiotic bacteria or their extracts involves lysates of *Lactobacillus*, and to date has shown initial promising results<sup>2</sup>.

## CONSIDERATIONS FOR USE

Consider using alternative low cost treatments to manage malodorous wounds, including green tea<sup>18</sup>, medical-grade honey<sup>19</sup>, sugar paste<sup>15</sup>, or rice bran sheets<sup>20</sup>.

## CONFLICTS OF INTEREST

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

## 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 detail in resources published by the Joanna Briggs Institute as cited in this evidence summary. 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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