

Why we really need to learn to love maggots—for the sake of our health

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For years, maggots have been a powerful tool in medicine, quietly excelling in the <u>treatment</u> of chronic wounds. But despite the clinical <u>evidence</u> supporting their efficacy, maggots remain an underused treatment. This isn't due to a lack of effectiveness but rather our own innate negative perceptions.



Approved for use in the NHS, maggot therapy relies on the willingness of both the wound clinician and the patient. But our revulsion of these insects often hampers their widespread acceptance and use. And because of this, maggots are not yet universally embraced by society nor by all health professionals.

In wound care, maggots act like miniature <u>medical devices</u>. They are particularly efficient at cleaning wounds, <u>removing dead tissue</u> almost immediately. Their ability to destroy harmful bacteria, including antibiotic-resistant strains, is very impressive.

Maggots can even <u>break down</u> bacterial biofilms—tough, pathogen-rich barriers that thrive in chronic wounds. And they can also stimulate the arrival of healthy cells and molecules, promoting healing.

Recent discoveries have shed further light on the remarkable abilities of maggots. We now know they can produce 47 different antimicrobial peptides. These small, bacteria-killing molecules can be ramped up significantly in response to infection, demonstrating the maggots' dynamic response to different types of wound conditions.

But maggot therapy isn't without its challenges. Some patients can experience <u>psychological discomfort</u> or sometimes <u>pain</u> so it's essential that the therapy is administered with care and under clinical supervision.

Perception

<u>Research</u> by my team shows us that knowledge and public awareness, along with the perception of medicinal maggot therapy, is generally quite poor. Cultural norms often paint maggots as <u>revolting</u> creatures, and this deep-seated hostility affects patient acceptance.

Feelings of squeamishness and disgust are common, even among health



care professionals. My team's work has revealed that nearly a third of general nurses find maggots disgusting and are reluctant to administer maggot therapy. Other researchers have uncovered similar findings.

But hard-to-heal wounds, such as leg ulcers, <u>diabetic foot ulcers</u> and pressure ulcers, are managed by health care practitioners and wound clinicians worldwide. Often, these are most predominantly nurses, who will make decisions on whether maggot therapy should be administered.

Attempting to endear such insects to people is not easy. Public interest and feelings are strong for insects such as <u>bees and butterflies</u>, but not so much for flies and maggots. So, how can we overcome this?

To improve acceptance, it's crucial to <u>explain maggot therapy</u> carefully to patients, to alleviate negative emotions and anxiety. Addressing the inherent aversion to maggots is especially urgent given the rise in chronic wounds and <u>antibiotic-resistant infections</u>.

Public engagement is an essential conduit for science communication and information dissemination. My team has created the public engagement campaign, Love a Maggot, which aims to raise awareness of the use of living maggots as a clinical treatment. By telling people about maggots, their biology, their useful role, successful medical stories, and using fun maggot activities and games, we may help to improve their image.

Another method to encourage maggot fondness is entertainment media. In 2019, we were invited by producers of the BBC TV drama Casualty to help create episodes which contained the positive portrayal of maggots and maggot therapy.

<u>Subsequent analysis</u> by my team showed that perceptions and attitudes towards maggets changed after viewing the positive outcome of patients



in the drama. More maggots on medical dramas would certainly be welcome.

Chronic wounds are not decreasing, so, a shift in how we perceive maggots could support health workers in offering maggot therapy more readily.

As <u>lack of experience</u> and knowledge among nurses often hinders the implementation of maggot therapy, including maggot therapy in undergraduate nurse education could foster a more informed and accepting health care environment. This has already started <u>in Wales</u>.

The challenge for maggot therapy advocates is significant. Maggots may indeed be nature's answer to the call for super-efficient wound management. The question is, can we be taught to overcome our disdain enough to begin to love them, just a little bit?

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