

## CLINICAL GUIDELINES FOR LARVAL THERAPY (MAGGOTS)

### Introduction

The use of maggots for wound debridement has a long history and the introduction of sterile maggots specifically bred for wound management has increased this use further. Sterile maggots are produced by chemically sterilising the eggs of the green bottle fly and allowing them to hatch on a sterile agar-based substrate.

### General Indications

Sterile larvae can be used in the treatment of many types of sloughy, infected or necrotic wounds including leg ulcers both venous and arterial, pressure sores, burns and ulcerated diabetic foot wounds. Care should be taken when recommending Larvae for wounds where the patients may exert pressure on the area crushing the larvae e.g. the underside of the heel that a patient is weight bearing on.

### Contraindications

Larvae should not be applied to wounds that have a tendency to bleed easily, or to be introduced in to wounds that communicate with the body cavity or any internal organ. They should also not be applied close to any large blood vessels.

### Mechanism of action

Maggots promote healing by:

- Secretion of proteolytic enzymes which break down necrotic tissue which can then be ingested
- Production of exudate which aids mechanical washing out of bacteria
- Mechanical stimulation of viable tissue leading to formation of granulation tissue
- Secretion of agents such as amino acids which promote healing.

### Product Information

Maggots are available in pots of 100 or 200. Refer to larvae free range calculator (on Biomonde website). Available as kits, boot or flat net.

Biobag (Larvae in a bag) available in 5 sizes (refer to Biobag guide on Biomonde website).

They are delivered usually within 24 hours of ordering.

### Company

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## PROTOCOL

1. Patient selection should be based on the following criteria:
  - Appropriate wound characteristics and documented wound assessment
  - Patient verbal consent (good practice to document this in notes)
  - Failure of all previous conventional debridement therapies
2. Verbal rationale of treatment explained to patient. Patients will be given an information sheet (Biomonde patient information leaflet see appendix 1) and will be given adequate opportunity to discuss any aspect of therapy with an appropriately trained healthcare professional
3. No pressure will be put on the patient to agree to treatment
4. If the patient refuses, alternative treatments will be sought
5. Larvae may be ordered by a Clinical Lead Tissue Viability, or in the absence of Clinical Lead, a Senior Nurse Manager, or a member of the tissue viability team. The treatment needs to be prescribed by the GP/Consultant/Senior Doctor / independent (tissue viability) nurse prescriber responsible for the patients care. In hospital they will be ordered through the Hospital Pharmacy once prescribed, in community, tissue viability team will order the larvae
6. Application will only be undertaken by nursing staff who can demonstrate competence in this treatment
7. The larvae will be applied in accordance with the patient application guide
8. The larvae will be disposed of in accordance with the local clinical waste procedure
9. Outcomes of treatment will be recorded in the patient's notes
10. Patient given a copy of the Patient Information Sheet within the Larvae kit

## ORDERING PROCEDURE

- Measure wound area to determine the quantity of Larvae or size of Biobag required (see ordering size guide)
- In community, the tissue viability team will already be involved in the patients care and will generate the order. In hospital, contact the Clinical Lead Tissue Viability or member of the team, senior nurse manager or the ward pharmacist and request larvae – the following information will be required:
  - Ward/patient's address
  - Patient name
  - Patient hospital/NHS number/date of birth
  - Consultant/GP
  - Required delivery date

The larvae will be ordered and delivered to the ward (via Pharmacy) or for community patients to their nominated community pharmacy.

Larvae must be used within the expiry date on the box. They **must not be stored in a refrigerator**

## PROCEDURE FOR APPLICATION / DISPOSAL OF MAGGOTS / LARVAE

### Suitable wounds

Pressure sores, leg ulcers, diabetic foot ulceration, infected wounds, traumatic wounds, surgical wounds, burns and haematomas

### Indications for use

- Where adherent slough and necrotic tissue are persistent and can not be removed with conventional treatment ie sharp debridement (only by a competent practitioner / doctor), hydrogels or enzymes
- Where there is no evidence of a tracking sinus
- With informed consent
- Agreement from Consultant/GP

### Contraindications

- Where wounds exist near major organs or cavities or blood vessels
- Wounds that have a tendency to bleed easily
- Wound too dry

### Equipment

Larvae, available in kits, ready to use, with full instructions on how to apply.

### Preparation

Soften hard necrosis with hydrogel (this should not contain propylene glycol) for at least 24 hours. Discontinue use of gel 24 hours prior to application. Any gel residue must be removed before treatment.

Application as per Biomonde application guides

### Duration of treatment

In many circumstances a single treatment of four days is adequate however in particularly extensive wounds further applications may be required

Stop treatment immediately if a wound starts actively bleeding  
Discontinue treatment when wound is fully debrided



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