

# MAGGOT DEBRIDEMENT THERAPY – THE BIOTHERAPEUTIC METHOD FOR HEALING OF LEG ULCERS AND OTHER CHRONIC WOUNDS

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The maggot debridement therapy is a modern biotherapeutic method based on the use of necrophagous flies to treat chronic non-healing wounds. In last two decades, maggot debridement therapy became routinely used therapeutic method and thousands of patients over the world had benefit of its healing power.

In Slovakia, maggot debridement therapy was successfully used for the first time in August 2003 at the Medical Faculty Hospital in Bratislava to clean persisting wound of patient suffering by diabetes. Sterile larvae of blowfly *Lucilia sericata* were prepared by the Institute of Zoology, Slovak Academy of Sciences. A year later, non-profit organization MEDALT was established with the aim to develop biotherapeutic methods and to introduce this methods in clinical praxis in Slovakia. The research and introduction of maggot debridement therapy was supported by European Social Foundation through the project running in 2005-2008. Tens of lectures for medical experts and common public as well as media presentations were organized. Thanks to these activities, maggot debridement therapy is routinely used in hospitals over the country. Since 2010 research in the field of larval therapy is provided by the company SCIENTICA, s.r.o., which received the grant from Operational Program of Research and Development of European Union. In the frame of this project, modern laboratory for production and research of sterile larvae was developed.

The application of larval therapy is carried out in two ways: By straight application of *Lucillia sericata* larvae in wounds two layered dressing is used to prevent larvae escape. The bottom layer (cage layer) is fixed to the intact skin surrounding the wound. Its purpose is to keep maggots in the wound and to protect surrounding skin from aggressive maggots juice side effects. We use colostomy pads Coloplast. The second layer is chiffon, which is attached

by a special disperse glue (developed in the Institute of Polymers, SAS, Bratislava) to the bottom layer. This layer allows maggots to breath oxygen and to drain out liquefied necrotic tissue and wound secretion. One day old sterile larvae are applied under plastered chiffon. Top layer is a dry gauze which is usually placed over the cage layer to absorb the liquefied necrotic tissue. Only this layer is regularly (every 4-6 hours) changed by the nursing staff.

Biobag application. Biobag is our challenge. Simuntaneously we are designing a new "biobag" for maggot debridement therapy. By using biobags we didn't notice any larvae escape. The application, removal and disposal is simple and practical. We can recommend this way of maggot's application direct into the wound.

Maggot debridement therapy is a safe, reliable, cost-saving and very effective method in management of chronic non-healing wounds.

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