COLD ATMOSPHERIC ARGON PLASMA SIGNIFICANTLY DECREASES BACTERIAL LOAD OF CHRONIC WOUNDS IN PATIENTS

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We are treating chronic wounds using a low-temperature argon plasma. The results of the clinical phase II of this study show a significant increase in the rate of germ reduction in plasma-treated wounds in comparison with wounds that received only standard wound care. This effect is found in all kinds of germs, regardless the resistance level.

The observed bactericidal effect of plasma therapy relies on the synergy of UVR, charged particles, electric fields, ROS and RNS. The combination of these biologically active components makes plasma a promising tool for fighting multiresistant germs. The advantage of this indirect plasma device is that it can be designed and optimized for different purposes, such as germ specific biofilms or varying wound fluid compositions. Furthermore there is evidence that plasma can enhance wound healing itself.