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## Moris Topaz

The Technion-Israel Institute of Technology, Israel

## Changing the standards of wound care: New concepts for treatment of minor and large wound defects

Stress-relaxation is a well-established mechanism for laboratory skin stretching with limited clinical application in conventional suturing techniques due to the inherent, concomitant induction of ischemia, necrosis and subsequent suture failure. Skin defects that cannot be primarily closed are a common difficulty during reconstructive surgery. The TopClosure\* tension-relief system (TRS) is a novel device for wound closure and secure attaching to the skin through a wide area of attachment in an adjustable manner enabling primary closure of medium to large skin defects. We present demonstrative cases requiring resection of large to huge tumors customarily requiring closure by skin graft or flaps. TRS was applied during surgery serving as a tension-relief platform for tension sutures to enable primary skin-defect closure by cycling of stress-relaxation and following surgery as skin-secure system until complete wound closure. All skin defects were manipulated by the TRS through stress-relaxation without undermining of skin enabling primary skin closure and eliminating the need for skin grafts and flaps. Immediate wound closure ranged 26-135 min. Complications were minimal and donor site morbidity was eliminated. Surgical time, hospital stay and costs were reduced and wound aesthetics were improved. TRS is novel technology that enables the utilization of the viscoelastic properties of the skin to an extreme level extending the limits of primary wound closure by the stress-relaxation principle. This is achieved via simple device application that aid immediate primary wound closure and downgrade the complexity of surgical procedures for a wide range of applications on a global scale.

## **Biography**

Moris Topaz has completed his MD and PhD at the Ben Gurion University, Israel and Postdoctoral Fellowship at the Eastern Virginia Graduate School of Medicine, USA. He is the Director of the Plastic Surgery Unit, the Hillel Yaffe Medical Center and was affiliated for years to the Department of Chemistry, Bar Ilan University, Israel. He has developed innovative devices and technologies to expedite wound healing. He has written and published articles in a variety of medical journals and has actively participated in numerous scientific meetings globally. Currently he is leading a National Project in Wound Healing in China as a Visiting Foreign Expert Professor.

mtopazmd@yahoo.com

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