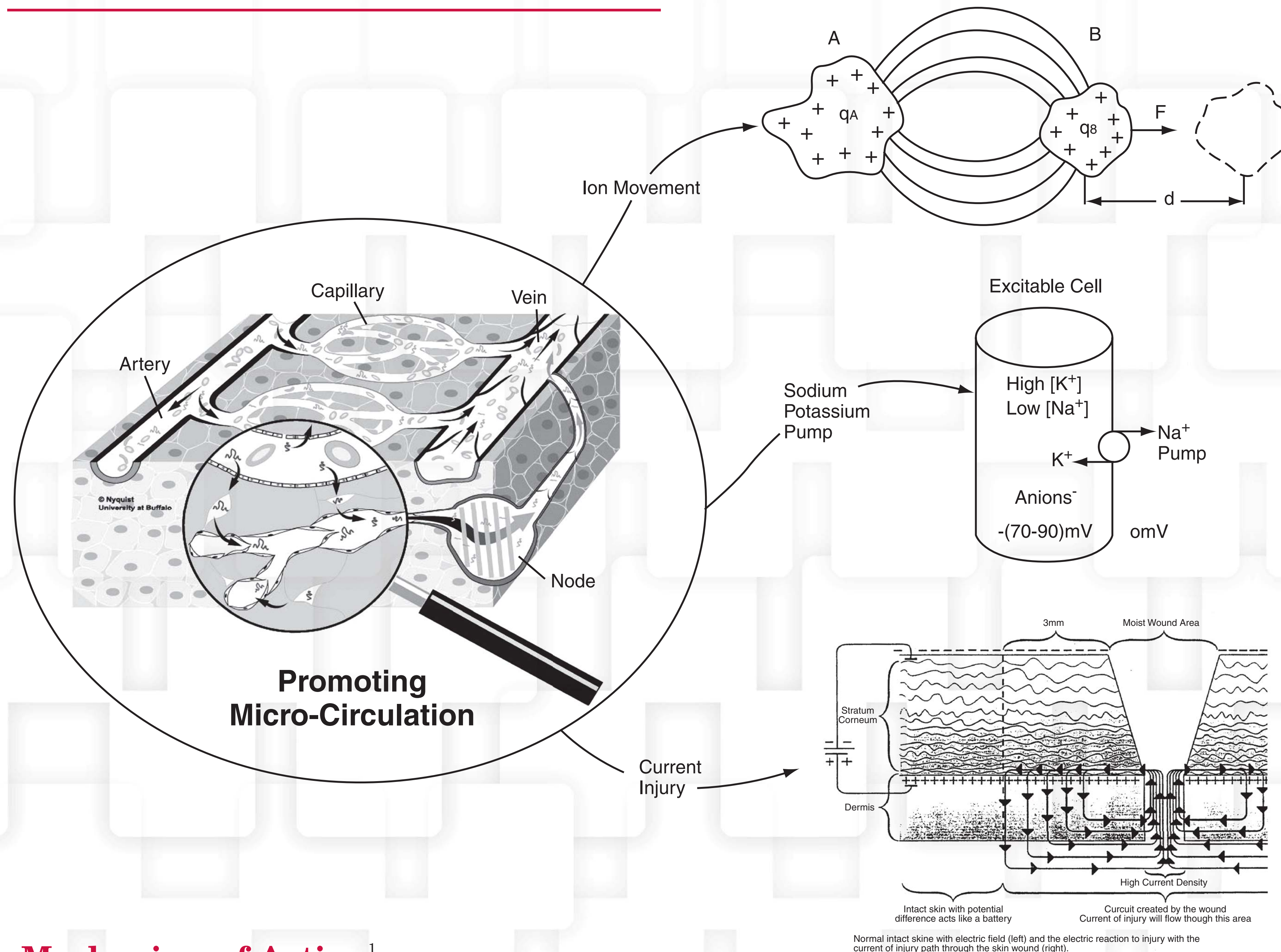


Science behind our Technology



Mechanism of Action¹

- 1) Electrical current applied
- 2) Cell membrane potential is altered
- 3) Voltage sensitive channels in cell membrane are opened
- 4) Increased Ca⁺⁺ uptake
- 5) Increased intercellular Ca⁺⁺ level
- 6) Insulin receptor sites are uncapped
- 7) Increased insulin binding occurs
- 8) Enhanced protein and DNA synthesis results
- 9) Enhanced fibroblast formation
- 10) Healing promote by the release of VEGF

¹ Bourguigow, G. & Bourguigow, L. (1987-1989) reported this stepwise process leading to healing.

Microamperage Current Promotes Soft Tissue Healing

- Cheng et al. (1982) cited direct currents at 500 uA (microamp) resulted in a 500% increase in ATP. The same ranges of stimulus intensity greatly enhance amino acid incorporation (member transport). With currents higher than 1000 uA a signifi cant drop in ATP production resulted. Protein synthesis was also seen to be greatly increased by microamperage electrical current.
- Becker et al. (1967) stated that externally applied electrical currents stimulating biologic homeostasis feedback mechanisms and therefore the events, resulting in tissue repair and replacement.

Evidence Base Medicine

- 50 years of clinical studies > 75 peer review medical journal research.*
(now available for home use)
- The center for Medicare and Medicaid services (CMS) on July 25, 2002 stated, *"The use of electrical stimulation will be covered as an adjunctive therapy only after there are no measurable signs of healing for at least 30 days of treatment with standard wound therapy and must be used in addition to standard wound care."*
- U.S. Department of Health and Human Services Clinical Practical Guidelines States:
"At this time, electrotherapy is the only adjunctive therapy with suffi cient supporting evidence to warrant recommendation by the panel."

* References and clinical studies provided upon request.

Therapy While Sleeping...

The human body goes into a natural healing cyclewhen sleeping.

- 70% of growth hormones are produced during sleep.
- Fibroblast cells are more active while sleeping.
- Micro-Z-Mini™ promotes microcirculation while enhancing the body's own healing mechanism.