

RianCorp

LTU-904

LOW LEVEL LASER
THERAPY UNIT

*SUPPORTED BY
SCIENTIFIC EVIDENCE*

SAFE • PORTABLE • PROVEN

Laser therapy supported by scientific evidence

Low Level Laser Therapy

Low Level Laser Therapy (LLLT) is the treatment of various conditions using laser to effect a photochemical reaction at a cellular level. The laser light penetrates into tissue where it is absorbed by cells and converted into energy that influences the course of metabolic processes.

The LTU-904 is an infrared laser operating at a wavelength of 904 nanometers (nm). The invisible wavelength penetrates deeply into tissue, (unlike the visible red wavelengths, which are absorbed superficially).

The LTU-904 does not generate any heat into tissue, which makes it a true LLLT device.



Patients are generally advised to not apply any heat to their lymphoedema limbs. Hot baths, spas heat pads etc. Increase blood flow to the skin surface and this is can increase the spread of infection. Laser systems that we have trialled have not generated any surface heating to the skin.

- Prof Neil Piller

*Director International Lymphoedema Framework
Director Lymphoedema Research Unit*

*Department of Surgery
School of Medicine, Flinders University.*



LLLT was first introduced in the 1960's in Europe and promoted for wound healing. Since that time LLLT has been researched and used extensively for muscular skeletal conditions, pain relief and lymphoedema.

The LTU-904 is registered by the Australia TGA and US Food and Drug Administration. It is registered as a therapeutic non heating laser device. Making it a true LLLT device, and not a heat lamp.



I believe that every lymphedema practice should have access to the LTU-904 laser

- Dr. Andrea Brennan *OTR/L, CLT-LANA, WCC*

*Post-Professional Doctor of Occupational Therapy,
Certified Lymphedema Therapist, Lymphology
Association of North America*



Laser for Lymphoedema

Riancorp completed the first randomised double blind study on the use of laser for lymphoedema in 2000.

The LTU-904 is the only laser registered with the American FDA and the Australian TGA specifically for lymphoedema treatment. Many LLLT devices generate heat and are registered as heat lamps – making them unsuitable for lymphoedema treatment.

Extensive Trials

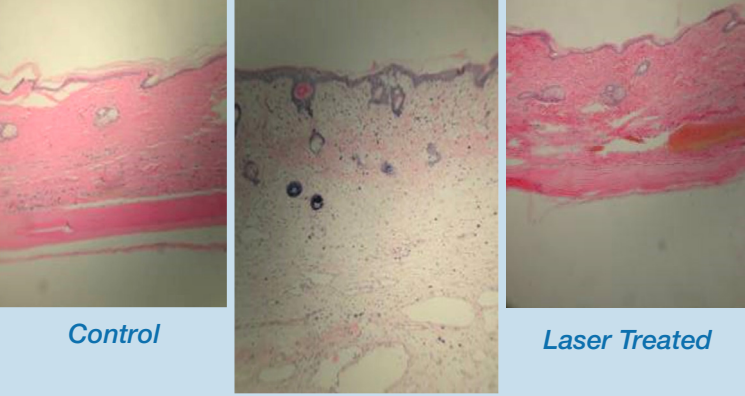
Pulsed, non heating laser operating at 904nm has been used in 12 clinical trials for lymphoedema involving more than 450 patients. Of these trials, 5 specifically used the LTU-904. None involved lasers with light emitting diodes that generate heat.

Every trial reported positive effects for patients, those with long-term follow-up demonstrated long term effects for patients – unlike any other lymphoedema treatment.



Patients can expect:

- Fast softening of fibrotic tissue
- Volume reduction over time – maintaining or improving after treatment has stopped
- Improvement in skin texture and thickness
- Lasting benefit and continuing improvement



Control

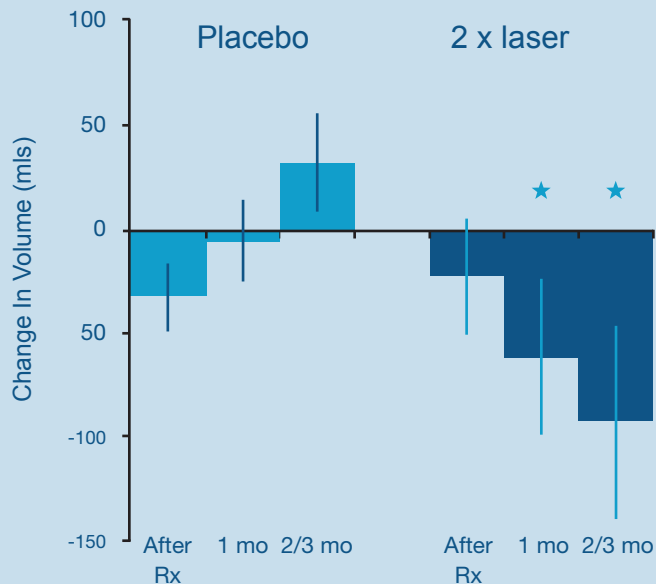
Untreated

Laser Treated

Pathology images of rat lymphoedema tissue. Showing control, laser treated and untreated tissue.

- University of Arizona Study

Average Volume Change



Graph above shows results of the Carati et al placebo controlled study.

Volume reduction continued for 2 - 3 months after treatment (Rx) had concluded.



As the surgeon, I have asked patients to change lymphedema therapists because they didn't have this laser

- William L. Scarlett D.O., FACS, FACOS, FAACS.

Associate Professor of Plastic Surgery, PA, USA



Treatment Protocol

The LTU-904 is used in contact with the skin, directly on scar tissue, muscles or fibrotic tissue. Treatment time is usually 1 minute per point. Most treatments are 15-20 mins per session.

The LTU-904's patented diffusion technology allows it to be classified as a Class 1 laser product which is considered safe in all conditions. No special safety requirements such as safety glasses or a controlled environment is required.

Individual treatment protocols are available for a range of conditions.

Responsive Injuries

Laser therapy is recognised and used worldwide for a range of conditions. The pulsed 904nm wavelength is suitable for:

- Oedemas and lymphoedema
- Slow healing wounds
- Fibrous lesions
- Sprains and strains
- Muscle spasm
- Muscular skeletal pain



If you have a loved one or a friend who has lymphedema - you need to locate a therapist who can offer her laser therapy - regardless of what else is included in her treatment plan.

- Penny Smalley RN, CMLSO, MACORN

Laser Safety Educator



The LTU-904 can be used in conjunction with manual lymph drainage, physiotherapy, chiropractic therapy and over any implants, including pacemakers, breast implants, orthopaedic implants.

Specifications

Laser Type:	Gallium Arsenide Laser Diode (Ga-As)
Laser Wavelength:	904 nanometers
Peak Power:	5 Watts
Pulse Frequency:	Low 2500Hz, High 5000Hz
Pulse Duration:	200 nanoseconds

Technical Data

Battery:	Inbuilt nickel metal hydride
Battery Capacity:	5 hours
Charge Time:	15 hours
Class 1 laser product	
Weight:	375 grams
Length:	205mm (8 inches)

Scientific Data

Please contact RianCorp for clinical trial and research information.

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