

Low Intensity shockwave therapy (LiSWT) at Burlington Urology

Low Intensity shockwave therapy (LiSWT), also known as Low Intensity Pulsed Ultrasound (as it uses soundwaves) is a typically painless treatment for erectile dysfunction (ED) without any serious risks.

Most ED treatments such as oral therapy (pills), penile injections, and penile vacuum pump therapy require the use of medication or device on each occasion prior to sexual activity. LiSWT is different in that the beneficial effect is persistent following treatment, which may mean an improvement in sexual spontaneity is possible.

How does it work?

LiSWT is most suitable for 'vasculogenic erectile dysfunction' which is the most common cause of ED. There are two theories about how sound waves work to treat ED; they directly stimulate the growth of new blood vessels leading to improved erectile function, and they recruit stem cells which help with the growth of new penile vascular tissue.

Who is it appropriate for?

LiSWT is likely most effective in men with mild to moderate ED with a vascular cause for the dysfunction (rather than a nerve injury or 'neurogenic' cause). Risk factors for vascular injury are hypertension, diabetes, high cholesterol, smoking, and aging.

This therapy will not work for everyone and so it is important to have a fully informed conversation with your Urologist to assess whether you may benefit from this. If you have no or minimal erectile activity at present, this is likely not the treatment for you (and you should discuss alternate options such as penile injections or vacuum).

We feel that you may benefit from this treatment if:

- 1) *'Doc, I just want the pills to work'*. You have some erectile activity with oral therapy, but are not responding sufficiently. The potential here is that LiSWT treatment may allow you to respond to oral therapy with satisfactory erectile function.
- 2) *'Doc, I just want to get off the pills, and be spontaneous again'*. You have adequate response to oral therapy, but not adequate for satisfactory erectile function without them, and wish to return to spontaneous erections without oral therapy.

What is the evidence that it works?

- Trials comparing LiSWT to placebo (or 'sham' treatment) have demonstrated a significant improvement in erections from the treatment. A recent meta-analysis selected 16 randomized controlled trials (RCTs) including 1064 patients, and demonstrated a significant increase in IIEF (International Index of Erectile Function Questionnaire) in ED patients, especially in moderate ED groups. *Systematic Review and Meta-Analysis of 16 RCTs of Clinical Outcomes of Low-Intensity Extracorporeal Shock Wave Therapy in Treating Erectile Dysfunction. H Yao et al. American Journal of Men's Health 2022 Mar-Apr; 16(2)*
- As this is a new treatment and a number of questions remain about the long term duration of treatment effects, and that other ED treatments are available, the American Urology Association ED Guideline (2018) has provided the recommendation – *For men with ED, LiSWT should be considered investigational.*
- The Canadian Urological Association ED Guideline (2021) has recommended further adequately powered RCTs focusing on dose, type of machine, and patient populations most likely to benefit are required with longer-term clinical efficacy using standardized protocols need to be established.
- *Further references can be provided to you by your Urologist upon request and we would be pleased to discuss the available information about this technology

What does treatment involve?

Soundwaves are applied to different treatment zones on the penis and perineum using a small handheld probe (Storz Duolith SD1 ultra). The treatment is typically painless so anesthesia or other pain-relieving medications are not needed. There are few side effects aside from mild skin redness. A course of treatment consists of once weekly 15 minute treatment sessions over 6 weeks. Some patient may opt for up to 10 treatments.

Initial assessment and treatment will be done by your Urologist, and subsequently treatment may be delegated to our RN at the Urology Resource Centre who has an expertise in sexual health medicine.

To maximize the chance of success, sexual activity is good during treatment. We recommend vacuum pump therapy daily x 10 minutes as this may help. We will provide vacuum rental for the 6 weeks as part of the LiSWT treatment fee (with a \$550 refundable deposit – the cost of the vacuum). Daily dose Cialis (5 mg once per day) may also add benefit.

We will have you complete a IIEF (International Index of Erectile Function Questionnaire) prior to treatment and at 2 and 6 months following treatment.

Cost for treatment at Burlington Urology is \$1500/6 treatments.

**As the treatment takes 10-15 minutes with your care provider holding the LiSWT handheld device on various areas of your penis and perineum you may want to bring music or handheld device to watch during treatment*

What if LiSWT treatment does not work for me?

There are several lifestyle measures that can be implemented to improve erectile function. These include daily exercise, keeping weight in a healthy range, avoiding smoking and excessive alcohol or THC, getting adequate sleep and ensuring that blood pressure, cholesterol and testosterone have been checked and are in the normal range. Some medications (blood pressure, anti-anxiety/depression) may inhibit erections, sometimes these medications may be able to be substituted for alternatives without this side effect.

There are other treatment options available for ED – including i) oral therapy (PDE5 inhibitors), ii) intracavernosal injection therapy – ICI (penile injections), iii) vacuum pump therapy, and iv) Surgery – prosthesis. We offer these services at Burlington Urology and will provide you with expertise on all available treatment options.

LiSWT at Burlington Urology Consent

***Please complete and give to reception prior to starting your treatment**

Questionnaire: Please circle (True or False)

1. I have read the documents provided by Burlington Urology including i) Erectile Dysfunction Treatments, ii) LiSWT at Burlington Urology, and iii) Reviewed the video on Shockwave Therapy for ED – how does it work on Burlington Urology website

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2. I understand that initial counselling and treatment will be provided by my Urologist and subsequent treatments by Urologist or delegate (RN with expertise in sexual health medicine)

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3. I have had an opportunity to have all my questions addressed about this technology, and I have reviewed the evidence available with my Urologist

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4. I understand that the AUA (American Urology Association) currently considers LiSWT for ED to be investigational

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Consent: LiSWT at Burlington Urology

I authorize LiSWT treatment to be performed by Urologist and/or Delegate (RN), and I feel that I am fully informed about the evidence available on this technology, and the potential benefit, and that I may not experience success with treatment.

Signature

Print Name

Date