



# STIMVIA therapy

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**This leaflet is for patients with bladder conditions and outlines the non-invasive, needle-free treatment called STIMVIA, including benefits and risks.**

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## What is STIMVIA?

STIMVIA is a medical device used for the treatment of overactive bladder (OAB) and other bladder dysfunction conditions. It is the latest generation of tibial nerve stimulation treatment, but instead of using needles under the skin, STIMVIA uses electrode pads on top of the skin. These pads are placed on the skin behind your knee to deliver gentle electrical signals through the skin to the nerves. The treatment's full name is peroneal electric transcutaneous neuromodulation but you'll hear the STIMVIA device being referred to as a transcutaneous tibial nerve stimulator (TTNS).

## What is it used for?

While STIMVIA is primarily prescribed for overactive bladder, it is effective for a range of conditions, including the following:

- **Overactive bladder (OAB):** For sudden, uncontrollable urges to urinate (urgency), frequent urination (frequency), or urine leakage.
- **Bladder pain syndrome / Interstitial cystitis:** For chronic pain, pressure, or discomfort in the bladder region.
- **Bladder sensitivity:** For bladders that feel constantly 'irritated' or send false signals that they are full.
- **Bladder failure (underactive bladder):** For patients who have difficulty emptying their bladder or have weak bladder signals (there is a problem in the communication between your nervous system and your bladder).

## How does it work?

STIMVIA works through a process called 'neuromodulation'. Despite advances in technology and scientific understanding, we still do not know for certain exactly how the mechanism works in every detail, but clinical evidence proves that it does work effectively.

- **The theory:** The bladder is controlled by a complex network of nerves. In many bladder conditions, these lines of communication become 'noisy' with the result that the bladder doesn't function properly. STIMVIA corrects these miscommunications.
  - The device sends a mild electrical signal through the skin at the back of the knee.
  - This signal travels up the nerves in the leg to a network of nerve fibres at the base of the spine and the brain.
  - It acts like a 'reset' for your bladder nerves – calming down an overactive bladder or stimulating an underactive one.

## Aims of treatment

The aim is to help you regain control over your bladder. However, it is important that you have realistic expectations before starting any bladder therapy.

- **The 50% benchmark:** Clinically, a 'good effect' or successful outcome is defined as a 50% reduction in your symptoms. For example, if you currently go to the toilet 12 times a day, reducing this to 6 times a day or less would be seen as a successful treatment.
- **Comparable efficacy:** The success rate of STIMVIA therapy is very similar to other established therapies, including oral medications and bladder botox injections where symptoms can improve but it is unrealistic to aim for a complete 'cure'.
- **Quality of life:** Ultimately, it is unlikely that any single treatment will achieve 'perfection' or completely cure every symptom 100% of the time. However, STIMVIA therapy aims to significantly manage and improve your symptoms, thereby vastly improving your quality of life and confidence.

## What happens during treatment?

The treatment is simple, painless, and needle-free.

- **Preparation:** Please wear or bring clothes that allow our staff to access both of your knees comfortably, for example, a pair of shorts.  
You will be asked to empty your bladder prior to starting each treatment.  
Do not use any moisturising lotions on your legs beforehand. The electrode pads are then placed on the skin at the back of your knees.
- **Bilateral stimulation:** To get the best result, STIMVIA is applied to both legs at the same time and the nurse will adjust the position of the electrode pads until a good signal is seen. This is typically done by seeing a 'twitch' in the leg/toe. You will also have a small electrode pad placed just in front of your bladder over your pubic bone.
- **Schedule:** You will typically attend 12 weekly sessions, with each session lasting 30 minutes.
- **Position:** You will be seated in a chair with your legs up on a pedestal. It is important to sit still in this position throughout the treatment. You can distract yourself by reading a book or scrolling through your phone/tablet.
- **Sensation:** You may feel a tingling or twitching in your foot or heel. This is a good sign the nerve is being targeted; it should not be painful.
- **Aftercare:** After the 30 minute treatment, the nurses will remove all the electrodes from your abdomen and legs and you can go home immediately. You can drive/make your own way home without any limitations.

## Side effects and when STIMVIA may not be suitable

STIMVIA, like all forms of TTNS, is a non-invasive, drug-free treatment for overactive bladder. The treatment is easy to tolerate and has **no reported major side effects**.

Any minor discomforts are rare and typically resolve on their own, including:

- Skin irritation or redness from the electrode pads.
- Mild cramping or slight pain in the lower leg and foot.
- Tingling sensations during the stimulation.

TTNS is generally considered safe, but you should not undergo treatment without consulting a healthcare professional if you are pregnant, have a pacemaker, have epilepsy, or have open wounds or metal implants (like screws or plates) in your lower leg.

If you have any questions, please speak to your consultant or our nurses who can review and determine if TTNS is an appropriate and safe option for your specific medical needs.

## What are the alternative treatments for OAB?

STIMVIA is one of several options for managing bladder conditions. It is important you understand the alternatives so you can make an informed choice:

| Treatment category         | Specific options                                 | Description and impact                                                                                                                                                        |
|----------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Lifestyle modifications | Diet and bladder training                        | Cutting out bladder irritants such as caffeine (tea/coffee), alcohol, and spicy foods. Techniques to 'teach' the bladder to hold on for longer periods.                       |
| 2. Oral medications        | Anti-muscarinics (e.g., Solifenacin, Oxybutynin) | Relaxes the bladder muscle but can cause dry mouth, constipation, and memory issues longer term.                                                                              |
|                            | Beta-3 Agonists (e.g., Mirabegron, Vibegron)     | Relaxes the bladder during the filling phase with fewer side effects than anti-muscarinics.                                                                                   |
| 3. Invasive procedures     | Bladder botox                                    | Injections of Botulinum toxin directly into the bladder wall to paralyse the muscle and stop spasms. Requires a cystoscopy and repeated injections every 6-9 months.          |
|                            | Sacral neuromodulation (SNS)                     | A surgically implanted pacemaker for the bladder placed in the lower back.                                                                                                    |
| 4. Major surgery           | Clam cystoplasty                                 | A major operation where the bladder is cut open and patched with a piece of bowel to make it larger. Usually a last resort with high risks and possibility of further injury. |

## Further reading

There is extensive clinical literature demonstrating the efficacy of TTNS and PTNS for treating overactive bladder, bladder pain / sensitivity, and bladder failure (underactive bladder).

Below are the key papers showing the evidence behind this technology:

### For overactive bladder (OAB):

- <https://pmc.ncbi.nlm.nih.gov/articles/PMC10219410/>
- <https://pubmed.ncbi.nlm.nih.gov/34356261/>
- <https://pmc.ncbi.nlm.nih.gov/articles/PMC8514907/>
- <https://pubmed.ncbi.nlm.nih.gov/34659685/>

### For bladder pain / sensitivity:

- <https://pmc.ncbi.nlm.nih.gov/articles/PMC9782322/>
- <https://pmc.ncbi.nlm.nih.gov/articles/PMC8318015/>

### For bladder failure (underactive bladder):

- <https://pubmed.ncbi.nlm.nih.gov/12639649/>
- <https://www.sciencedirect.com/science/article/pii/S2772973724002595>
- <https://pmc.ncbi.nlm.nih.gov/articles/PMC9612778/>

## Contacting us

The Frederick Potts Unit can be contacted for advice on weekdays between 8.30am – 4.30pm via the Urology Clinical Admin Team (CAT 3a) Tel: 0118 322 8629 or email [rbb-tr.CAT3A@nhs.net](mailto:rbb-tr.CAT3A@nhs.net).

To find out more about our Trust visit [www.royalberkshire.nhs.uk](http://www.royalberkshire.nhs.uk)

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