

Electromagnetic stimulation has been promoted as a treatment for UI, but only weak evidence of the short- and long-term effects has been reported in SRs [647, 648].

A more recent SR found insufficient evidence to suggest that electrical stimulation is beneficial for male patients with post-prostatectomy UI [649].

5.6.3.2.5 Posterior tibial nerve stimulation

Posterior tibial nerve stimulation (PTNS) has been studied as a treatment of UI, especially UUI. Electrical stimulation of the posterior tibial nerve delivers electrical stimuli to the sacral micturition centre via the S2-S4 sacral nerve plexus. Stimulation is done either percutaneously using a fine, 34-G, needle, inserted just above the medial aspect of the ankle (P-PTNS) or transcutaneously using surface electrodes (T-PTNS). Percutaneous-PTNS treatment cycles typically consist of twelve weekly treatments of 30 minutes and T-PTNS treatment cycles typically consists of self-administered, twenty-minute daily sessions, after adequate education.

A female-predominant sham controlled RCT, assessed the effectiveness of PTNS in OAB population. There were 22.8% and 20% males in the treatment and sham arms, respectively [650]. Overactive bladder symptoms improved significantly in 54.5% of patients in the PTNS arm compared to 20.9% in the sham arm. A non-inferiority RCT comparing T-PTNS compared to P-PTNS, reported significant improvements in daytime frequency, urgency and UUI episodes without significant difference between treatment arms after twelve weeks of therapy [651]. A SR on T-PTNS in idiopathic and neurogenic female-predominant (males < 10%) population, reported significant improvement in OAB symptoms in 48-93% of patients and cure of UUI episodes in 25-45% [652].

For PTNS, mild pain and discomfort at the puncture site is the most common adverse event [653]. Small haematomas, swelling, leg tingling and vasovagal reaction to needle placement have also been reported [650]. Treatment adherence is generally high at 89.7% [651]. Contra-indications include a cardiac pacemaker and skin disease at the site of stimulation.

There is some evidence that PTNS may benefit male patients with OAB, but due to too insufficient data, no recommendation on PTNS in males can be made at this time. However, considering the safety of this therapy, it can be offered to male patients as an alternative option prior to more invasive treatments.

Summary of evidence	LE
Prompted voiding, either alone or as part of a behavioural modification programme, improves continence in elderly, care-dependent people.	1b
The combination of bladder training with antimuscarinic drugs does not result in greater improvement of UI but may improve frequency and nocturia.	1b
There is conflicting evidence on whether the addition of BT, electrostimulation or biofeedback increases the effectiveness of PFMT alone.	1b
Pre-operative PFMT does not confer additional benefit to men undergoing radical prostatectomy.	1b
Electrical stimulation may add benefit to PFMT up to six months.	2
There is limited evidence for the effectiveness of PTNS in male population.	2
There is no evidence that PTNS cures UUI in male population.	2

Recommendations	Strength rating
Implement prompted voiding for patients with urinary incontinence (UI) where appropriate.	Strong
Offer bladder training as a complementary treatment for UI.	Weak
Offer pelvic floor muscle training alone or in combination with biofeedback and/or electrostimulation to men undergoing radical prostatectomy to speed recovery from UI.	Weak

5.6.4 Pharmacological management

5.6.4.1 Drugs for urgency urinary incontinence

Muscarinic receptor antagonists [654-657] and beta-3 agonist [308-310, 658-661] are currently the first-line pharmacological treatments for UUI. The mechanism of action, efficacy, and safety and tolerability profiles of both classes of drugs are discussed in detail in sections 5.2.3 and 5.2.4, respectively.