

A revolutionary design

Helen O'Callaghan reports on a non-invasive treatment for pelvic floor weakness and urinary leakage

It's more common than hay fever, yet women just don't talk about pelvic floor weakness, a condition resulting in intermittent urinary leakage.

It affects one in three women in varying degrees of severity — 82% consider their symptoms severe, while 70% wear absorbent pads to deal with it. Yet, 68% of women never seek medical help.

"Women are embarrassed. It's called stress urinary incontinence and they associate the word 'incontinence' with old ladies being wet all the time," says Dr Ruth Maher, an associate professor at the Department of Physical Therapy, Creighton University in Omaha.

Maher is one of the original four inventors of recently launched innovo-therapy, a non-invasive treatment for pelvic floor weakness. Innovo-therapy directly targets pelvic floor weakness — the root cause of urinary leaks — unlike many other treatments which simply mask symptoms.

Pelvic floor weakness plagues women, says Maher, because of "all the things they go through across their life span" — pregnancy, childbirth and menopause.

"During pregnancy, muscles get stretched almost four times their normal length, so they can't contract. They lack stiffness. When a woman coughs, sneezes or does any sort of exercise, the rise of pressure in the abdomen pushes down on the weak pelvic floor, which can't provide resistance, so there's leakage," explains Maher. The problem can also be caused by over-exercise or being overweight.

Impact on women's lives is "atrocious", says Maher and goes way beyond the cost of absorbent pads. "It hugely impacts on quality of life. Women don't exercise so they put on weight. They get depressed. They won't wear nice clothes because they're afraid of leakage and smell. They plan shopping trips around where the bathrooms are. They pack extra underwear in their bag. They're terrified of leakage during sex so it ruins relationships."

In fact, a survey conducted by Galway-based Atlantic Therapeutics, the developers of innovo-therapy, found 55% of women felt anxious and depressed as a result of the problem and 20% said it impacted their sex life.

Maher says the common exhortation, 'oh, don't make me laugh or I'll wet myself', has normalised a condition that — though widely prevalent — should never be accepted as a woman's normal lot in life. When running her own practice in the US, Maher became frustrated trying to teach women how to do strengthening pelvic floor contrac-

tions. "The muscles inside don't move a joint — they basically just control pressure — so a doctor can't see from the outside whether a woman is doing them.

"I started using ultrasound imaging and I noticed when women said they were doing pelvic floor exercises, they were actually doing inappropriate contractions using muscle groups other than the pelvic floor ones."

About 40% of women are unable to voluntarily do pelvic floor exercises.

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"It's a subtle contraction. Women don't have an awareness of the area – they find it hard to distinguish between their bum and the muscles inside the pelvis."

Innovotherapy — the new pelvic floor strengthening technology — consists of a hand-held controller attached to a two-part garment that looks like a pair of bike shorts with one wrap for each leg. Electrodes embedded in the garment send targeted impulses via conductive pads (attached to upper thigh and buttocks)

to safely and effectively activate all muscles of the pelvic floor. The device essentially does your pelvic floor exercises for you. Users can feel their entire pelvic floor being "recruited" without having to do any voluntary activation — so you can't make a mistake or do it 'the wrong way'.

"The person switches it on. They then increase the intensity to the maximum comfort level. They should feel a contraction high up between the legs. It's a very unusual sensation," says Maher. "It recruits

all the muscles so it feels like a very intense lift. Women start laughing when they get to this point. They say 'this is weird' – it's a peculiar, odd sensation inside the pelvis. With ultrasound, you can see it lift up the bladder. We've seen the contraction happen in 100% of women tested while using it."

"The device is used at home, at least five times a week for 30 minutes at a time. The optimum position for wearing/using it is standing. After 12 weeks, women with mild inconti-

nence saw 90% reduction in leakage, while those with moderate-to-severe saw 65-70% reduction. Once the problem begins to resolve, women can use the device on a maintenance basis once or twice a week. Using innovotherapy also has a learning benefit, says Maher. "Usually, after their first time trying it, women are able to do a pelvic floor contraction on their own, even if it mightn't be very strong."

Work began on the Innovo project in 2008 as part of an industry-academia partnership between Bio Medical Research Limited (BMR) and University College Dublin (UCD). It was co-funded by BMR and Enterprise Ireland. The clinically proven device has been used in the UK, Germany and France.

Maher reports women saying it's like winning the lotto. "They say 'I'm only getting the odd leak. I can wear white trousers again. I don't have to always know where the bathroom is.'"

Innovotherapy is available at selected Lloyds Pharmacy outlets and online for €399 at www.restorethefloor.com/ie. Further expert and patient resources are also available to users via the free INNOVO® App, which also allows women to track their progress.



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