

Newsletter No.3 2013

Dear Colleagues,

Welcome! to the October WHTA newsletter. This is the third of the four newsletters for the 2013 membership year. The final newsletter will be sent in early January prior to the membership renewal date of 31st Jan 2014. In addition to the three newsletters so far, you all should have previously received the links to the 6 Animated Mini-Tutes developed for Members this year and have Dropbox access to WHTA shared documents/

Over the last few months there has obviously been both the APA conference and the CFA conference which many of you attended. Because of these events I didn't plan any WHTA based training courses for October. Instead, I attended the APA conference for a few days and also had two holidays! I had a 4 day camping holiday on the Hawkesbury River and a 5 Day 'Theme Park Holiday' on the Gold Coast. ☺

Being the only female in my family with two little boys (aged 9 and 11) and one big boy (I won't tell you his age!) I am sure you can all guess that the five days on the Gold Coast was simply a week long journey of adrenalin fuelled Thrill Rides / Rollercoasters. I can honestly say, you realise how much pelvic floor is engrained in your thoughts when you are sitting on the Batwing Space Shot ride at Movie World, about to be flung 150m up in the air at super-fast speed and all you keep saying to yourself is "Squeeze your pelvic floor, Squeeze your pelvic floor!".

Anyway, I do hope that you find this newsletter interesting and that hopefully there is something in it for everyone to enhance clinical practice.

Have a lovely day,

Taryn

Contents pp

Letter from Taryn 1

Clinical Focus Topic 2
1. Vitamin D and Urinary Incontinence

Clinical Tip 9
Important History Taking Questions in the Woman with Endometriosis and Dyspareunia

In the News 13
Summary of Some Recent Research over the last few Months

Books Reviews 23
1. A Head-Ache in the Pelvis
2. Ending Female Pain

Final Note 27
FREE Webinar on Coital Incontinence for Members who renew in December.

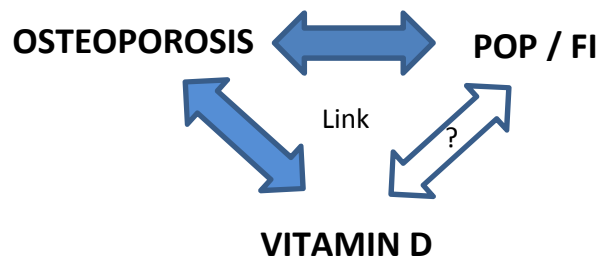
Clinical Focus Topic: *Vitamin D and Pelvic Floor Symptoms*

INTRODUCTION

Vitamin D has long been known for its association with bone and connective tissue density. Due to this link, reduced Vitamin D levels are accepted as an important risk factor for osteoporosis. Interestingly, epidemiological studies have also recently demonstrated a link between osteoporosis and pelvic floor disorders such as pelvic organ prolapse and faecal incontinence.

Vitamin D receptors have been found in human muscle tissue. As a result, Vitamin D is thought to influence not only bone and connective tissue density, but also striated muscle strength. Some research has even shown Vitamin D receptors in smooth muscles such as the detrusor and prostatic tissue. Therefore, the question now being asked by researchers is.....

“In women with both Osteoporosis and Pelvic Floor Disorders, could the common underlying link be a Vitamin D deficiency that is impacting on bone, muscle and fascial density/function?”



LET'S START WITH SOME LITTLE FACTS ABOUT VITAMIN D.....

PERSONAL DISCLOSURE

My Limitations on Writing this Review

I think it is important to acknowledge my limitations in writing the initial part of this review which is simply an overview of Vitamin D itself. I am not a dietician nor a naturopath. Therefore my knowledge on Vitamin D is not extensive. As a result, this initial section will simply consist of a few basic facts about Vitamin D before turning to my main focus which is to summarise the research on Vitamin D and pelvic floor disorders.

Note; I may ask one of our WHTA Physio members who is also a qualified naturopath to do a talk for us in the future on this!! (hint hint Alyssa ☺)

How do we get Vitamin D ?

The first important fact to realise is that there are many forms of "Vitamin D" and its precursors. The form that is ultimately measured in clinical studies is known as 25-hydroxyvitamin D₂, commonly abbreviated to 25(OH)D.

PROCESS OF CREATING 25(OH)D₂

The process is commonly started by either a chemical reaction in the skin or via dietary intake of Vitamin D rich foods. In general though, a person's primary source is usually via the chemical reaction in the skin, with only 100-200IU per day usually coming from food sources.

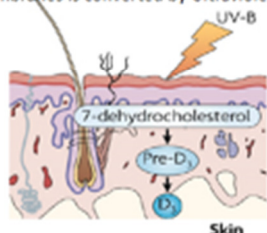
1. The chemical reaction in the skin starts with Ultraviolet B exposure causing the Vitamin D precursor '7-dehydrocholesterol' being converted to Provitamin D₃.
2. Provitamin D₃ is then transported via blood to either Adipose tissue or the Liver
3. In ADIPOSE TISSUE Provitamin D₃ is stored
In the LIVER Provitamin D₃ is converted to 25-hydroxyvitamin D₂, the substance which can then be converted to an active form by the kidney for influence over calcium homeostasis**.

**Calcium then affects bone and connective tissue density, but also affects muscle function via passage through calcium channels and interplay with ATP.

SUMMARY: SOURCES OF VITAMIN D

1. Primary Source is via a stimulated reaction in the skin following Sunlight Exposure

A cholesterol called 7-dehydrocholesterol which is found in skin cell membranes is converted by Ultraviolet B exposure to Provitamin D₃



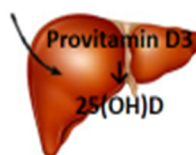
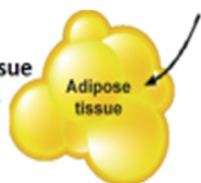
1. Secondary Source is via Fortified and Non-Fortified Foods

However, only ~100-200IU of Vit D comes from dietary sources each day



2. Provitamin D₃ is then transported via serum to either

3. Adipose Tissue for Storage



3. Liver for conversion of Provitamin D₃ to 25-hydroxyvitamin D₂

Note: The level of 25(OH)D is what is measured in most clinical studies to determine Vitamin D status

How are Vitamin D Levels Measured Clinically?

A person's Vitamin D status is determined by a blood test that measures the serum **25(OH)D levels**.

Vitamin D cut-offs:

It can be seen from the table below that there is some variation in the literature regarding the accepted cut-offs for diagnosing "Vitamin D Insufficiency" vs "Vitamin D Deficiency". However, >30ng/ml is generally regarded as normal.

	<u>Badalian et al (2010)</u>	<u>Parker-Autry et al (2012)</u>
NORMAL =	>30	>30
Vitamin D <i>Insufficiency</i>	20 – 30	15 - 30
Vitamin D <i>Deficiency</i>	<20	<15
SERUM LEVEL OF 25(OH)D units ng/ml		

SOME FACTS ABOUT VITAMIN D DEFICIENCY

- Prevalence rates vary from 38% to 73%
- Prevalence rates vary based on skin pigmentation, geographic location and BMI / Obesity rates
- Countries at high and low latitude tend to have higher rates of seasonal vitamin D deficiency compared to those closer to the equator due to the reduced daylight hours.
- It affects people of all ages, however the implications for adults and young children are more severe
- Is known to cause osteoporosis, pain and muscle weakness.
- Due to the link with muscle weakness, there has also been found a link between Vit D Deficiency and falls
- It is also thought to have a role in some cancers, cardiovascular disease, diabetes, and pregnancy morbidity.

Research on the Relationship between Vitamin D Levels and Pelvic Floor Disorders

Review of 4 relevant research papers....

1. Badalin SS and Rosembaum 2010, Vitamin D and pelvic floor disorders in women: results from the National Health and Nutrition Examination Survey, *Obstetrics and Gynecology*, vol 115 (4), pp795-803
2. Parker-Autry, Burgio and Richter 2012, Vitamin D Status in women with pelvic floor disorder symptoms, *International Urogynaecology Journal*, vol 23 (11), p1699-1705
3. Vaughan C, Johnson T, Goode P, Redden D, Burgio K and Markland A (2011), Vitamin D and lower urinary tract symptoms among US men: results from the 2005 – 2006 National Health and Nutrition Examination Survey.
4. Rhodius-Meester H, Otten H and Hamburger H (2010), Urinary Incontinence resolved after adequate vitamin D supplementation: a report of two cases. (2 CASE STUDIES WITH TREATMENT OUTCOME) *Journal of the American Geriatric Society*, vol 58 (12), pp 2438-2439.

1. Badalin SS and Rosembaum 2010, Vitamin D and pelvic floor disorders in women: results from the National Health and Nutrition Examination Survey, *Obstetrics and Gynecology*, vol 115 (4), pp795-803

Location: United States of America

Participants: n = 1,881 non-pregnant women. All participants >20 years old

Methods: Screened as part of the National Health and Nutrition Examination Survey, USA

- Pelvic Floor Disorders (PFD)
- Vitamin D Levels via blood test of 25(OH)D

RESULTS:

*Results in black, marked with an asterisk and underlined reached clinical significant p<0.05

	All Women > 20years		Only women > 50 years	
	Normal >30 ng/ml	Insufficiency <30ng/ml	Normal >30 ng/ml	Insufficiency <30ng/ml
Prevalence of Urinary Incontinence	<u>6.2%*</u>	<u>9.8%*</u>	<u>14.0%*</u>	<u>25.7%*</u>
Prevalence of Pelvic Organ Prolapse	2.8%	3.7%	<u>3.3%*</u>	<u>8.6%*</u>
Prevalence of Faecal Incontinence	6.2%	9.8%	12.5%	14.5%
Prevalence of <i>AT LEAST ONE</i> PELVIC FLOOR DISORDER	<u>16.7%*</u>	<u>24.8%*</u>	<u>27.9%*</u>	<u>35.5%*</u>

OTHER SIGNIFICANT RESULTS FOR ALL WOMEN >20 years of age

- Women with a 25(OH)D level >30 had a 25% lower risk of PF disorders compared to women with 25(OH)D<30
- Every 5 point increase in 25(OH)D level resulted in an ~6% decreased risk of pelvic floor disorders
- With specific regard to urinary incontinence rates, a 25(OH)D level >30 resulted in a 30% reduced risk compared to women with a level <30.

OTHER SIGNIFICANT RESULTS SPECIFICALLY FOR WOMEN >50 years of age

- Women with a 25(OH)D level >30 had a 21% lower risk of PF disorders compared to women with 25(OH)D<30
- Every 5 point increase in 25(OH)D level resulted in an ~8% decreased risk of pelvic floor disorders
- With specific regard to urinary incontinence rates, a 25(OH)D level >30 resulted in a 45% reduced risk compared to women with a level <30.

2. Vaughan C, Johnson T, Goode P, Redden D, Burgio K and Markland A (2011), Vitamin D and lower urinary tract symptoms among US men: results from the 2005 – 2006 National Health and Nutrition Examination Survey.

BACKGROUND From p. 1292:

“Vitamin D receptors are known to exist in prostate and bladder tissue, and agonists for the vitamin D receptor may have anti-inflammatory and anti-proliferative properties. Vitamin D deficiency could influence the development of benign prostatic hyperplasia (BPH) because the active form of Vitamin D is a regulator of prostatic cell growth through anti-proliferative effects.”

METHODS:

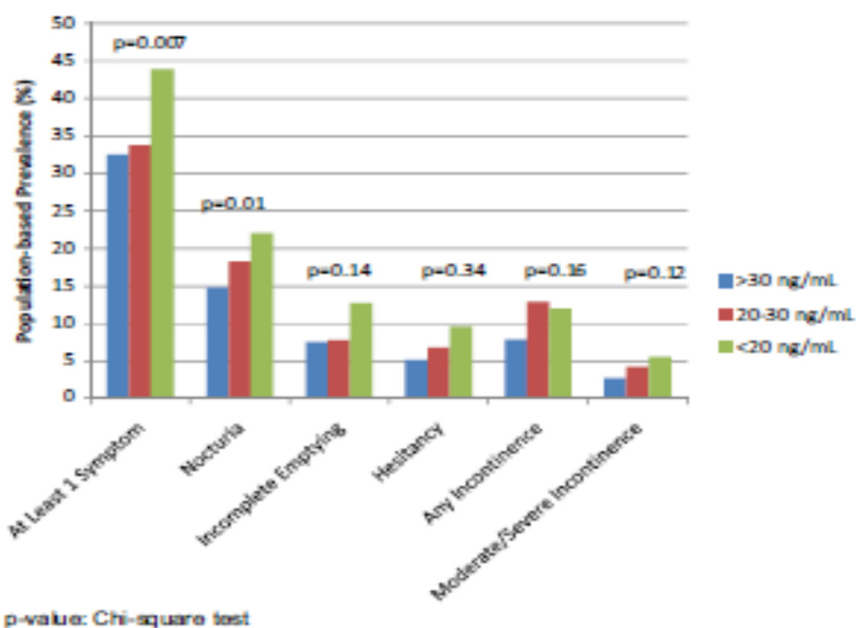
Participants were interviewed in their homes regarding LUTS. Physical examination including height, weight, abdominal girth, also occurred. Venepuncture to determine levels of 25(OH)D was carried out.

Vitamin D Status was classified as:

>30	= Normal,
20-30	= Insufficient,
<20	= Deficient

RESULTS:

Progressively lower levels of 25(OH)D were associated with increased prevalence of all urinary symptoms including nocturia, incomplete emptying, hesitancy, and urinary incontinence (any incontinence or mod/severe incontinence).



Whilst the difference between normal and “insufficiency” (20-30) did not always reach significance, there was a significant difference between those with Normal Vitamin D and those with Deficiency (<20ng/mL)

Figure 1. Prevalence of individual LUTS and urinary incontinence according to vitamin D levels among US men.

3. Parker-Autry, Burgio and Richter 2012, Vitamin D Status in women with pelvic floor disorder symptoms, *International Urogynaecology Journal*, vol 23 (11), p1699-1705

METHODS:

Reviewed 394 women who presented to a gynaecology clinic over a 2 year period.

- Assessed symptoms of pelvic floor dysfunction via multiple validated questionnaires
 - o POPDI-6, CRADI – 8; UDI-6; PFDI – 20, MESA-stress; MESA – urge; MESA – total, IIQ-7
- Determined 25(OH)D levels via blood test

RESULTS:

- Women with evidence of pelvic floor disorder symptoms had lower 25(OH)D levels than women without pelvic floor symptoms (29.3ng/ml vs 35.0ng/ml)
- The Incontinence Impact Questionnaire (IIQ-7) however, was the only validated questionnaire that demonstrated a significant difference in symptom score between women with vitamin D insufficiency and normal vitamin D (Score = 42.7 vs 28.8)
- Higher IIQ-7 scores were independently associated with Vitamin D insufficiency ($p < 0.001$).

4. CASE STUDIES REPORT

Rhodus-Meester H, Otten H and Hamburger H (2010), Urinary Incontinence resolved after adequate vitamin D supplementation: a report of two cases.

***Journal of the American Geriatric Society*, vol 58 (12), pp 2438-2439.**

Presented two case studies of women aged >50 years old who had resolution of their urinary incontinence following administration of Vitamin D supplementation.

CASE #1:

Patient was a 78yo female with a long history of allergic rhinitis, well controlled asthma, and hyperlipidemia. She had been identified as having a Vitamin B deficiency 6months previously and commenced having Cobalin injections since that time. She was fully functioning in her daily life and worked part-time.

She presented with urge urinary incontinence with symptoms of longer than 6months duration that required regular pad use. Past History included hysterectomy 36 years prior and one vaginal delivery.

Laboratory tests included complete blood count, thyroid function and urinalysis which were all normal

Baseline Weight / Height/BMI: 75.8kg, 1.68m, BMI = 26.9

Baseline 25(OH)D level: 10ng/ml

TREATMENT #1: Commenced on 50,000IU of vitamin D2 *twice per month* (ie 100,000IU per month).

Results at 1 year:

25(OH)D Level: 21ng/L

Urinary incontinence: Persisted but patient declined referral to a gynaecologist as she believed her condition was incurable.

TREATMENT #2: Commenced on 50,000IU of vitamin D2 *weekly* (ie 200,000IU per month) for a further 6/12

Results at 18 months:

25(OH)D Levels: 54ng/ml

Incontinence: Patient reported that her urinary incontinence had completely resolved and she had not worn a pad for over a month.

CASE #2:

Patient was a 59yo female with a long history of allergic rhinitis, and complained for chronic multiple joint pains. She presented with a several month history stress urinary incontinence with her main symptoms occurring when she stood up or sneezed. She had no history of hysterectomy or bladder surgery.

Laboratory tests included complete blood count, thyroid function and urinalysis which were all normal. She was referred to a gynaecologist who gave a diagnosis of "loss of external sphincter control". She was suggested to perform pelvic floor muscle exercises, but refused to continue after two weeks as she experienced pelvic and hip pain.

Baseline Weight / Height/BMI: 67kg, 1.60m, BMI = 26.2

Baseline 25(OH)D level: 13ng/ml

TREATMENT #1: Commenced on 50,000IU of vitamin D2 *weekly for 12 weeks*

Results 12 weeks:

25(OH)D Level: 43ng/L

Urinary incontinence: Had completely resolved and her joint pain had significantly improved.

She continued to take Vitamin D2 50,000IU 3 times per month and her most recent blood level was 70ng/ml.

DISCUSSION BY AUTHOR – Direct Copy from Journal Article, page 2439.

"These two cases suggest that vitamin D deficiency is the underlying condition associated with UI. Significant improvement in UI after "adequate" vitamin D blood levels have been achieved with aggressive treatment supports this."....."Side effects resulting from the use of medications such as corticosteroids or antihistamines that may have contributed to UI are unlikely because there were no changes in these medication uses in either of these cases. There is debate as to what blood levels are considered "adequate" for vitamin D supplementation..... Future studies such as a clinical trial will further illustrate the relationship between vitamin D deficiency and UI.

CLINICAL TIP

Important History Questions in Patients with Endometriosis and Dyspareunia

As a general rule, physiotherapists embarking on a career in pelvic floor dysfunction tend to commence their journey with training in the “relaxation” disorders (ie stress incontinence, pelvic organ prolapse). For many, it is a brand new journey that requires a completely new set of history taking skills including questioning on fluid intake, bladder and bowel function, symptoms of urinary incontinence, pad usage, sexual dysfunction and so forth.

Most introductory courses cover these initial history taking skills with instruction given on the types of questions needing to be asked, hints on how to ask them and explanations of what each question is telling the physiotherapist with regards to possible underlying pathophysiology.

Then one day a different type of pelvic floor patient walks through the door.....

Casey is a 26yo female who presents to your clinic with a history of severe dysmenorrhea (painful periods) since menarche at 14yo. She was ultimately diagnosed with endometriosis via a laparoscopy at age 19, and has had 2 subsequent laparoscopic resections of endometriosis at age 21 and 25. She has now been referred to you by her gynaecologist as she has severe dyspareunia (pain with intercourse) and the doctor thinks physiotherapy may be helpful.

WHAT ARE SOME OF THE QUESTIONS I WOULD ASK?

CONSIDERATIONS.....

Whilst nothing is ever definite, it is obviously highly likely there is a link between this lady's history of endometriosis and her dyspareunia. Recurrence of disease or simply persistent dysmenorrhea exacerbating central sensitization mechanisms are all very relevant in determining the underlying cause of her current dyspareunia. It is therefore vital to take a thorough history regarding her menstrual periods (both past and current), current pelvic pain and previous responses to surgery.

FIRST AREA OF QUESTIONING:

Current Medical Management of Menstrual Cycle

It is known that the more menstrual periods a woman has after a surgical resection of endometriosis the more likely it is that she could have a recurrence of disease. As a result, after surgery most women are encouraged to consider either

- being on the Oral Contraceptive Pill continuously (ie skipping the sugar pills so as to prevent having periods)
- having a Mirena IUD inserted to stop her periods (or at least reduce them to 'spotting')

OR.....

- in more severe cases, going onto a GnRH agonist temporarily to suppress oestrogen eg Zoladex (note: these can only be used for a very limited time due to severe consequences with long term use eg osteoporosis).

Therefore....

QUESTION SET #1:

- a. *"Between each of your laparoscopies and now, were you placed on any type of contraceptive or hormonal treatment to reduce your periods?"*

If she is on the Oral Contraceptive Pill

- b. *"Does your doctor get you to skip the sugar pills and try to simply not have a period?"*
c. *If yes, "how long can you be on the OCP before you tend to get a breakthrough bleed?"*
d. *"What is the pain like when you have a breakthrough bleed?"*

If she has a Mirena

- b. *"Do you have a period at all with the Mirena?"*
c. *"If yes, what is your pain like when you have a period?"*

If she is on a GnRH agonist (eg Zoladex)

- b.. *"How long have you been on Zoladex?"*
c. *"How long has your doctor said s/he is happy to keep you on Zoladex?"*
d. *"What is the plan after you stop Zoladex?"*

SECOND AREA OF QUESTIONING:	Effectiveness of Surgeries
-----------------------------	----------------------------

As would be expected, with each subsequent surgery there is the potential for increased scar tissue as well as central neural changes that can result in centrally mediated pain (neural sensitisation). As a result, most women typically have their best outcome following their first surgery, with progressively less benefit with each subsequent surgery.

In women who keep having substantial relief following subsequent laparoscopic resections it is likely that their pain has been due to

1. Continual recurrences of disease that needs resection, or
2. Not all of the disease was originally cleared in their first surgery, but was resected in subsequent surgeries.

Either way, in this scenario, the woman's pain appears to have a strong link with actual existence of disease (note: the degree of pain in endometriosis is only ever related to existence of disease, not volume/extent of disease. A small volume of disease can produce just as much pain as a large volume of disease).

In contrast, in women who indicate that they had good relief of pain after their first laparoscopy, but have experienced progressively less benefit with each subsequent surgery, it is highly likely that any current dysmenorrhea or pelvic pain

has either a large central component or is influenced substantially by scar tissue / adhesions / muscular overactivity rather than disease. This central component and/or muscular overactivity obviously needs a different treatment approach than dyspareunia related to current active endometriosis.

Therefore.....

QUESTION SET #2:

A) Menstrual Periods and Pelvic Pain prior to first Laparoscopy

- *"Before you had any laparoscopies, what were your periods like?"*
 - *On a scale of 0-10 how severe was the pain?*
 - *How many days would you be in pain for?*
 - *How much pain relief did you need to take? Did it actually control your pain?*
 - *Could you get out of bed / go to work when you had period pain?*

B) Menstrual Periods and Pelvic Pain after Primary Laparoscopy

- *"How effective was your first laparoscopy in reducing your period pain?"*
 - *What were your periods like after your first surgery?*
 - *How long did you have relief before your pain with periods started to get worse again?*
 - *What was the main symptoms that caused you to consider having a second laparoscopy?*

C) Menstrual Periods and Pelvic Pain after Subsequent Laparoscopies

- *"Were your second and third laparoscopies performed by the same surgeon?"*

Note: If a first or second surgery is not effective in reducing pain some women choose to change surgeons. As different surgeons have differing surgical expertise, sometimes a subsequent surgery is more effective because it is performed by a more skilled surgeon
- *How effective were your second and third laparoscopies?*

Note: if the patient received benefit from her first laparoscopy, but did not gain any benefit from her most recent laparoscopy (or if it made her worse), it is likely that her current mechanism of pain is unrelated to a recurrence of endometriosis. It could be centrally mediated or related to muscular overactivity.

THIRD AREA OF QUESTIONING:

Dyspareunia:

- **primary or secondary?**
- **related to the endometriosis or the surgery or neither?**

- How old were you when you first became sexually active?
- Has it always been painful to have intercourse?
 - If yes:

- Does it tend to be better or worse in the first few months after a surgery?
- Have you ever noticed whether your intercourse pain is worse when your period pain begins getting worse again

Notes: women whose dyspareunia is better in the first few months after each surgery and then progressively gets worse are more likely to have a direct endometriosis cause for their dyspareunia. This type of pain is also more typically a deep pain, or a pain that is worse in the hours after intercourse rather than during.

- If no:
 - When did it first start to become painful?
 - Since your last surgery, is it getting progressively worse, better or staying the same?

Notes: In women whose dyspareunia has become progressively worse after each surgery, it is more likely to be due to either a central mechanism or a secondary muscular hypertonicity in response to surgery. This is the Grouping physiotherapy is most essential for.

IN THE NEWS

What research has recently been published?

Outlined below are some major points from research recently published online. Most of these articles are prior to official publication in their respective journals – but have been released ahead of print online. The dates are therefore often the online publication date.

Why are some women with pelvic floor dysfunction unable to contract their pelvic floor muscles?

Kim, Wong and Moore 2013, Aust NZ Journal of Obst Gyn, epub ahead of print October 1st.

Found that 67% of women who are unable to contract their PFM despite physiotherapy show levator avulsion on transperineal ultrasound.

LINK TO ABSTRACT: <http://www.ncbi.nlm.nih.gov/pubmed/24116976>

Does episiotomy protect against injury of the levator ani in its pubic insertion after normal vaginal delivery?

Cassado et al 2013, Neurourology and Urodynamics, epub ahead of print, Sept.

Performed 4D (real time) transperineal ultrasound scanning on n = 194 women after *normal vaginal delivery* with and without episiotomy.

Results:

Avulsion was identified in 10.9% of women with episiotomy and 15.1% of women without. This was not found to be *statistically significant*.

Author's Conclusion:

Episiotomy does not appear to be associated with levator ani avulsion at the pubic insertion.

Taryn's Comments:

Comment #1:

The positive of this study was that all the women had a normal vaginal delivery. Often episiotomy is performed in preparation for a forceps delivery. As forceps is a known risk factor for avulsion this obviously impacts on a researcher's ability to assess the relationship between episiotomy and risk of avulsion. By narrowing the selection criteria to "normal vaginal delivery only", the authors were able to more specifically look at episiotomy on its own as an independent risk / protective factor.

Comment #2:

Many authors have postulated in recent years that an episiotomy may in fact reduce the chance of avulsion. It has been suggested that the increased vaginal opening induced by an episiotomy may reduce the expulsive force needed to birth, and consequently reduce the force placed on the pubic insertion of the levators.

Interestingly, the raw data demonstrated that the episiotomy group only had a 10.9% incidence of avulsion, whilst the no episiotomy group had a 15% incidence of avulsion. Whilst this did not come out 'statistically significant', it would be interesting to know whether this is purely due to insufficient power in the study (ie the numbers were simply too low to be certain that the result wasn't just by chance). If the study was repeated on 1000 women and the same percentages occurred, we may find that this difference does reach statistical significance (ie $p < 0.05$).

Therefore, I think I unfortunately need to say the classic Cochrane statement "we need more studies before we can be certain there isn't a link!!" ☹

LINK TO ABSTRACT: <http://www.ncbi.nlm.nih.gov/pubmed/24009145>

Pelvic Floor Biometry during a first singleton pregnancy and the relationship with symptoms of pelvic floor disorders: a prospective observational study

Chan et al 2013, British Journal of Obstetrics and Gynaecology, Oct 22 e-published ahead of print

Performed both Translabial Ultrasound (3D) and a Standardised Questionnaire in the first, second and third trimesters of **405 nulliparous women** during their **first pregnancy**.

Primary Results – When comparing first and third trimester

- Significant descent of Bladder Neck, Cervix and Anorectal Junction was seen by third trimester when compared to 1st trimester
- A Significant increase in Levator Hiatal Area was demonstrated by third trimester
 - ~ 15.1% increase in resting levator hiatus area
 - ~ 24.7% increase in levator hiatal area on valsalva
- There was a significant increase in the percentage of women reporting pelvic floor symptoms by 3rd trimester.

The percentage of nulliparous women experiencing:

 - SUI increased from 9.4% to 36.5% by 3rd trimester
 - UUI increased from 4.9% to 15.6% by 3rd trimester
 - Prolapse symptoms increased from 11.4% to 37.3% by 3rd trimester
- Faecal Incontinence rates did not change from first to 3rd trimester
- Risk factors for development of Stress Urinary Incontinence during pregnancy were
 - Bladder Neck descent on Valsalva evident in first trimester

- Bladder Neck descent at Rest evident in third trimester
- Evidence of Increased HA despite PFC in either first or second trimester
- Increased Maternal Age
- Risk factors for development of Prolapse Symptoms were:
 - Evidence of descent of anorectal junction
 - Increase in levator hiatal area at rest

LINK TO ABSTRACT: <http://www.ncbi.nlm.nih.gov/pubmed/24148651>

Familial predisposition to pelvic floor dysfunction: prolapse and incontinence surgery among family members and its relationship with age or parity in a Swedish population

Hamer and Persson 2013, European J Obst and Gynaecology, epub ahead of print

Assessed the risk of a woman having POP / SUI surgery at some point in her life, when there is a family history of POP / SUI surgery (either mother or sister).

Found that women with a

- Sister who had POP/SUI surgery had 4.69 times the risk of having POP/SUI surgery herself.
- Mother who had POP / SUI surgery had 2.17 times the risk of having POP / SUI surgery herself

In particular, women whose sisters were operated on at a young age (<50years) and with low parity were at particular risk.

However, a woman whose sister / mother was only operated on at an older age with high parity were not at significantly increased risk compared to women without a family history of POP / SUI surgery.

LINK TO ABSTRACT: <http://www.ncbi.nlm.nih.gov/pubmed/23928477>

Outcomes of a Comprehensive Non-Surgical Approach to Pelvic Floor Rehabilitation for urinary symptoms, defecatory dysfunction and pelvic pain.

Starr et al 2013, Female Pelvic Medicine and Reconstructive Surgery, vol 19, no. 5, pp 260 – 65

This study reviewed the outcomes of n = 778 women referred to physiotherapy for urinary, bowel, pelvic pain and sexual symptoms.

Management included a combination of PFMT, biofeedback, electrical stimulation, constipation management, behaviour modification, incontinence devices and vaginal oestrogen (patients did not necessarily receive all management options – treatment was determined by health professional).

RESULTS:

In women who completed a minimum of 5 therapy sessions the average symptom improvement was 80% for urinary incontinence, defecatory dysfunction and pelvic pain.

LINK TO ABSTRACT: <http://www.ncbi.nlm.nih.gov/pubmed/23982573>

Combination of foot electrical stimulation and tolterodine eliminates bladder overactivity in CATS.

Schwen et al 2013, epub ahead of print

Performed urodynamics on anaesthetised cats who they induced detrusor overactivity by instilling 0.25% acetic acid into their bladders.

Measurements:

1. Baseline bladder function was assessed.
2. Bladder Fill was then repeated with Foot stimulation alone (5Hz) at 2 and 4 times (2T and 4T) the intensity required to induce toe movement with the aim of inhibiting bladder overactivity.
3. Bladder fill then repeated with Cumulative doses of tolterodine
4. Bladder Fill repeated with combination of Tolterodine and Foot Stimulation.

Results:

- Irritation of the bladder with AA reduced bladder capacity to 23.5mls
- Adding Foot stimulation alone inhibited bladder overactivity and increased bladder capacity to 50.7mls
- Adding tolterodine alone at 0.3mg/kg increased bladder capacity to 65.6mls
- Adding tolterodine plus 5Hz electrical foot stimulation increased bladder capacity to 86.2mls

When foot stimulation was added to treatment complete inhibition of bladder overactivity could be achieved at a lower tolterodine dose of 0.1mg/kg.

TARYN'S COMMENT:

Obviously the downfall of this study is that it is on CATS, and also that the cats were ANAESTHETISED (not particularly valid for human beings who are awake!!)

However, like all initial animal studies, it does enable us to start hypothesising about future treatment possibilities. Eg In our patients who experience a large degree of side effects when on antimuscarinics..... *Could they possibly get the same benefit on a lower dose if combined with electrical stimulation treatment?*

LINK TO ABSTRACT: <http://www.ncbi.nlm.nih.gov/pubmed/24038323>

Electrical Stimulation of Somatic Afferent Nerves in the Foot Increases Bladder Capacity in Healthy Human Subjects

Chen et al 2013, Journal of Urology, epub ahead of print

METHODS:

n = 8 subjects performed a 3 Day voiding diary.

On the second day transcutaneous electrical nerve stimulation was applied:

- Applied for 90minutes through skin surface electrodes to the sole of the foot.
- Pulse Frequency = 5Hz
- Rectangular wave form with pulse width 0.2ms
- Intensity = 2-6 times the minimum stimulation needed to induce a toe twitch . Final intensity set by subject to be the maximal level that did not cause discomfort.

RESULTS:

Average Voided Volume per void prior to stimulation was 350+/- 22mls in the 24hours prior to stimulation

Average Voided volume increased to 547ml for up to 5hours after stimulation.

Average voided volume returned to 363mls within 36hours after stimulation.

CONCLUSIONS OF AUTHORS:

Foot stimulation can delay bladder filling sensations and significantly increase bladder capacities in healthy humans without OAB. Although the study group was small, our results support moving forward with clinical trials of foot neuromodulation in OAB patients

TARYN'S NOTE:

It is important to note that this study was performed on 8 people with "normal" bladders. The research obviously needs to be repeated on a larger cohort and on people with 'dysfunctional' bladders.

LINK TO ABSTRACT: <http://www.ncbi.nlm.nih.gov/pubmed/24113017>

Self Induced Plantar-Flexion objectively reduces wave amplitude of detrusor overactivity and subjectively improves urinary urgency: A pilot study

Stav et al 2013, Neurourology and Urodynamics, epub ahead of print.

They performed urodynamics on 22 patients with confirmed detrusor overactivity.

- Detrusor Overactivity (DO) Pressure was assessed via pressure transducer in the bladder and compared to pressure transducer in the rectum
- Severity of urgency during DO episodes was rated by the patient on a 10 point VAS

They monitored a minimum of 3 detrusor overactivity waves in each patient.

Intervention:

On the first detrusor overactivity wave they ask the patient not to do anything.

On the 2nd or 3rd episode of DO they asked the patient to perform continuous plantar-flexion by pushing their tip-toes against the floor and assessed the change in detrusor pressure and urgency severity.

RESULTS:

DETRUSOR OVERACTIVITY:

Without PlantarFlexion:

- Detrusor Pressure during DO wave was 58cmH20

With Plantar-Flexion

- Detrusor Pressure during DO wave dropped to 31cmH20

SYMPTOMATIC URGENCY:

Without Plantar Flexion;

- VAS of Urgency during DO wave was 9.3

With Plantar Flexion

- Urgency Severity during DO wave dropped to 4.7

AUTHOR CONCLUSION:

The author's stated that "Self-performed plantar-flexion manouvre might reduce the severity of urinary urgency and the magnitude of overactive detrusor contractions, which may have a role in the conservative therapy of detrusor overactivity."

LINK TO ABSTRACT: <http://www.ncbi.nlm.nih.gov/pubmed/24115037>

Reasons for Dissatisfaction ten years after TVT procedure

Aigmueller et al 2013, Int Urogyn Journal, epub ahead of print.

Note– this is an almost direct copy from the abstract online.

METHODS:

Patients who underwent TVT surgery between 1999 and 2001 at two participating units were included. All patients who did not consider themselves to be cured were asked for their reasons.

RESULTS:

- 56 patients did not consider themselves cured
- Reasons for perception that they were not cured were
 - o OAB symptoms in 29 patients (52 %),

- Stress urinary incontinence in 13 patients (23 %), and complaints of
 - Mixed urinary incontinence in 8 patients (14 %).
- 85 % of all patients reporting urgency at the time of follow-up and 66 % of patients with SUI at the time of follow-up did not consider themselves cured.

CONCLUSIONS:

In most cases overactive bladder symptoms were the reason for dissatisfaction. The results of this study support using composite outcomes to assess the results of surgery for urinary incontinence.

LINK TO ABSTRACT: <http://www.ncbi.nlm.nih.gov/pubmed/24030215>

TARYN'S NOTE:

I think this study makes a very important point. Often when women are considering surgery they ask their doctor.... "What is the chance that this surgery will cure my incontinence?". Because the woman is presenting with stress incontinence, the doctor's reply with the stress incontinence cure rates. However, what women are really meaning to ask is "What is the chance I will be dry?". Whilst these procedures often have cure rates for stress incontinence of 85-90%, some have de novo (new onset) urge incontinence rates of up to 30-35% post-operatively.

Women who are cured of their stress incontinence by a sub-urethral tape but end up with urge incontinence rarely consider themselves cured, as their initial goal was to be "dry".

Solifenacin in Women with De Novo Overactive Bladder Post TVT-O: Is it effective?

Serati et al 2013. Journal of Urology, epub, ahead of print.

Compared the effectiveness of Solifenacin (an anti-muscarinic) for the management of urgency/urge urinary incontinence (UUI) in two groups of women.

- Group 1: WOMEN WITH *DE NOVO* OAB
- Women who had previously undergone a mid-urethral tape (TVT-O) for Stress Incontinence but then developed urgency / UUI post-op
 - These women did not have urgency/UUI pre-operatively.
- Group 2: WOMEN WITH STANDARD OAB
- These women had urgency / urge incontinence without ever previously having a stress incontinence procedure

All women underwent 12 weeks of antimuscarinic therapy, Solifenacin 5mg, 1/day

Results:

Women with De Novo OAB that occurred post-SUI surgery had significantly lower benefits from solifenacin therapy than those with standard OAB, both in terms of episodes of urgency and urge urinary incontinence.

Previous TVT-O was an independent predictor of solifenacin failure.

TARYN'S COMMENT:

More and more often I now find myself simply sitting with patients who would like an explanation of ALL the different treatment options for SUI so that they can make an informed decision between a conservative or surgical approach. I believe there is a very high ethical responsibility in these discussions. My goal is not to convince them to take a conservative approach, rather, my goal is to simply provide neutral, unbiased advice regarding both conservative and surgical options so that they feel comfortable choosing a management option that feels right for them. Therefore, in these discussion I aim to explore all the options for SUI including PFMT, electrical stimulation, vaginal cones, vaginal support devices and also the surgical options (such as TVT, TOT etc).

This study raises important issues when discussing the pros and cons of various management options for SUI. Whilst mid-urethral tapes do have a higher cure rate for SUI than conservative management, after surgery a woman also has an ~30% risk of developing de novo urgency / urge incontinence as a result of the procedure. My experience is that many women find this risk of urgency / UUI as a major factor in their decision making. Many women indicate that urge incontinence would probably affect their quality of life more than their current stress incontinence if it occurred post-op. As a result, before they consider surgery they want answers of how the urge incontinence would be managed if it became bothersome post-op.

The decision between conservative vs surgical management of SUI ultimately comes down to a risk vs benefit analysis. Unfortunately, this study seems to suggest that de novo urgency / urge incontinence post SUI surgery may be less responsive to antimuscarinic therapy than standard OAB. If this is true, there is even greater need to warn patients of the possibility of de novo OAB post mid-urethral sling surgery so that they can make a fully informed decision before embarking on surgery.

Twelve year follow up of conservative management of postnatal urinary and faecal incontinence and prolapse outcomes: randomised controlled trial.

Glazener et al 2013, British Journal of Obstetrics and Gynaecology, Oct 22 e-published ahead of print

This paper is a long term follow up study on a group of women previously enrolled in a RCT 12 years earlier.

The initial randomised controlled trial (approx a decade earlier) recruited 747 women, all of whom were experiencing urinary incontinence 3months after the birth of their first child. At the time the women were randomly allocated to

1. GROUP ONE: Pelvic Floor Muscle Training and Bladder Retraining with a nurse
2. GROUP TWO: Control Group – Standard Care.

The initial trial showed a greater improvement in urinary, faecal and prolapse symptoms at 1 year post birth in group One. The Authors then attempted to follow up this initial cohort 12 years later to determine whether the significant difference persisted.

TARYN's Note:

Unfortunately only 471 out of the initial 747 women (63%) were able to be followed up at the 12 year time point. This obviously effects the results as we do not know the outcome of the other 37% of women.

Results:

- At 12 years there no longer appeared to be any difference in urinary, faecal and prolapse symptoms between the two groups
- Whilst the initial treatment program led to more women in the treatment group performing PF exercises (83% vs 55%), by 12 years the number of women performing PF exercises in each group was not significantly different (52 vs 49%)
- 80% of women who had urinary incontinence at 3months post birth still had the problem 12 years later.

Conclusions:

The moderate benefits of a brief nurse-led conservative treatment for postnatal urinary incontinence did not persist at 12 years.

LINK TO ABSTRACT: <http://www.ncbi.nlm.nih.gov/pubmed/24148807>

Effect of Depression and anxiety on the success of pelvic floor muscle training for pelvic floor dysfunction.

Khan et al 2013, Journal of Obstet and Gynaecology, vol 33, no. 7, pp 710 – 714.

N = 93 / 108 women who attended a 6month physiotherapy program for 'pelvic floor dysfunction' also underwent an assessment of psychological health at intake. Comparisons were made between psychological health, severity or symptoms, persistence with physiotherapy and successful outcome.

Assessments:

1. HADS: 'Hospital Anxiety and Depression Scale'
 - Contains 7 questions on Depression and 7 questions on Anxiety
 - All question scored 0-3 resulting in a minimum score of 0 and maximum of 21 for each component
 - Normal = 0-7 Mild = 8-10 Moderate = 11-14 Severe = 15-21
2. Queensland Pelvic Floor Questionnaire
 - Bladder Dysfunction Scored 0-42
 - Bowel Dysfunction Scored 0-36
 - Prolapse Symptoms Scored 0-15
 - Sexual Dysfunction scored 0-19

Intervention:

Physiotherapy included six group sessions and 2 individual sessions.

Results:

- Psychological Health: Of the initial cohort
 - 11% had moderate / severe HADS score
 - 19% had mild HADS score
 - 55% had normal HADS score
- Relationship between Psychological Health and Pelvic Floor Symptoms

- Strong correlation between severity of anxiety and depression symptoms and severity of pelvic floor dysfunction
- Persistence with Therapy:
 - 56/93 completed the six months of physiotherapy
 - Amongst those who dropped out:
 - 51% had moderate to severe anxiety/depression,
 - 30% had mild anxiety / depression
 - 19% had no symptoms of anxiety depression.
- Success with Therapy for Pelvic Floor Symptoms
 - For women who completed Physiotherapy there was an overall improvements in all domains of pelvic floor dysfunction except sexual function.
 - However..... when stratified by HADS scale, women with moderate or severe anxiety/depression did not show any improvement in any of the domains of pelvic floor dysfunction.
 - Patients who benefited most were those with either no or only mild anxiety / depression.

TARYN'S NOTE:

The discussion in this study seems to imply that anxiety / depression may be a causative factor in drop-out rates from therapy as well as physiotherapy not being successful.

One confounding factor that may need to be considered however is that those with concomitant anxiety / depression in this study also had more severe symptoms to begin with. It is already known that conservative management is less successful the more severe the symptoms are (we are much more likely to cure someone with mild SUI than severe SUI). In addition, women are less likely to continue if they are not seeing improvements.

It would be interesting to see a follow up study of women with/without mood disorders who have the same severity of incontinence in both groups to see if these results are replicated.

LINK TO ABSTRACT: <http://www.ncbi.nlm.nih.gov/pubmed/24127961>

Prevalence of Symptomatic Pelvic Floor Disorders among Gynecologic Oncology Patients

Thomas et al 2013, Obstetrics Gynaecology, vol 122, no. 5 pp. 976 to 980

Assessed a cohort of n = 347 women with gynaecologic malignancy for urinary incontinence and prolapse symptoms. Found that more than half experienced urinary incontinence and 10.9% experienced a vaginal bulge. Risk factors were increased age and increased BMI.

Author Conclusion:

Women with gynaecologic cancer show a high prevalence of POP and UI, however the rate does not appear to be higher than that found in women with benign gynaecologic conditions.

LINK TO ABSTRACT: <http://www.ncbi.nlm.nih.gov/pubmed/24104774>

Books Reviews x 2

(1 Frustratingly Long!, 1 Good!)

BOOK #1

TITLE: A Headache in the Pelvis
Expanded 6th Edition

EDITORS David Wise and Rodney Anderson

PUBLISHER: National Centre for Pelvic Pain

PRICE: ~\$30.00 in Hard Copy via Amazon
\$9.99 Kindle Electronic Edition

Taryn's Rating

OVERALL:



2 out of 5 - Felt like reading War and Peace...

DIFFICULTY:

Intermediate

VIEWPOINT:

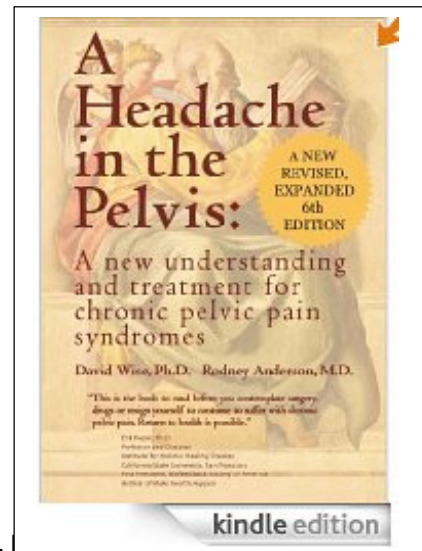
Conservative / Pelvic Floor Muscle Rehabilitation Focus
Written for health professionals.

RECOMMENDED?

Only if you are flush with money to spend –

Do these guys know the phrase “Get to the Point”?

In reality I probably can't even tell you whether there is lots of great information in this book. *How anyone could read every page of this book is beyond me. It goes on and on and on and on.....*



However, I have read most of it. I did find some good information in this book. In particular, it is one of the only books on the market that addresses pelvic pain in men. I also have to applaud the authors as they were really the first health professionals / doctors to begin publishing research suggesting muscle dysfunction may be a component of the pelvic pain symptoms experienced by both men (eg chronic proctalgia) and women (dyspareunia, CPP etc).

This is ultimately the book that outlines the basis for the “Stanford Protocol”. A treatment program published in the scientific journals and developed at Stanford University in the Department of Urology. They do have some published randomized trials to back up their statements. They have protocols for both men and women with pelvic pain /discomfort. It has a major focus on myofascial release and the psychology behind learning to relax when you are in pain rather than contract.

The biggest problem with this book is that there is probably 200 pages of great information buried amongst 800pages of writing. Which means you find yourself getting so bored with the 600 pages of waffle in between that you give up.

Book Chapters

1. Definitions and Categories
2. The Old Models and Treatments
3. A New Understanding of Chronic Pelvic Pain Syndromes leads to an effective therapy
4. The Wise-Anderson Protocol: Paradoxical Relaxation and Myofascial Trigger Point Release
5. Paradoxical Relaxation
6. Trigger Point Release Inside and Outside the Pelvic Floor
7. Pelvic Pain In Women
8. Frequent Concerns
9. Stories of Patients in their Own Words
10. More than you ever wanted to know about the medical science of chronic pelvic pain
11. How To Contact us

BOOK #2

TITLE: "Ending Female Pain – A Woman's Manual"

AUTHOR: Isa Herrera (Physiotherapist)

PUBLISHER: Duplex Publishing, New York

PRICE: Amazon - ~\$30.00 plus postage

Taryn's Quick Rating

OVERALL:



4 out of 5 "Very Good"

DIFFICULTY:

Basic - Intermediate

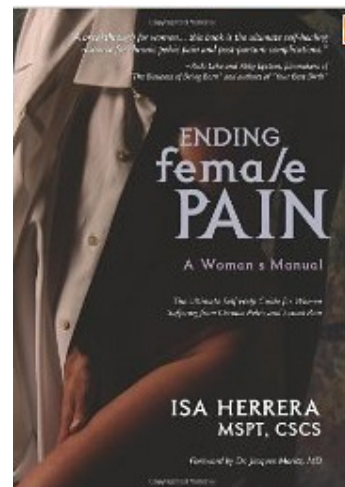
(yet still very useful!)

VIEWPOINT:

Natural / Conservative / Self-Help

RECOMMENDED?

Definitely. Very useful for the physiotherapist needing practical strategies to try with their pelvic floor pain patients (dyspareunia, vaginismus, vulvodynia etc etc)



POSITIVES

1. Empowering Language: This book is actually written for patients and is very empowering in its language and approach. It encourages patients to take control of their pain through self-applied stretches, massage and self-education. *Great for Chronic Pain Patients!!*

2. Volume of Techniques: I have never actually counted accurately, but on a quick glance I counted over 70 stretches, myofascial releases, trigger point techniques, scar releases, and strengthening exercises appropriate for women with CPP.

3. Easy to Follow Instructions: The soft tissue releases and stretches are extremely well explained with both diagrams / photos and text based instructions. They cover both internal and external work, providing a great manual of techniques that even physiotherapists can use with/on their patients.

4. Education: Not only does the book provide practical strategies, the book also assists women to understand their bodies including anatomy of the different layers of the pelvic floor, vaginal vestibule (through to detail of hart's line), vagina, abdominals, diaphragm etc. Thorough explanation of both the contract and relax phases of pelvic floor contraction is given with a nice "rose" analogy. In addition, Isa Herrera explains in easy to understand language various causes of vaginal pain, perineal pain, pelvic pain, lower abdominal pain, scar pain etc.

5. Concise!! With everything I have said you would think the book would be over a 1000 pages. The whole book is only 258 pages. Through diagrams, pictures and concise explanations, Isa Herrera manages to create a really practical "how to" manual of techniques to try with women suffering with CPP that is both easy to read and gets to the point quickly!

NEGATIVES:

1. Very much an 'End Organ' Approach: The focus of the whole book is on muscle release, improving muscle function, mobilizing scar tissue etc etc. Unfortunately this seems to ignore the impact of central sensitization that is a major factor in many chronic pelvic pain patients.

2. Lack of Research Base: This is definitely NOT an Evidenced Based Textbook! This is literally just idea after idea of practical strategies that Isa Herrera finds works with her chronic pelvic pain patients. Reading the book is a bit like sitting with any long time physio who has worked clinically their whole life, and asking them to simply share all their little clinical secrets. Can be really good, but you will find it hard to say this is evidenced based practice.

BOOK CHAPTERS / CONTENTS

note – The book is divided into four parts, with 3-4 chapters in each. I have only given the detailed subsections for chapters Three, Four, Nine and Ten to give an idea of content.

PART ONE: OVERVIEW

1. Introduction
2. How to Use This Book
3. Pelvic Floor Muscle Conditions – Background
 - Understanding how your pelvic floor muscles work
 - Pelvic Floor Muscle Layers
 - Definitions of Muscle States – Finding your Trigger Points
 - Effects of Trigger Points on Sarcomeres

- The Pain "Down There"
- Medical Conditions Affecting the Pelvic Floor Muscles
 - Vulvodynia
 - Childbirth
 - Vestibulodynia
 - Pudendal Nerve Entrapment
 - Vaginismus
 - Fibromyalgia
 - Interstitial Cystitis
 - Dyspareunia
 - Endometriosis
 - Adhesions / Scar Pain
- How to Perform a Self Examination

Please remember that these explanations are designed for patients not health professionals. They use layman's terms and basic ideas so that they are easy to understand. They do not provide the detail a physiotherapist would be expected to have. With that said, they provide a nice introduction for those starting in the field.

PART TWO: EXERCISES AND STRETCHES FOR THE RELIEF OF PELVIC PAIN

4. To Kegel or not to Kegel

- Reverse Kegel Muscle Relaxation Series
- The Importance of Breath
- Reverse Kegel Downtraining Series
- Direct Vaginal Release
- Stretches – Child's Pose Release, Prayer Release, Dead Bug Release, etc etc

5. The Herrera Pilates Ball Strengthening Routine for Pelvic Pain

6. The Herrera Yoga Series for Pelvic Pain

7. Stretching at the Workplace

8. Foam Roller Myofascial Massage and Release Techniques

PART THREE: Self Care Techniques of the Pelvic Floor

9. Decreasing Pelvic Floor Muscle Pain with Internal Dilator Stretches and Internal Hands-on Techniques

- Hands on techniques
- Dilators
- Pelvic Floor Muscle Clock Stretching
- Pelvic Floor Muscle Myofascial Release
- Internal Pelvic Floor Muscle Trigger Point release
- Internal Pelvic Floor Muscle Cross Friction Fiber Massage
- Internal Pelvic Floor Muscle Half Moon Strumming Massage

10. Decreasing Pelvic Floor Muscle Pain with External Hands-On Techniques

11. Scar Care Techniques

PART FOUR: Pelvic Pain Relief Tool Box

12. Basic Tools for Better Vulvar Skin Care

13. Bathroom Habits

14. Tools of the Trade

15. Mind/Body Visualisations and Life Strategy Techniques

Final Note from Taryn.... Membership Renewals 2014

You have now reached the end of the third newsletter for the year. I do hope you have enjoyed it and found something useful for your clinical practice. There will be one more newsletter for current members that will come out in early January, just before membership renewals are then due on the 31st January 2014.

A LITTLE NOTE ABOUT MEMBERSHIP RENEWALS FOR 2014

May I begin by first thanking you all for being members during 2013. I do hope you have been finding it a valuable membership community to be a part of.

My aim has always been to utilize as high a percentage as possible of the funds raised through membership to go directly toward time spent on educational services such as newsletters, mini-tutes etc. In addition, in 2014, some of the funds will be focused toward promotional activities to doctors, midwives etc.

Unfortunately, a large administrative cost associated with the membership service is the time spent on invoicing renewals, receipting of payments, updating of mailing lists, dropbox access etc. This cost is minimized if all renewals happen within the same month rather than having to be processed in bits and pieces over 3-4 months. In addition, the membership renewal month is specifically chosen as January because it is a quiet month for training events.

SPECIAL OFFER for Members who renew by January.....

To enable the administration associated with membership renewals to all occur over the Christmas / New Year school holidays we will be offering a special bonus for anyone who renews their Membership for 2014 in December.

NOTE: Standard Renewal of Membership is \$84.00 for the year.

For anyone who renews in December, this fee will include a **free 1 Hour WEBINAR in DECEMBER or JANUARY** titled

“SEX, LIES AND SUBURETHRAL TAPE”

This webinar will look at the anatomy and pathophysiology underpinning coital incontinence (both on penetration and with orgasm) as well as the concept of female ejaculation. Anatomical studies outlining possible evidence of the female prostate and implications for clinical practice when women report “fluid leakage” during intercourse will be discussed.

Finally.....You are all truly an inspiration to me as I get to interact with you at courses, on phone calls etc. It has once again been an amazing year where I think I have also learnt so much from all of you. May I wish you all in advance a very Merry Christmas and Wonderful New Year. Thank you for all your support.

Taryn