



Case Study

Improving Mind-Body Connection and Sexual Response while Strengthening the Pelvic Floor Muscles

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Introduction

The Vibrance Pelvic Floor Trainer is well established as a useful tool for improving SUI by developing pelvic floor muscle strength; gradually increasing strength by serially increasing the stiffness of the overlying sheaths. The woman must mount increased pelvic floor muscle strength in order to trigger the vibration of the device.

This case study was undertaken to show another benefit of consistent use, when presented along with a specific process to enhance mind-body connection between the woman and her genitals/sexual response. Female genital self-image influences sexual function and related behaviors, and when genital self-image is positive, it correlates with improved sexual function and satisfaction.³ Digital/video resources that educate women about their own normal, varied genital anatomy can decrease personal genital dissatisfaction and improve perceptions of genital appearance.² Pairing activity that provides mental and/or physical wellbeing to support sexual function creates a more positive genital self-image in women.³

Providing detailed instruction/guidance to improve body awareness enhances sexual wellbeing and sexual response in women.⁴ If women pay more attention to their genitals; while mentally considering the context of improved sexual arousal and response, they can effectively experience that improvement.⁵ The woman in this case study were given the Vibrance pelvic floor trainer to use as a tool of sensate focus and mindfulness in order to connect the training process with intentionally improving not only their physical muscle strength, but also their attitude and aptitude toward their own genitals and sexual response.

Patient Profile & History

Ashley is a 38-year-old, married, medical assistant with one child and describes herself as leading a normal, busy lifestyle. Since her normal vaginal delivery 12 years ago, she reported feeling some vaginal looseness and mild urine leakage. She considered this a minor impact to her life yet had concerns about the underlying issue and long-term effects. She requested treatment to improve her vaginal laxity and sexual health and satisfaction for herself and her partner.

Examinations and Findings

Physical examination

Ashley's initial consultation included a general history and gynecologic physical examination. Her vitals were normal with a BMI of 21.6. She has had regular menstrual cycles, has not taken hormone medicine, and reported no history of pelvic/genital surgery or past physical or sexual trauma.

A vaginal examination found no abnormal structures and her pelvic floor muscle tone was measured 40 at rest and 64 at peak contraction using the Peritron (cm H₂O) pelvic floor meter.

Female sexual function

Ashley's female sexual health was assessed using the Female Sexual Function Index (FSFI), a 19-item questionnaire focused on sexual functioning and developed as a brief, multidimensional self-reporting instrument.^{1,2} There are six domains assessed: desire, arousal, lubrication, orgasm, satisfaction, and pain. The patient is advised to consider each of the questions in the context of the last four weeks.

The six domain scores are summed according to the published instructions to obtain the overall score. Scores of equal to or below 26.55 are classified as indicating female sexual dysfunction. Ashley's baseline indicated areas of concern in four of the six domains: Desire, Arousal, Orgasm, and Satisfaction, for a total score of 24.6.

Female genital self-image

Female genital self-image is found to be positively related to a woman's sexual function.^{4,5,6,7} The Female Genital Self Image Scale (FGSI) is a reliable, validated measurement to quantify a woman's self-perception of the female genital region.³ Ashley was administered the FGSI to rate, on a Likert scale from 1-4 (1 = Strongly Disagree; 2 = Disagree; 3 = Agree; 4 = Strongly Agree), her genital self-perception. The total score may vary from 7 to 28 points; higher scores indicate a more positive genital self-image. Ashley's total score was 16 indicating a below average genital self-image.

In summary, Ashley had average pelvic floor muscle strength and stamina, reported mild SUI, low libido,



decreased genital sensation and genital self-image, and showed a decline in the following sexual function domains: desire, arousal, orgasm, and satisfaction.

Clinical Treatment/Intervention

Integrative Pelvic Exam Protocol (IPEP)[™]

The Integrative Pelvic Exam Protocol (IPEP) is a journey that incorporates colposcopic images of the vagina and vulva during a pelvic exam, transmitted in real-time to a portable digital device held by the woman, with the 4-D Wheel of Sexual Experience – thoughts, emotions, relational dynamics and physical sensations. The central figure of the journey is the woman's genitals – being given a voice for this often-neglected aspect of a woman's body, and her related story – told from that perspective. This process was co-developed by Drs. Debra Wickman (MD) and Gina Ogden (PhD) to educate and engage a woman in connecting cognitive awareness with anatomic form and physiologic function. The IPEP process creates a mind-body connection and becomes a form of cognitive-behavioral therapy, as a dynamic intervention designed to resolve an issue in the physical sense by also dealing with its related origins and consequences in the emotional, intellectual, and spiritual contexts.

Initial consultation

Ashley's initial consultation consisted of IPEP coupled with pelvic floor muscle training using Bioinfinity's Vibrance[™]. Ashley observed her IPEP exam on an iPad and was encouraged to connect with the structures seen on the iPad, as she perceived the examiner's touch. The patient-physician conversation was organized to evoke her physical, emotional, intellectual, and spiritual responses as she interacted with each part of her body. The exam was performed in a sex-positive manner, with all questions about form and physiological function discussed in real time relevant to positive sexual/body image and response.

Ashley was then educated, following the manufacturer's instruction, on using the Vibrance device to properly perform pelvic floor muscle training. Studies show that up to 30% of women exercise the wrong muscle group due to poor muscle identification and isolation.⁸ Providing cues or feedback (e.g., audio, visual, vibration) as the woman contracts the correct muscle, facilitates the ability to isolate the correct muscle and sense contraction. She then learns to control the pelvic floor muscle by responding to visual or auditory signals.

With the iPad, and under the physician's guidance, Ashley inserted the tampon-shaped device while lying supine and worked to contract and release her pelvic muscles. When she isolated the right muscles correctly, the Vibrance probe sensed her body-force and transmitted gentle vibrations to the vagina and pelvic floor muscles. Ashley exercised her muscles following the preprogrammed audible prompts (5 seconds hold and 5 seconds rest) for 25 repetitions) to engage and rest both the fast twitch and slow twitch muscles.

Ashley's consultation included how to build muscle strength, tone, and endurance using physical resistance. Progressive-resistant exercises are the most effective physical therapy to correct muscle disuse and atrophy and restore normal function.⁹ Vibrance comes with three sleeves in three degrees of resistance, or stiffness, for different training intensities. Ashley started with the base unit (no sheath) to help her adjust to isolating and activating the correct muscles.

Ashley was asked to perform pelvic floor muscle exercises using Vibrance twice per day and other tasks, such as mental imagery and brief journaling, to accompany each session.

Using the Teach Back method, or the "show-me" method, Ashley communicated confirmation of what had been explained to her including changing the Vibrance sheaths. No education materials beyond the Vibrance Pelvic Trainer manufacturer instructions were provided for the unsupervised sessions. Screen shots of specific anatomy were offered for reference.

Vibrance[™] Pelvic Floor Trainer

The Vibrance[™] Pelvic Floor Trainer from Bioinfinity USA is an FDA-cleared intravaginal medical device, available without a prescription, for strengthening pelvic floor muscles to improve pelvic health and quality of life. This clinically proven, easy-to-use pelvic training device enables women to properly perform Kegel exercises at home for improved muscle strength, tone, and bulk. Vibrance was selected for this case study because it offers features that parallel an effective exercise regime – proper muscle isolation and feedback, preprogrammed repetition, and increased resistance.

Ongoing, at-home (unsupervised) sessions

Ashley performed ongoing, unsupervised sessions twice daily for eight weeks with the Vibrance Pelvic Trainer as demonstrated, progressing to the stiffer sheaths when appropriate. Additionally, while using Vibrance, Ashley



used mental imagery detailing the most fulfilling sexual encounter she has had with her partner, visualizing her vaginal opening becoming tighter and more responsive, and linking this with a chosen mental image – such as pulling a drawstring or gripping a penis. She also practiced fully feeling the entire device’s circumference, paying close attention to where the vibration was felt (e.g., where it radiates to, what anatomy it is felt in), and visualize each structure feeling the sensation.

After each exercise session, Ashley confidentially journaled her experience by responding to the following questions (framed for mind-body awareness):

1. *What do I want my sexual response to be like today?*
2. *Is it different than yesterday? If so, how?*
3. *How can I take even more responsibility for my desire/arousal/satisfaction? List ways I can be in control of my own pleasure today by engaging all my senses.*

There were no physician visits, phone calls, or contact during the eight weeks of the unsupervised sessions.

Final consultation

At her final consultation (Week 8), Ashley’s pelvic floor muscle tone was re-measured with the Peritron device and both FSFI and FGSI questionnaires were completed.

Ashley was encouraged to continue her exercises with visualization two or three times per week (more if feeling loss of laxity or pelvic muscle strength) and to practice during intercourse.

Results

At the end of eight weeks, Ashley improved her peak pelvic floor muscle tone by 36% as evaluated by the Peritron pelvic floor meter (Table 1). She mastered isolating and activating the pelvic floor muscle without a sheath on the Vibrance probe by Week 2 and progressed to the third and firmest sheath by Week 8.

Table 1: PFM Tone

PFM	Before	After	
Rest	40	36.8	
Peak Contraction	64	87	36%*

*Percent increase

Ashley’s FSFI scores showed dramatic improvements in most domains, with the greatest improvements seen in orgasm and satisfaction, increasing 63% and 86% respectively (Table 2). Total sexual function improved 30% after eight weeks.

Table 2: FSFI Results

Domains of Women Sexual Function	Before	After	Change
Desire	3.6	4.8	33%
Arousal	3	4.8	60%
Lubrication	6	6	0%
Orgasm	3.2	5.2	63%
Satisfaction	2.8	5.2	86%
Pain	6	6	0%
Total	24.6	32	30%

Ashley’s FGSI scores showed an average improvement of 69% over all categories and a 50% increase in 5 of the 7 areas questioned. (Table 3)

Table 3: FGSI Results

	Before	After	
1. Not embarrassed about genitals	2	3	
2. Comfortable letting HCP examine genitals	4	4	
3. Think genitals work the way they are supposed to	2	4	
4. Think genitals smell fine	2	4	
5. Comfortable with partner looking at genitals	2	4	
6. Satisfied with appearance of genitals	2	4	
7. Feel positive about genitals	2	4	
Total	16	27	69%*

*Percent increase

Ashley reported experiencing a better mind-body association and satisfaction with her ability to improve her pelvic floor muscles and consciously connect with her vaginal tone. As a result, she was having enhanced orgasms and increasing sexual satisfaction for both her and her partner. She described an improved self-esteem that accompanied her control of stronger, more intentional muscle contractions and tone.

Conclusion

Integration of psychosexual protocols with consistent pelvic floor exercises, using the Vibrance Pelvic Floor Trainer, is a novel approach. The biofeedback and progressive resistance features of Vibrance accelerate a woman’s ability to strengthen her pelvic floor muscles, while connecting with her sexual response. The results demonstrate improvement in urinary function, genital self-image, sexual function (e.g., desire, arousal, orgasm), and overall sexual satisfaction.



References

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