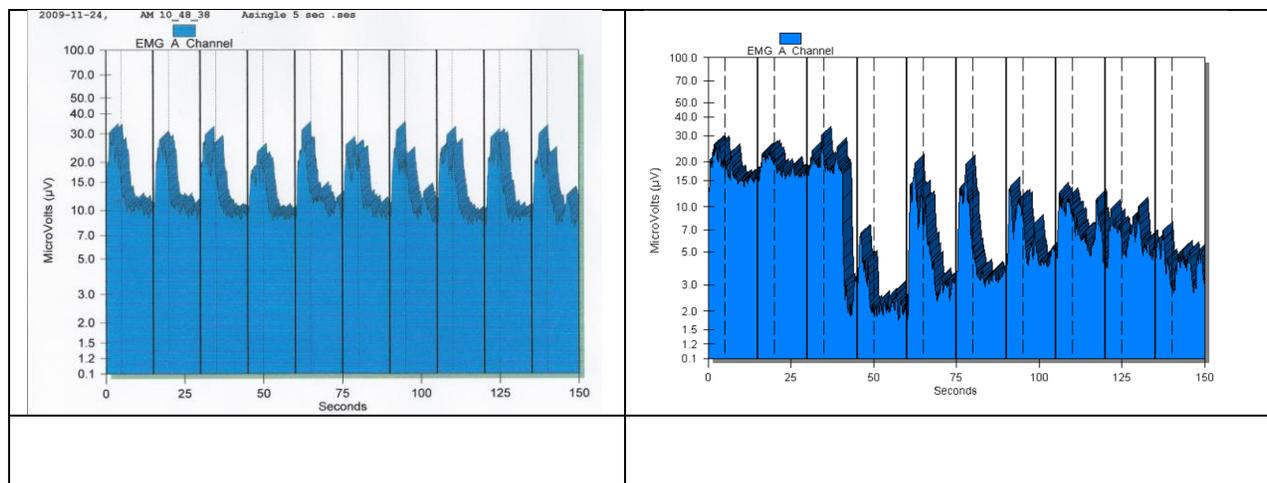


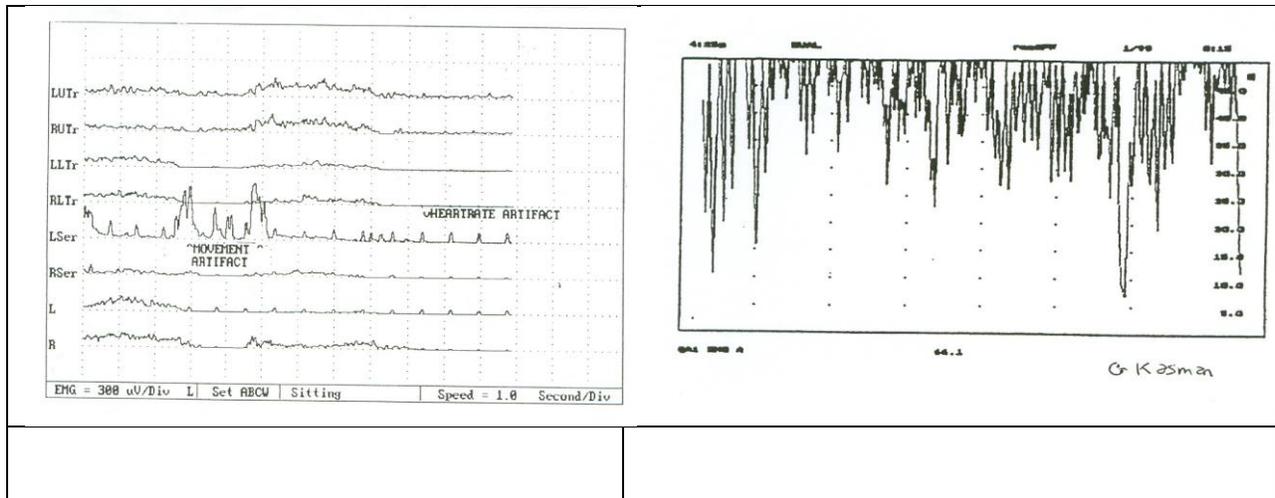
Biofeedback and Sexual Dysfunction
 Innovative Pelvic Floor Rehabilitation: Workshop #2 July 22,2014
 AUGS / IUGA Scientific Meeting Washington DC
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Unwanted Signals

- Environmental noise - electrical activity created by: lights, motors, radio, electrical plug
 - Usually elevated steady base line with little variability related to muscle activity
 - Replace electrodes with good skin preparation, especially ground
 - Check all connections
 - Unplug all electrical devices in the room including the high low treatment table
 - Do not cross power cords or wind cords
 - Change to new electrode wires - wires fatigue and damage can occur under the plastic coating
 - Change power strip
- Artifact - unwanted electrical activity created by the body

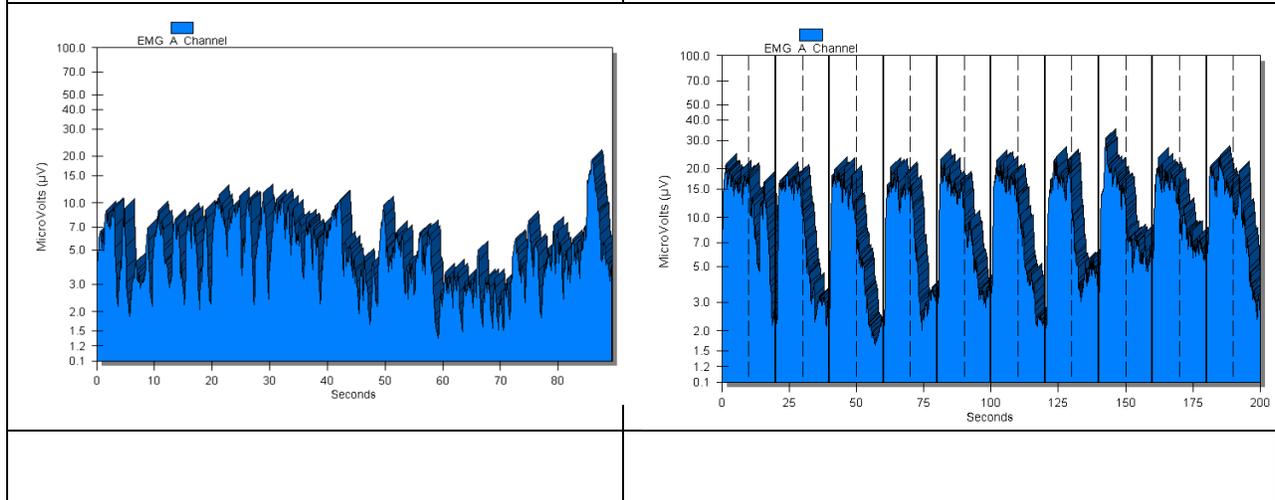
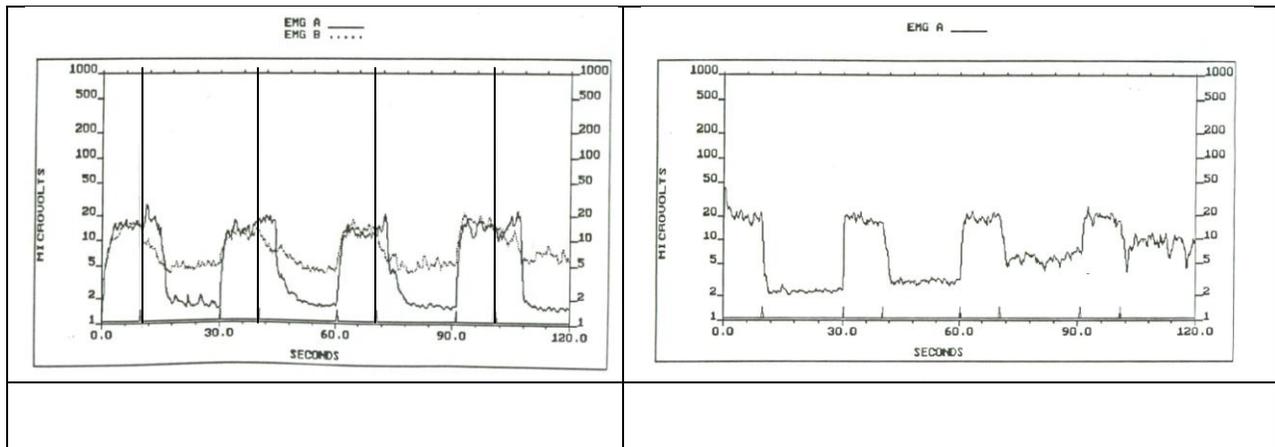
| Artifact | What it Looks Like | What to Do |
|---|---|--|
| Heart rate | Regular small spike occurring during rest phase | Ignore |
| Cross talk: contraction of other muscles | Increased microvolt levels with contraction of other muscles | Watch / palpate patient Encourage relaxation of all muscles |
| Skin electrode shear: movement artifact - sliding of electrodes over skin surface | Spikes during movement | Ensure good contact Reapply electrodes Stop moving skin |
| Electrical short circuit | Bridging of electrodes from excessive gel or vaginal secretions, sweating | Remove electrodes and re apply |

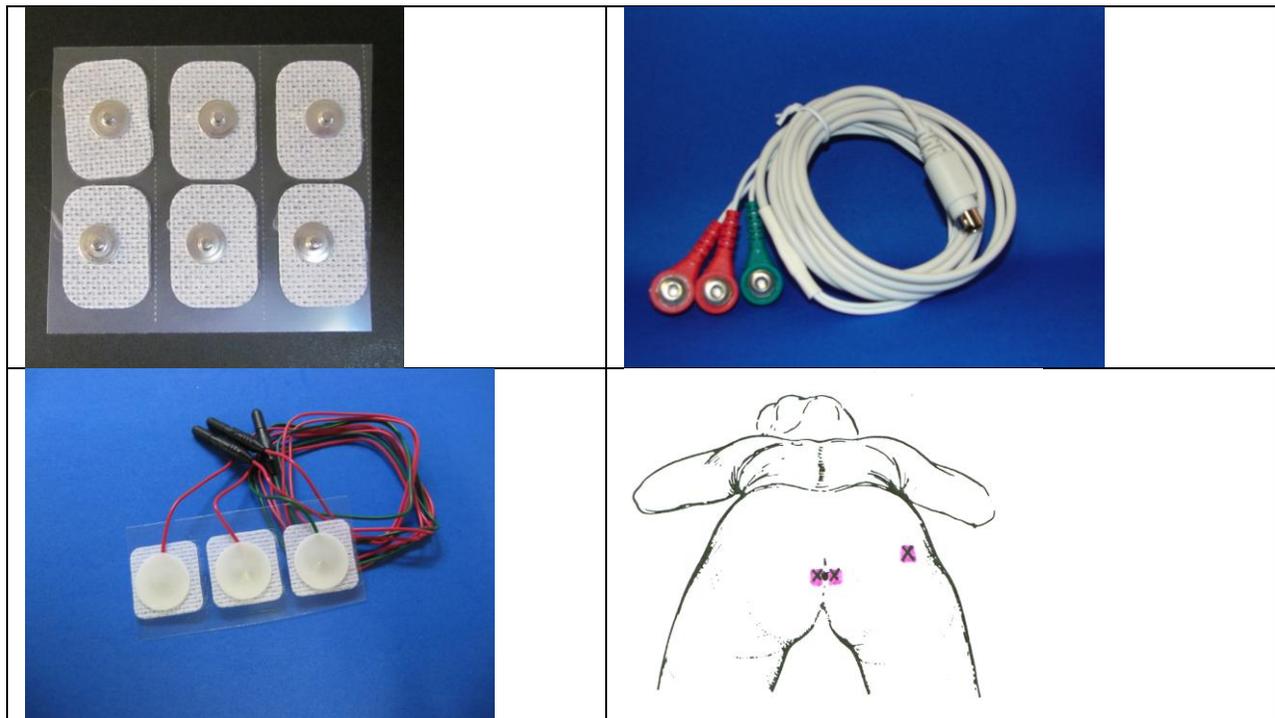
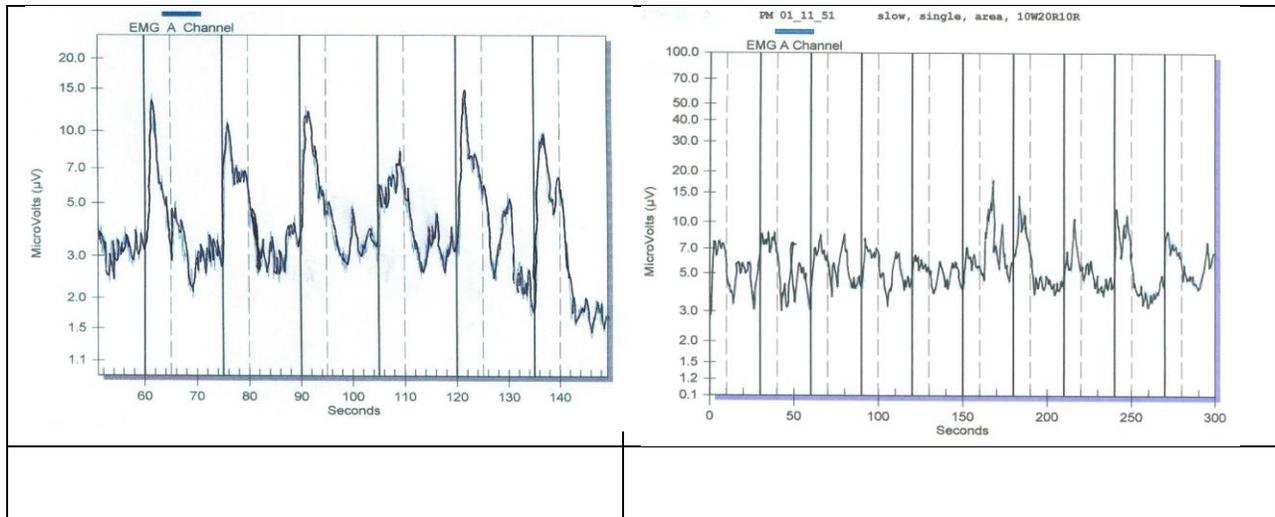




Overactive PFM

- Inconstant baseline between contractions
- Elevating baseline between contractions
- Elevated standard deviation
- Slow return to baseline after contraction, startle or frightening





Education in biofeedback

- Biofeedback Certification International Alliance - BCIA.org
- Biofeedback Federation of Europe - bfe.org

Biopsychosocial approach to vaginal dilators / trainers for dyspareunia

Purpose

- Learn PFM relaxation during insertion - must have EMG for best learning
 - Practice intercourse without upsetting pain
 - Increasing confidence and decreasing anxiety and fear
- Improve skin tolerance to sliding - hot sand analogy
 - Understand pain
 - Have control over the pain
 - It is not dangerous
- Stretch the contractile and non contractile vaginal tissue - learning splits analogy

Indications for use of vaginal dilators

- Tension of PFM in all quadrants – (tension in just one area is better treated with manual stretching / Myofascial release)
- Paradoxical contraction in response to vaginal penetration
- Patient expresses fear or anxiety about possible negative experience during penetration

Contraindications

- Atrophic vaginitis
- Infections or skin lesions
- Emotionally unstable or unable to understand procedure

Principles

- The patient is in control of the trainer and the process at all times. Let them go at their own pace when they are ready
- Monitor anxiety / worry - graded on scale 0 = no anxiety to 5.
- Break cycle of pain with penetration
- Use adequate lubrication on every trainer - even if you think they have enough lubrication already, better to have too much
- Have non irritating water-soluble lubricant available - olive oil, Slippery Stuff
- Excessive lubrication after several trainer insertions may bridge electrodes making EMG signal unreliable
- Experiment with different leg and trunk positions as well as angles of insertion to find the best combination
- Slow movement is usually best
- Most practitioners recommend no more than 10 minutes total training time, every day or every other day as patient tolerates
- Be aware of delayed pain and under treat if the patient has delayed pain with intercourse
- Also consider use of lidocaine cream with trainer for very painful conditions
- Must include change in thought process and feeling around insertion
- Patient should also be working on desire and arousal and possibility working with a counselor to resolve relationship or personal issues

Patient set up

- Place external peri anal EMG sensors on
- Patient in hooklying with head up on several pillows or a wedge to reach the vagina
- Record resting base line with knees bent

Basic method

- Ask patient to choose the size trainer she thinks she can insert without pain
- Place a sufficient amount of water-soluble lubricant on the tip and sides of the trainer
- Patient separates the labia minora with one hand and insert the trainer with the other – do not let a part of the labia fold in on the trainer – explain this for intercourse also. Common source of pain
- Angle the trainer slightly down toward the table; might have to angle up or to the side if PFM is restricting movement, you may need to hold the trainer and assist the patient but never force.
- Keep the PFM relaxed and slowly insert the trainer – watch EMG screen. Remember movement artifact may cause signal to increase during movement of trainer.
- Pause if there is significant pain or resistance; allow the muscle time to relax
- Continue to insert until fully inserted per manufacture suggestion

Learn PFM relaxation during insertion

- Have patient practice PFM contract and relax with focus on relaxation
- Explain principles of relaxation during insertion
- Slowly inserting will allow better focus on relaxation
- Have the patient watch the EMG screen and point out when they are contracting the muscle
- Have the patient stop moving the trainer and focus on relaxing, then continue inserting when muscle is relaxed
- Some patient do better with distraction and may be less anxious if they wiggle their toes during insertion
- Playing music may also improve patient's ability to relax during insertion
- Ask patient for anxiety level. Have patient stop, breath and relax if anxiety is above 2/5
- Often patients are pleasantly surprised they can insert the device with little pain and good relaxation. Advance if the patients feels she can try a larger trainer. Two or three sizes per session.
- Consider having the patient move the trainer to work on skin slide (see below) if pain and anxiety is low and PFM is relaxed.

Improve skin tolerance to sliding

- Explain principles of increasing tolerance to skin slide - walking on the hot sand
- Have the patient move the trainer in an out simulating intercourse
- Slowly at first
- Stop if pain increases

Stretch the contractile and non contractile vaginal tissue

- Explain principles of stretching skin and muscle - learning splits
- If patient is unable to insert the trainer fully, hold it at the depth they are able to tolerate with slight to moderate pain as long as anxiety is low and PFM is relaxed
- If patient can insert trainer fully, allow the trainer to stay in place for up to 10 minutes; remove if pain increases
- Keep the PFM relaxed
- It may also be helpful to perform sub maximal PFM contractions to enhance relaxation
- If trainer has been in place tightly for several minutes, lubrication can move making the dilator sticky. Have patient slight turn the trainer and then remove slowly
- Advance to the next size if stretch / pain is minimal
- May consider moving the trainer to improve skin tolerance

Advancing

- Advancing is dependent on the reason for using the trainers and the condition
- In the first session you may be able to advance several sizes
- Subsequent weeks may advance one size per week or slower
- Patient is in control

Home trainer use

- Home practice is usually necessary – patient should buy a set
- Recline in a tub of warm water with both knees bent and legs supported
- Sometimes the master bedroom is too emotionally charged and training may need to be done in an alternative bedroom or location
- Also consider music or fragrance

Integration of partner

- Patient must feel she is in control and partner should not force intercourse. In some cases the partner will not be introduced until the patient is almost ready for intercourse.
- May have patient visualize partner and intercourse during trainer use
- Progress to patient performing trainer treatment with partner in the room watching
- May have partner and patient work together to insert trainer
 - Patient has control over trainer with partner's hand over.
 - Partner has control with patient's hand over
 - Partner has control without patient's hand
- Helpful to use trainer before intercourse
- Partners can also be taught manual stretching of the PFM and this can also be used before intercourse.