Pilates and Lyme Disease - Increase the Quality of Life for Client’s with Lyme Disease

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Abstract

The Center of Disease Control states that 30,000 people are diagnosed with Lyme Disease every year. Lyme Disease is a bacteria from a tick that can be very destructive in the human body. If you don’t catch it early with antibiotics you can have severe life long symptoms. Medical professionals believe Lyme disease can mimic the symptoms of Fibromyalgia, Chronic Fatigue Syndrome, MS, ALS, Parkinson's and Alzheimer's, and over 300 other diseases. These symptoms can vary from person to person and affect someone differently on a daily basis.

Movement and exercise can be beneficial for everyone, especially someone who has a condition that impacts them physically and decreases their quality of life. The Pilates Method is a versatile platform that offers an abundance of exercises, various equipment, modifications and adaptations for each individual person. Pilates provides a balanced workout with an emphasis on strength, flexibility, stability, mobility and corrects muscular imbalances with proper alignment of the body.

This case study explores the implementation of Pilates and the BASI Block System to improve my client’s quality of life due to Lyme Disease. My approach was to reintroduce the mind-body connection by honoring my client’s limitations, working slowly and modifying when necessary with the hope of improving range or motion, stability, strength and neuropathic connections that may have been impaired due to inactivity or nerve damage.
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Anatomical Description

According to the Centers for Disease Control “Lyme disease is caused by the bacterium Borrelia burgdorferi and rarely, Borrelia mayonii. It is transmitted to humans through the bite of infected black legged ticks. Typical symptoms include fever, headache, fatigue, and a characteristic skin rash called erythema migrans. If left untreated, infection can spread to the joints, the heart, and the nervous system. Lyme disease is diagnosed based on symptoms, physical findings (e.g., rash), and the possibility of exposure to infected ticks.

Laboratory testing is helpful if used correctly and performed with validated methods. Most cases of Lyme disease can be treated successfully with a few weeks of antibiotics. The ticks that transmit Lyme disease can occasionally transmit other tickborne diseases as well.”
There are dozens of different symptoms associated with Lyme Disease and not every case presents the same way. Possible early indications of Lyme Disease may include flu-like symptoms and/or the development of a rash (commonly resembling a bulls-eye). Other common symptoms of Lyme Disease include: fatigue, joint pain and/or swelling, stiffness of the neck, headaches, and muscle pain and/or cramps.

Neurological Lyme Disease is a term used if the infection has crossed the blood-brain barrier and has affected the Central Nervous System. If this happens, then a spectrum of neurological symptoms begin to appear ranging from mild to severe.
Case Study

The client in this case study is a 37 year old female named Channing. Before Channing was affected with Lyme Disease she was a collegiate athlete with a golf scholarship. In her mid 20’s, Channing started having neurologic, nerve and muscular symptoms in her feet and lower legs. Her pain was enough to limit her physical activity, she had to quit running, hiking and golfing. In her early 30’s Channing’s symptoms got worse and more extensive with headaches, migraines, limited range of motion, fatigue, fevers and overall stiffness. She was no longer able to walk on an incline and lying down flat was also very uncomfortable. Her life as a strong, flexible, and successful athlete came to an unexpected and disheartening end. She became very stiff and sedentary as the pain increased; her energy and activity level decreased. Channing’s treatments in the past include Physical Therapy, Laser Therapy, Myofascial treatments, Acupuncture, Yoga and Aquatic Therapy. All of these treatments provided temporary relief without a long term solution.

When Channing came to see me for a session she had poor posture, weak abdominals, extremely tight hamstrings along with shortened calf muscles, and lacking scapular stability. We started with one 60 minute session once a week and eventually worked up to one 60 minute session twice a week. Channing would have to stop several times throughout each exercise due to nerve pain, initially. Rotation and adduction of the arms with resistance were difficult without nerve activation. I implemented a program using the BASI block system that increased her strength slowly, improved her flexibility, nerve tolerance, and all over stability. Some exercises and spring weights were modified or adjusted to decrease the intensity at first to support the client’s ability.
Conditioning Program

**Warm Up**

*First 10 Sessions*

**Mat**- Roll down, Pelvic tilt, Chest Lift, Leg Changes (one leg at a time until increased pelvic-lumbar stability). Cat Stretch

*11-30 Sessions*

**Mat**- Roll Down, Pelvic Curl, Supine Spine Twist, Chest Lift, Chest Lift w/ rotation (started with straight arms with hands together facing knees, slow progression to full Chest lift w/ rotation), Single Leg Stretch, Hundred Prep, Shoulder Bridge Prep, Back Extension, Single Leg Kick, Double Leg Kick, Side Lift, Swimming, Front Support (modified knees down).

**Cadillac** - Roll up with the RUB, Supine Spine Twist, Mini Roll-Ups, Roll-Up Top Loaded.

**Purpose:** Strengthen the abdominal muscles, develop pelvic stability and control. Also, improve trunk and shoulder stabilization.

**Foot Work**

**Purpose**- Focus on positioning of pelvis and spine, engagement of the hamstrings, fully straighten legs and stretch the calves.

*First 10 Sessions*

**Reformer** -Double Leg Foot Work w/o Prances, Prances were so difficult without nerve aggravation because of shortened gastrocnemius muscles and soleus muscles. Light spring resistance for calf raises. Intention to strengthen quadriceps and lengthen Hamstrings and calves while stabilizing the pelvic-lumbar connection.
11-30 Sessions

**Reformer** - Introducing Single Leg Foot Work and Prances. Calf Raises range of motion has significantly improved!

**Cadillac** - Only heels, on the toes usually too intense.

**Wunda Chair** - All footwork. Calf Raises on a light spring. No Single Leg due to nerve activation. This was good to challenge for the pelvic-lumbar stability, only if clients hip flexors were not aggravated prior or during exercise.

**Abdominal Work**

**Purpose** - Strengthen abdominal muscles, emphasis on obliques due to shortened/weakened side, Develop balance with hip flexors and pelvic-lumbar stabilization.

**First 10 Sessions**

**Reformer** - Hundred Prep

**Cadillac** - Roll down with the RUB, Mini Roll-Ups, Roll-Up Top Loaded

11-30 Sessions

**Spine Corrector /Step Barrel** - Chest lift, Reach, Overhead Stretch (with me holding a ball on spine corrector for under her head/neck support), Side Lift.

**Reformer** - Hundred Prep, Double Leg, Short Box Abdominals (Round Back, Flat Back, Tilt, Twist)

**Cadillac** - Teaser, Bottom Lift with RUB.

**Hipwork**

**Purpose** - Strengthen hip support and pelvic alignment, hip disassociation.
First 10 Sessions

Reformer - Frog, Circles, Openings. Light spring resistance due to extreme tightness in Hamstrings. Challenging to keep neutral pelvis and neutral spine.

11-30 Sessions

Reformer - Building up spring resistance and increased pelvic-lumbar stability. Circles, Extended Frog, Extended Frog Reverse.

Cadillac - Basic Leg Spring Series and Single Leg Supine Series focusing on pelvic stability.

Spinal Articulation

Purpose - Spinal flexion/articulation/mobility, Increased abdominal control and flexibility.

First 10 Sessions

Mat - Pelvic Tilt, Pelvic Clock.

11-30 Sessions

Reformer - Bottom Lift, Bottom Lift with Extension, Short Spine (client’s Favorite!)

Cadillac - Tower Prep, Tower.

Wunda Chair - Pelvic Curl.

Stretches

Purpose - Flexibility in hamstrings and hip flexors.

Very difficult for client with her nerve activation to hold any stretch. Majority of the time we make it more of a dynamic nerve glide stretch.

First 10 Sessions

Reformer - Lunge Standing.
11 - 30 Sessions

**Reformer** - Lunge Standing.

**Ladder Barrel** - Shoulder Stretch 1, Hip Flexors.

**Full Body Integrative**

**Purpose** - Utilizing and recruiting the whole body for performance, emphasizing the upper girdle and pelvic -trunk stabilization, core strength.

*First 10 Sessions*

None

*11-30 Sessions*

**Reformer** - Scooter, Up Stretch 1 and Elephant, Reverse Knee Stretch, Down Stretch to achieve scapular stability, strengthening the abdominals and back extensors.

**Cadillac** - Kneeling Cat Stretch, Sitting Forward with micro bend in knees due to extreme hamstring tightness to lengthen hamstrings and activate abdominals.

**Arm Work**

**Purpose** - Function, mobility, strength and flexibility of shoulders and arms, trunk and scapular stability.

*First 10 Sessions*

**Reformer** - Arm Supine Series (extremely light springs for Adduction, client not able to lengthen arms completely and have resistance).

**Cadillac** - Standing Arm Series w/o circles due to lack of scapular stabilization.

*11-30 Sessions*
Reformer - Slowly increasing spring resistance for Arm Supine Series, Sitting Arm Series (on Box if hip flexors too tight or nerve impingement), Shoulder Push Double Arm, Shoulder Push Single Arm - light spring.

Cadillac - Standing Arm Series (Chest Expansion, Hug a Tree, Circles Up, Circles Down, Punching, Biceps.

Wunda Chair - Shrugs, Tricep Press Sit, Triceps Prone.

Leg Work

Purpose - Strengthen hip adductors and pelvic lumbar stabilization, balance the quadriceps and hamstring strength and flexibility.

First -10 Sessions - None

11-30 Sessions

Reformer - Skating Single Leg, Side Split, Jumping Series.

Cadillac - Squats.

Wunda Chair - Leg Press Standing with Foam roller assist (on floor vertical) for balance.

Lateral/Rotation

Purpose - Get client back to golfing, balance, core stability; emphasis on Transverse Abdominals and Obliques, spinal mobility, lateral flexion.

Very cautious of rotation, would initially cause nerve activation in the mid back.

First - 10 Sessions

Reformer - Mermaid; Light spring.

Wunda Chair - Side Stretch.
11-30 Sessions

Reformer - Side Over with me guiding/spotting, Mermaid.

Wunda Chair - Side Stretch Kneeling.

Ladder Barrel - Side Over Prep.

Spine Corrector/ Step Barrel - Side Lift.

**Back Extension**

Purpose - Posture, strengthen back extensors, mobility and spinal flexibility, scapular stabilization, shoulder extensors.

Frist 10 Sessions

Reformer - Breaststroke Prep 1, Pulling Straps w/o Adduction.

Spine Corrector / Step Barrel - Swan Prep (no extension of arms).

11-30 Sessions

Reformer - Breaststroke Prep 1 and 2, Pulling Straps 1 and 2.

Cadillac - Prone 1.

Wunda Chair - Swan Prep.

Spine Corrector/ Step Barrel - Swan Prep and Swan.
Conclusion

Lyme Disease impacts millions of people around the world differently. A complicated illness like Lyme Disease needs an adaptable approach because it can attack any part of the body. There is not a specific exercise protocol for each client to follow. Rael Isacowitz and Karen Clippinger believes there has been a greater need for individualization of Pilates. “Being able to adapt exercises to such individual needs will enhance potential benefits and reduce injury risk” (Isacowitz/Clippinger 2020,2011, p. viii). The Pilates Method provides an array of exercises, equipment and modifications to customize a workout to meet the unique needs of every client.

Incorporating Pilates and using the BASI block system was instrumental in my clients life. The BASI block system is a focused and an essential tool that helped progress my client. Knowing how to break down and modify every exercise starting with the fundamental work was the successful step in achieving Channing’s goals. Channing has more strength, stability, balance and less nerve pain. She has been out golfing a few times this year after a seven year break due to her symptoms. Channing believes that “Pilates has been a key factor in my recovery as I build back muscle and re learn how to properly use my body. Without Pilates I would not have made such rapid strides in my activity levels.”

I didn’t know much about Lyme Disease - other than you got it from a tick and it leaves a bullseye rash on your body. I never thought about the after effects it has in your body and how it can impair movement until I met my client; Channing. Working with Channing over the last year has been enlightening and has proven that Pilates can be beneficial to get people moving in a healthy, functional and safe way with the renewal of freedom and well being.
Bibliography


10. Cover Page Image, Motionscape Photography [purchased from photographer]