Degenerative Disc Disease

Bettina Belter

February 22\textsuperscript{nd}, 2014

2014 La Playa Santa Barbara, California
Abstract

My subject choice for this paper is personal and was lived out through my very own experience. You see, I am Betty ... I chose Degenerative Disc Disease (DDD), because it is what led me to discover Pilates. Pilates was my silver lining to an unfortunate card dealt me in that delivery room all those years ago. It works, it's effective, if you do the work and are consistent, it delivers the results. My results are my very own personal testimony that I will shout from the mountaintops until the day I die. I was in pain every day for 30 years and now ... I'm not. Pilates for me is a ministry, I want to share with others how they too, can be pain free, or be in less pain. More flexible, more toned, be in better health with out killing themselves at a standard gym.

My research was my personal experience, Callie Jenkins Spitzer, of Poise Pilates+Barre in Bakersfield, California, Quest Imaging and the Internet. Callie and I have spent many hours together doing Pilates and studying the movements of Pilates. The MRI images you will see are mine, taken 6 years ago. Included in this paper are the doctor’s reports from these images.
Table of Contents

Abstract ......................................................................................................................... 2
Anatomical Description of DDD ................................................................. 4
Body .............................................................................................................................. 5
Conclusion .................................................................................................................. 9
Bibliography ............................................................................................................... 10
Lumbar Degenerative Disc Disease

DDD is a syndrome in which a compromised disc causes pain. Discs of the vertebrae do not have a blood supply, so when it's injured or becomes diseased, it cannot repair itself the way other tissues in the body can. When diseased with DDD, a
"degenerative cascade" can start, causing the affected disc to wear out and collapse, causing pain. Betty came to learn that DDD is fairly common although not in her age group, it is estimated that 30% of people aged 30 to 50 have some degree of disc space degeneration, although not all will have pain or ever receive a diagnosis. In fact after 60, some level of disc degeneration is a normal finding on an MRI scan.

Betty came to learn that spinal pain associated with DDD is usually caused from one of two things,

1. INFLAMMATION: Proteins in the disc space can irritate the surrounding nerves, both the small nerve within the disc space and the larger nerves that go to the legs.

2. ABNORMAL MICRO-MOTION INSTABILITY: when the outer rings of the disc, called the Annulus Fibrous, are worn down and cannot absorb stress and jolts on the spine as before, it causes "movement" along the vertebral segment, causing pain.

Continued micro-motion, combined with inflammatory proteins, can produce ongoing spinal pain, whether it is the cervical, sacral or lumbar spine (SpineHealth, Ullrich).
Body

Betty was a 25 year old, in labor with her first child, two weeks late, in her third and final hour of "pushing". Upon his arrival and final push, Betty ruptured her L5. Never having had a child, Betty thought it awfully cruel and thought perhaps THIS child would be her only.

Two weeks later Betty was in surgery for her ruptured disc. She would not be diagnosed until 20 years later with DDD, Degenerative Disc Disease, when she again would be confined to bed, in traction for a month. Five years later Betty's neck would begin to cause her pain, DDD affecting her cervical spine as well.

Upon further research Betty came to learn that over a long period of time the pain from DDD can eventually decrease, rather than becoming progressively worse. This is because a fully degenerated disc no longer has any inflammatory proteins that cause pain. Usually, the disc collapses into a stable position and you no longer have the "movement" that was the cause of the pain (Web M.D.).

After the birth of her son, and as she progressed in time from physical therapy Betty was able to get on in life with out any more pain in her leg. But 20 years later as mentioned above, she was again confined to bed for a time in traction after her L5 collapsed. After her time spent in traction she
was given a series of 3 injections into her spine called epidurals. She would again receive a series of 3 injections five years later and resolve herself to the fact that she would always be in a certain fluctuating degree of pain until ...

Betty was driving home from the cleaners one afternoon and noticed a new business had inhabited a former dress shop. It was a Pilates studio. She drove by many times throughout the week and finally decided to go in and see what exactly Pilates was. Betty found out that Pilates would elongate and strengthen her spine and muscles. Thereby strengthening her core that would be beneficial in the reduction of pain.

This is the conditioning program from Body Arts & Science International® recommended for Betty. The first ten sessions consisted of basic and conservative body mechanics. Starting with a warm up including the pelvic curl. This is a perfect exercise as it is spinal articulation to wake up the lumbar spine and increase awareness and blood flow to that area. Then moving to the chest lift leaving out the rotation. Teaching pelvic stabilization while lifting the chest to get an emphasis on abdominal core strength. Moving onto footwork on the reformer. Keeping the spring load light-medium to teach pelvic stabilization and abdominal rib cage awareness, through the movement. Beginner abdominal exercises were practiced even though some discomfort in the cervical spine was felt. It was
concluded to be strengthening when cued to relax the neck and lifting the shoulder girdle and not harmful, while taking breaks when needed. Some of these exercises include, single leg left, leg changes, leg circles and hundred prep on the reformer. Hip work was done on the reformer consisting of frog, down circles, up circles and openings. It was decided that short spine would not be beneficial until sessions 20-30. Therefore, bottom lift was substituted as well as adding bottom lift with extension for the spinal articulation block. Standing lunge was the stretch chosen for the stretching block until session 20-30. Full body integration is questionable at this point in the program because lateral flexion and rotation has been eliminated due to Betty’s condition of DDD. Therefore, cat stretch and scooter were integrated at this point. Arm supine series is the perfect series for these sessions because it allows Betty to maintain core stabilization while exercising her arms. For additional legwork the hamstring curl and hip opener on the wunda chair will be added. Basic back extension and rest position on the mat will conclude Betty’s first ten sessions.

Sessions 10-20 will integrate more spinal articulation, lateral flexion and rotation as deemed comfortable for Betty’s condition and rehabilitation.
Conclusion

Writing this paper was somewhat cathartic for me as it helped me realize how far I've come in this pain/Pilates journey. It was May 8th, 2012 the first time I got on a reformer and I've never looked back. I'm excited to tell, teach, and educate others, from my own experience, about the BASI method. My back pain was greatly reduced after just 10 sessions, and non-existent after 20. The cervical spine is better, though the pain is still present. I love that in this work, we are always students, as there is so much to learn, and try, and refine, that it truly excites me. You might say it has made me a passionate person of Pilates. I look forward to coming along side another person who has Degenerative Disc Disease and sharing my story and what I've learned, to help them find what I've found. Something we can incorporate into our everyday lives to stay in shape and manage our pain at the same time.
Bibliography

1. Spine Health
   Article Written by: Peter F. Ullrich M.D.
   Published 03/06/2013

2. Web M.D.
   Published 07/21/2010
   1995-2013 Healthwise Inc.

3. Quest Imaging
   Reports by Charlie Wrobel M.D.
   12/22/2008

4. Callie Spitzer Jenkins, BASI Instructor &
   Co-Owner of Poise Pilates+Barre Studio
   Bakersfield, California

5. Comprehensive Course Study Guide
   Body Arts and Science International®