



April Case Studies Worksheet

This month we have TWO case studies, but they are both young people, which will provide us with some very interesting shared elements.

Student #1: Fencer

Age: 12 years old

Activity level: Not clear. Fencing is incredibly challenging in terms of fast twitch muscles (speed, agility – ability to change directions quickly) and builds tremendous strength in the lower body.

Student is coming 2x/week to Pilates as cross training.

Focus:

- Developing core strength with 100s, ab series, jump board.
- Perfecting lunging form.
- Developing symmetry in muscle development (always lunges right).
- Developing rotation.

Pain: Some pain in the left knee (back leg, knee is straight in the right sided lunge)

Pain level: Unclear

Goals: See Focuses above

THINGS TO THINK ABOUT:

Primary movement goals:

What we've discussed so far is focusing on developing a strong awareness of supporting the left knee, his back knee, so that he can make the quick extension without hanging in the joint, which is what we are assuming he is doing given what we know about fencing and his pain.

Increasing upper body strength and awareness as well as developing greater lateral and rotational mobility/strength seems like a wise course of action for overall whole body integration and awareness and to promote symmetry and strength now at a young age so that it helps to prevent injury later, especially if he chooses to continue with competitive fencing.

What to release and stretch/open:

We didn't get into this aspect much in our first conversation, but if I had to guess I'd say he probably needs to open hamstrings and low back, maybe even chest and shoulders. I would definitely be encouraging mobilization through side bending and rotational stretches.

Using the roller or springboard/trap table (push through bar, standing springs, roll down bar) to help accomplish this:

- Cat/cow on the trap
- Simple to complex variations of circle saw
- Side bend and twisted roll downs
- Butterfly/side bending in standing arm springs
- Roller releases for chest
- Roll out hams
- Ham/hip stretch with feet in straps

What to strengthen:

Focus on strengthening the VMO on the left as well as medial glutes and adductors (contra lateral balance in the muscle structure of leg and hip – BB teachers think of the lateral sling line).

I love the idea of working him in footwork on a heavy spring and focusing on the last 10-15 degrees of knee extension, getting him to really plug into the VMO. Translate that awareness to exercises like chair lunges, front splits on the reformer, punching with a lunge with standing arm springs, even free standing (or with the springs) squats.

With squats you could also focus on the hip glide and proper low back (multifidus) activation.

Student #2: Dancer

Age: 17 years old

Activity level: SF Ballet 6 days a week 8 hours a day

Focus:

- Developing core strength with 100s, ab series, jump board.
- Perfecting lunging form.
- Developing symmetry in muscle development (always lunges right).
- Developing rotation.

Pain & Injury: 1.5 years ago he fractured his L 5 vertebra while dancing. He slowly recovered. He reinjured himself and started Pilates in March 2015.

Postural Analysis: Lumbar spine is lordotic while his thoracic and cervical spine was in extension. Forward tilting pelvis hips/legs externally rotated and with knees in hyper extension- and as he walked his feet flopped in extremely loose extension as well. I did my best to work him carefully in the brief amount of time we had. Supine abs worked best. No spinal flexion although he was pain free in lateral rotation.

Pain level: Unclear

Goals: To bring balance to overall posture and relief to the lumbar spine.

THINGS TO THINK ABOUT:

Primary movement goals:

One thing we really focused on in our original conversation is developing strength in the intrinsic core, especially anteriorly in order to give those lumbar vertebrae support while he moves into the intense extension pattern that he is both accustomed to and that is necessary in his profession.

He is experiencing pain when doing unsupported ab work due to the pull on his lumbar spine, which is indicative of poor core strength.

We would want to make sure his legs are supported during ab work or his torso is supported by the arms – as in attached to the roll down bar. Also focusing on neutral strength with a priority on *teaching* him what true neutral is, not what he thinks it is or what he's already good at, which we know is an anterior tilt.

What to release and stretch/open:

Release and open external hip rotators, low back and back extensors in general. Also release quads and IT band as this is likely to be a limiting factor when trying to take him in to parallel or internally rotated positions.

Use the roller, small ball, or other manual therapy tools to help him find space and softness in the back of his body so that he can better rely on his anterior strength and access it in while he's dancing – unconscious competence.

What to strengthen:

Lots of great suggestions here, but one of the things to be thoughtful of is that his body is super programmed for turn out and extension so there is likely to be resistance (mental and physical) and even pain when putting him in parallel, turn in and maybe even some forms of flexion.

After working to help him access and build strength in the anterior body including the TA, psoas, adductors and good strong whole core engagement then continue to build strength in functional positions such as standing so that he is more likely to take his work with him.

I would also suggest a fairly challenging level of core work once his anterior muscles were up to the job.

Overall focus on flow, transitions, connecting movements one to the other. The more you can emulate the dance environment the more likely the work will stick and translate for him.

**Please listen to the April call for much more exploration and suggestions. These are general notes distilled from that conversation. **