**Case 1**

**History:**

* you are a very active 24 y/o M, you are a student
* MOI: stepped in a hole with RLE while playing football in his yard with his friends, acute pain, has had “LBP” ever since
* Duration: 1 week; this is the first time you’ve ever had an incident of LBP
* Location of pain: over PSIS, gluts, groin, referring to lateral thigh
* aggs: walking/running, doing laundry, prolonged sitting, turning in bed
* eases: sitting for brief periods, advil
* what else have you tried? heat (worked okay)
* current pain: 3/10 (you ran errands this morning)
* worst pain: over PSIS on R at moment of injury was 8/10, since has been around 5/10 during aggs
* does it get down to 0? yes

**Examination:**

* Posture: good!
* MMT: 5/5
  + painful with R hip extensor testing
* ROM: all WNL, trunk and hip very painful
* Tender to palpation: over gluts, PSIS
* ASIS on R higher, PSIS on R lower, iliac crest heights appear level
* SIJ provocation tests:
  + anterior gapping: +
  + gaenslen’s with LLE extended: +
  + Sidelying posterior gapping: +
  + sacral apex test: + (provided relief)
  + posterior shear: -
* Gillet’s test: PSIS on R moves up with R hip flexion
* Long sitting test: + (LLE longer in lying)
* 90/90 HS length: -25 deg on R, -15 deg on L
* prone knee bend: WNL but painful on R
* (if they do Thomas test): painful with R hip flexion, otherwise WNL

**Possible intervention ideas:**

* You have UNC student insurance so you can’t come back many times! You have a huge co-pay!
* muscle energy technique to anterior rotate R pelvis
  + set pelvis first
  + hip flexors on R, hip extensors on L
  + follow with shot gun
* modalities
* PA mobs to sacrum
* stretching HS on R
* strengthening to posterior oblique system
  + squat with lat pull
  + quadruped with single leg extensions/arm raise

**Case 2**

**History:**

* You are a 42 y/o F, you worked at the post office but have been on disability for 3 years as a result of your low back pain, you are skeptical of their ability to help you, catastrophize!
* MOI: “accident at work”
* only exercise you are able to perform is walking, aquatic therapy
* aggs: lifting/bending, chores
  + you are very stressed by your dependence on your children for chores
* eases: changing position, side-lying
* what else have you tried? aquatic therapy-enjoy it and feel good during therapy but haven’t noted improvements carrying over; massage, chiro, other PTs-all with no lasting improvements; muscle relaxants helped a lot but you didn’t like the feeling of being dependent on a drug-want to give PT one more try
* current pain: 4/10 (ran some errands this morning)
* worst pain: 7/10 (upon first waking in the morning if the previous day was very active)
* does it get down to 0? yes
* you have a PMH of NIDDM, with noted edema and some tingling in L foot

**Examination:**

* Posture: hyper-lordotic, stiffness with gait, muscle guarding, low tone in abdomen, + trendelenberg with gait
* MMT: 5/5 in BLE except B knee flexion 4/5
* ROM:
  + bilateral trunk flexion: decreased R > L
  + trunk ext: decreased
  + trunk flexion: decreased with painful return to neutral
  + prone knee bend: decreased and painful
  + hip rotn: decreased L > R
* Palpation: tender over B paraspinals, gluteals
* ASIS, PSIS, iliac crest heights symmetrical
* Prone instability test: unable to perform secondary to weakness, pain
* SLR test: pain/tightness in popliteal but not “the pain”
* SIJ provocation:
  + Gaenslen’s: + for pain in L-spine (not over PSIS)
  + anterior gapping: + for pain in L spine
  + posterior shear: -
  + side-lying posterior gapping: -
  + sacral thrust: feels good into nutation and counter-nutation
* Faber: unable to obtain test position secondary to muscle guarding
* Pain relief from long axis distraction and soft tissue mobilizations
* bonus points if they think to do outcome measure: fear-avoidance, roland morris, oswestry

**Possible intervention ideas:**

* long axis distraction
* education
* ab bracing
* endurance activities for core
* ergonomics
* modalities
* stretching hip flexors, low back, lats
* eventually: strengthen abs, hamstrings, LEs

**Case 3**

**History:**

* You are a 33 y/o F with a hx of recurrent low back pain
* MOI: this most recent recurrence began while bending over to pick up your son’s sock off the floor
* Duration: 4 days
* you are very active! played soccer in college; mother of 2; does yoga, xfit, and zumba
* aggs: end of range trunk motion
* eases: popping low back, massage
* what else have you tried? chiropractic-very helpful but pain always returns
* current pain: 2/10
* worst pain: 8/10
* does it get down to 0?

**Examination:**

* Posture: forward head, rounded shoulders, increased lordosis in standing, poor posture in sitting
* MMT: 5/5 except B hip flexors
* ROM: WNL, B SLR 100 deg
* Standing trunk motion combined testing: full motion with L lateral + trunk flexion, decreased with R extension
* palpation: tender in B paraspinals, QL
* PA mobs to lumbar spine: generalized hypermobility
* Beighton ligamentous laxity screen: 5/9 positive
* active SLR: +
* prone instability test: +

**Possible intervention ideas:**

* mobilize possible hypOmobile segments above
* core stabilization-ab bracing
  + strengthening and endurance of core
* segmental re-education: manual resisted seated trunk rotation
* strengthening of hip flexors

**Case 4**

**History:**

* You are a 38 y/o F school-teacher and single mom, you have low back pain that sends a shooting pain (try not to lead them with this word) down to the R heel sometimes… it doesn’t hurt during the day while you’re teaching at the front of the class but once you get home and watch TV/eat dinner then it suddenly comes on! your muscles must be tired or something ;) It also hurts more when you wake up in the morning after having slept on your side all night
* MOI: you were doing “reverse crunches” you’d read about in a magazine when you heard a pop and had that shooting pain
* Duration: 3 days
* aggs: prolonged sitting, coughing, laundry, driving
* eases: walking, laying prone, tylenol
* what else have you tried? heat doesn’t change pain
* current pain: 2/10 when you walked in the door (short drive to clinic, 5 minute wait in waiting room) but as you’re talking it gets worse (4/10) and you have to stand up to complete history
* worst pain: the shooting pain is 8/10
* does it get down to 0?

**Examination:**

* Posture: poor in sitting (slumped or leaning to L), hyperlordotic in standing
* MMT: 4+/5 throughout
* ROM: WNL
* palpation: tender over gluteals, lumbar paraspinals
* PA mobs to L4-5 provide relief
* repeated flexion/extension: +
* SIJ provocation:
  + Gaenslens: + (for pain in hip if they ask where)
  + posterior shear: + (same as above)
  + rest: -
* slump test: + (or SLR, but only one of them)

**Possible intervention ideas:**

* repetitive, end-range mvoements in direction of centralization
  + rocking quadruped
  + prone on elbow🡪 prone push-up
  + standing trunk ext
* mobilization to promote extension
* prone traction
  + must be at least 50% of BW with long, static hold
* education!
  + esp posture in sitting