

## Defensive Jaw Complex

The **Third Neurological Unit** begins with the Defensive Jaw Complex (D.J.C.) or the Fight part of Flight/Fight survival mechanism. The D.J.C. essentially is the dural defense reaction involving the locking of cranial sutures and traction activity of flexion of the sacro-coccygeal junction. This activity is often referenced as Dural Defense which facilitates the protection of the brain and spinal cord / nerve roots.

**Note:** The D.J.C. is comprised of the two parts (temporo-mandibular-joint (TMJ) muscles and Coccyx) with three subcomponents:

1. Head neutral - release TMJ muscles
2. Head rotation - release TMJ muscles
3. Head rotation with pelvic rotation - release TMJ muscles

**Screening:** Using the left gluteus medius to access D.J.C. program, patient using right hand therapy localizes right jaw (masseter muscle). Positive therapy localization verifies a D.J.C. neurological deficit is present. The test is repeated with head turned right to verify subcomponent #2. Add pelvic rotation to verify subcomponent #3.

*If there was no active cranial injury component (C.I.C.), then D.J.C. will be absent. If C.I.C. is present then the minimal presentation will be subcomponent #1. If C.I.C. is present with bilateral Ocular reflexes then subcomponent #2 will be present. If a pelvic injury (bilateral cloacals active in gait correction), was seen then subcomponent #3 will be present. There is no harm in doing all three components whether needed or not.*



### I. Defensive Jaw correction: Head neutral

- Spindle down right masseter muscle – right temporalis muscle then across to opposite lateral pterygoid muscle. Repeat the same procedure starting from left masseter muscle.
- Head Rotation: Repeat above procedure.
- Head Rotation with Pelvic Rotation: Repeat above procedure.



### II. Coccygeal Release correction:

- Patient maintains bilateral TMJ contact while pumping pressure is applied to coccyx by pushing coccyx towards pubic bone on exaggerated expiration or inspiration (exaggerated respiration activity is required for ~ 5 respirations).
- Head Rotation: Repeat above procedure.
- Head Rotation with Pelvic Rotation: Repeat above procedure.

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**III. Fascial Defense correction:** Represents part of the body's defensive posture and is included in neurological unit three for convenience of description. Please note if a vestibulo-ocular reflex (V.O.R.) is present then the facial release must be completed after the scoliosis correction. If the V.O.R. is absent, the facial release is optimally completed after Defensive Jaw or before any weight-bearing activity.

**Note:** Early understanding of the Fascial Release protocol involved releasing of the fascia of the neck via a stair step mobilisation protocol. Following new knowledge and understanding of the anatomical fascial connection reference points in the book, "Anatomy Trains: Myofascial Meridians for Manual and Movement Therapists" by Thomas W. Myers published in 2001 lead to the dramatic improvement of this step.

Our understanding of Fascial Defense represents a hypotonic *fatigued* state of the fascia and correction is a reset of the fascia similar to spindling  $\leftarrow \rightarrow$  up muscle spindle fibers.

The fascial release is best applied following correction of scoliosis protocol when present and or implement before any weight bearing steps. If one completes the posterior fascial release and implements a weight bearing step before completing the anterior fascial release, one will need to redo the fascial release protocol again starting from the beginning.

**Screening:** Determine beginning point while in the prone position. Challenge the right or left fascia overlying the upper trapezius by spindling down  $\rightarrow \leftarrow$  and test the homolateral hamstring. The side of fascial involvement will result in result in a conditional inhibition of the hamstring challenge. The starting side will always be consistent with the high side of scoliosis when present.

**Fascial Release Correction:** Correction involves a spindling up (facilitation)  $\leftarrow \rightarrow$  of the fascia component along the anatomical landmarks as outline below. The procedure essentially follows the concept of a train moving from station to station criss-cross the body and always finishing on the same side one starts. The procedure is bilateral posterior then completed bilaterally on the anterior.

#### **Begin Prone:**

- Between occipital ridge to spine of scapula



- Between spine of scapula to contralateral lower ribs.



- Between lower ribs to contralateral iliac crest.



- Between iliac crest to greater trochanter.



- Repeat entire procedure (starting over from the other occipital ridge side).

~ Patient turns over supine without getting off table ~

~ Note: it is indifferent as to which side one begins next step on ~

### **Supine:**

- Between inguinal ligament & pubic bone to contralateral lower ribs.



- Between lower ribs to contralateral clavicle.



- Between clavicle to ramus of jaw.



- Repeat entire procedure (starting over from the other inguinal ligament side)

### **Completes Neurological Unit Three**

## Pelvic Complex

The **Fourth Neurological Unit** begins with the Pelvic Injury (P.I.C.) and finishes with the pelvic Categories which completes the Flight/Fight survival mechanism. The P.I.C. representing the defensive /fight posture of the lumbar spine-sacrum-pelvis complex.

**Note:** The P.I.C. may or may not be present. The indicators are when bilateral cloacal reflexes are seen in pelvis centering. If the P.I.C. is present, the Front-Back Protocol should be completed now if it was not already been completed in Section VI neurological Unit Two and is shown again below.

**Screening:** Using the left gluteus medius, the patient using left hand therapy localizes the right jaw (masseter). Positive therapy localization (conditionally inhibited gluteus medius) indicates the presence P.I.C.



*If a P.I.C. is present, this implies a significant low back /potential disc problem may exist and one should become suspicious of Category III (disc/imbrication problem) later, to be confirmed in the next section. If there were no bilateral cloacal reflexes, then pelvic injury is absent implying no significant low back /disc problem with this individual. There is no harm in doing this step if unsure or P.I.C. is absent.*

**I. Pelvic Injury Complex correction:** Patient must maintain contact on right jaw using left hand throughout correction. Head should be in neutral position, eye mode is not important in correction of pelvic girdle muscles.

- Spindle Up (tonify)  $\leftarrow \rightarrow$  all muscles; left gluteus medius ~ quadratus lumborum ~ across to opposite (right) adductor ~ gluteus medius ~ quadratus lumborum ~ across to left adductor (finish same side where one started).
- Repeat the same procedure starting from the right gluteus medius muscle.
- Reset anterior and posterior cloacal reflexes simultaneously using eye modes open and closed while patient now using both hands criss-crossing over jaw.
- Finish with stimulation of the lumbar righting reflexes located adjacent to lumbar vertebrae 3-4-5.



**Front-Back Combination correction:** Represents correction of gait reflexes involving anterior cloacals & labyrinthine and posterior cloacals & ocular reflexes.

**Note:** This step is referenced here if one did not already address this in Neurological Unit Two Cranial Injury section VI (it is easier to perform weight bearing than reclining).

- Anterior cloacals and labyrinthine reflexes rub with eyes open and closed with respiration.
- Posterior cloacals and ocular reflexes rub with eyes open & closed with respiration.



## Category III

**II. Category II:** Represents the structural jaw complex (left jaw) also known as the weight bearing fault of the cranial and body pelvis.

**Note:** Category II is composed of *two sections*; the cranial pelvis and body pelvis. The cranial pelvis involves only the left jaw and will need to be completed in both eyes open and closed modes.

The body pelvis, requiring blocking, will be always present on the left in eyes open. If pelvic blocking is also found on the right (with eyes open), this finding is confirmation of a need to complete Category III indicating a lumbar facet imbrication involvement and or lumbar disc.

**Screening:** Using the right Gluteus Medius as an indicator muscle, patient therapy localizes the left jaw (masseter muscle) with their left hand. The screening will show a conditionally inhibited muscle test in both eye modes, i.e. the need for correction of the cranial pelvis in both eyes open and closed, (consistent with prior gait correction findings of eyes open and closed).



### Category II Section One Cranial Pelvis correction:

Correction involves the cranial pelvis completed in both eyes open and closed. Please note correct eye mode must be maintained throughout procedure. If the patient changes eye mode, anything more than just blinking, one must repeat the procedure. Note yawning will also neutralize correction and one will need to start the procedure over again.

#### Correction:

- Spindling down (defacilitation) →← left masseter muscle.
- Spindling down →←left temporalis muscle.
- Reciprocal rocking motion of moving left mastoid up toward chin on inspiration and pull right mastoid down towards floor on expiration. Repeat for 4-6 respirations.
- Stimulate neuro-lymphatics (NL) of neck flexors under left clavicle and C-2 and neuro-vascular (NV) at angle of left jaw.
- Spindle down →← splenius capitus on left.
- Spheno-basilar lift: gently traction occiput and frontal bones with 4-6 respirations.
- Rub lateral pterygoids (bilateral).  
~ eye mode must be maintained throughout correction ~
- Repeat above procedure in opposite eye mode.
- If Scoliosis and or Pelvic Injury (PIC) were present and treated then relax psoas muscle by stimulating psoas NL & NV reflexes.





**Category II Section Two Body Pelvis correction:**

Body Pelvis correction involves pelvic blocking to correct leg length discrepancy. Correct eye mode must be maintained throughout correction. If the patient changes eye mode of more than just blinking, one must repeat the procedure. Note yawning will also neutralize correction and one will need to start over.

**Screening:** Commonly using the straight arm indicator muscle, therapy localize the left and right first rib heads. Alternate method using the inguinal SOT challenge. There will always be at least one positive finding commonly eyes open on the left. If one ascertains a second pelvic lesion on the right (eyes open). This second pelvic *lesion* will be the indicator of a lumbar disc / imbrication lesion and a need to incorporate Category III.

**Correction:**

- Utilize pelvic blocks to correct leg length discrepancy.  
~ block under right trochanter and left ilium.
  - If pelvic injury was corrected prior, unlock pubic bone with scissors action and reciprocal movement on chin.
  - Spindling down (defacilitation) → ← left masseter muscle.
  - Spindling down → ← left temporalis muscle.
  - Reciprocal rocking motion of moving left mastoid toward chin on inspiration and pull right mastoid down towards floor on expiration. Repeat for 4-6 respirations.
  - Stimulate neuro-lymphatics (NL) of neck flexors under left clavicle and C-2 and neuro-vascular (NV) at angle of left jaw.
  - Spindle down splenius capitus on left.
  - Spheno-basilar lift: gently traction occiput and frontal bones with 4-6 respirations.
  - Rub lateral pterygoids.
- ~ eyes open mode must be maintained throughout correction. If a persistent leg length discrepancy is seen, Category III will neutralize it. ~



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### III. Category III Lumbar Disc correction:

Category III may or may not be present. Category III represents significant lumbar imbrication and or lumbar disc involvement with indicators as described previously.

**Screening:** During Category II screening above, if a left and right body pelvis lesion is present (bilateral rib head indicators) then Category III is indicated.

**Prone:** Using a hamstring indicator muscle, a two point positive therapy localization from top of sacral base to each spinous process of lumbar vertebrae will be seen. Additional knife-edge therapy localization will assist in identifying disc level if present.



#### Correction (Lumbar Imbrication):

- Prone blocks are placed under pelvis.  
~ block under right trochanter and left ilium angling toward each other. If one places the blocks in the wrong direction, a global inhibition will be elicited via hamstrings.
- With thumb contact on spinous process of lumbar spine, starting from L-5 continue up to L-1 with a cephalad pumping action on exaggerated inspiration for 4-6 respirations. Repeat process on cervical spine (Lovett vertebrae). A supine mechanical Lumbar imbrication technique may also be helpful if disc lesion is absent.



#### Correction (Disc Involvement):

- Use knife-edge therapy localization to identify lumbar disc lesions starting from L-4, traction cephalad above lesion with inspiration while maintaining a solid hold on lower vertebrae /sacral base. L-4 is the common level of involvement, then proceed to L-5, L-3, L-2, L-1 if found. Repeat process on cervical spine (Lovett vertebrae).
- Have patient place thumb on hard palate and press firmly (2-3 lbs. pressure) on inspiration and release pressure on expiration while practitioner lifts affected vertebrae as performed above. Repeat 3-4 times as need per vertebral level. One can repeat procedure with right and left head rotation and repeat again in weight bearing mode (with patient standing and leaning against the wall with one hand).
- Rub Lumbar and Cervical righting reflexes.

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### Completes Neurological Unit Four