

Lower Cervical Adjustments (C2-C7)

| PR | Seated | Right index, distallateral portion | Right posterior inferior spinous process | CH - Rat hole, $\mathrm{IH}-$ fingers down neck | P-A, R-L through pts opposite eye, *** along plane line of disk |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PL | Seated | Left index, distallateral portion | Left posterior inferior spinous process | CH - Rat hole, IH fingers down neck | P-A, L-R through pt's opposite eye, *** along plane line of disk |
| PR-La | Seated | Left index, distallateral portion | Left lamina of involved segment (opposite of the listing) | CH - Rat hole, IH fingers down neck | P-A through pt's same side eye, *** along plane line of disk |
| PL-La | Seated | Right index, distallateral portion | Right lamina of involved segment (opposite of the listing) | CH - Rat hole, $\mathrm{IH}-$ fingers down neck | P-A through pt's same side eye, *** along plane line of disk |
| PRS | Seated | Right index, distallateral portion | Right posterior inferior spinous process | CH - Rat hole, $\mathrm{IH}-$ fingers down neck | P-A, R-L through pts opposite eye, CW torque, *** along plane line of disk |
| PLS | Seated | Left index, distallateral portion | Left posterior inferior spinous process | CH - Rat hole, $\mathrm{IH}-$ fingers down neck | P-A, L-R through pt's opposite eye, CCW torque, *** along plane line of disk |
| PRI-La | Seated | Left index, distallateral portion | Left lamina of involved segment (opposite of the listing) | CH - Rat hole, $\mathrm{IH}-$ fingers down neck | P-A through pt's same side eye, De-rotate spinous with P-A, CCW torque, *** along plane line of disk |
| PLI-La | Seated | Right index, distallateral portion | Right lamina of involved segment (opposite of the listing) | CH - Rat hole, $\mathrm{IH}-$ fingers down neck | P-A through pt's same side eye, De-rotate spinous with P-A, CW torque, *** along plane line of disk |

## GENERAL NOTES FOR LOWER CERVICALS:

> Cervical adjustments as presented at this level, should be performed in the Cervical Chair.
( More advanced techniques may take advantage of the knee-chest, and the Zenith Hi-Lo table)
> The line of correction should include a slight lift at the beginning of the thrust to bring the vertebra up "into the saddle" and then follow the disk plane line
> Modify the disk plane to suit the individual patient during a thrust.
> Stabilization hand should be held steady and not "whipped". Too much thenar pressure will cause a "whip" of the head
> Stabilization hand should contact the antero-lateral neck at the level below the one you are adjusting.
You should think about "catching" the vertebra you are adjusting at the MCP or distal portion of your index and middle finger of the stabilizing hanc
$>$ Extension of the neck should not bring the chin past level; only enough to cause the segment you are adjusting to just begin to move.
$>$ Spinous contacts are at the posterior, inferior lateral aspect of the Spinous.
$>$ The location of the lamina contact is approximately $1 / 8^{\prime \prime}$ lateral and $1 / 8$ " superior to the cervical spinous process.
> Torques: Right side contacts are clockwise, and left side contacts are counter-clockwise (we are always contacting the open wedge side).
$>$ Remember to "squash the grape" when you thrust - it will give you speed and help with the appropriate torque.
$>$ Keep your muscles relaxed until you actually thrust, a tight muscle has no speed. Most of the speed and depth occur within the first 1-1 1/2 inches.
$>$ All gonstead adjustments are a thrust and HOLD for a beat - this takes advantage of ligamentous creep.

Gonstead Technique Study Sheet
Fall 2006


Atlas AS Cervical Adjustments (C1)

| AR | Seated | Thumbpad, Right hand | Right Lateral TVP | R-L | Contact hand is slightly cupped, thumb in tight, wrist in slight extension. <br> A relaxed hand is much faster here. <br> Let the lateral portion of your index finger lay along the base of the patient's skull to monitor the tension on the sub-occipital musculature. Raise the patient's chin slightly until these muscles relax. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| AL | Seated | Thumbpad, Left hand | Left Lateral TVP | L-R |  |
| ASR | Seated | Thumbpad, Right hand | Right Lateral TVP | R-L, CW torque |  |
| ASL | Seated | Thumbpad, Left hand | Left Lateral TVP | L-R, CCW Torque |  |
| ASRA | Seated | Thumbpad, Right hand | Right Lateral TVP | R-L, CW torque, prestress posteriorly (nose toward contact) |  |
| ASLA | Seated | Thumbpad, Left hand | Left Lateral TVP | L-R, CCW Torque, prestress posteriorly (nose toward contact) |  |
| ASRP | Seated | Thumbpad, Right hand | Right Lateral TVP | R-L, CW torque, prestress anteriorly (nose away from contact) |  |
| ASLP | Seated | Thumbpad, Left hand | Left Lateral TVP | L-R, CCW torque, prestress anteriorly (nose away from contact) |  |
| Atlas AI Cervical Adjustments (C1) |  |  |  |  |  |
| AIR | Prone | Soft Pisiform of Right hand | Right Lateral TVP | R-L, CCW torque |  |
| AIL | Prone | Soft Pisiform of Left hand | Left Lateral TVP | L-R, CW torque |  |
| AIRA | Prone | Soft Pisiform of Right hand | Right Lateral TVP | R-L, CCW torque, A-P | Episternal notch anterior to Contact Point |
| AILA | Prone | Soft Pisiform of Left hand | Left Lateral TVP | L-R, CW torque, A-P | Episternal notch anterior to Contact Point |
| AIRP | Prone | Soft Pisiform of Right hand | Right Lateral TVP | R-L, CCW torque, P-A | Episternal notch Posterior to Contact Point |
| AILP | Prone | Soft Pisiform of Left hand | Left Lateral TVP | L-R, CW torque, P-A | Episternal notch Posterior to Contact Point |

For AS listings: Pt is in the cervical chair. LOC is across the line of the shoulders, through the plane of the atlas
> Hand position, AS listings: Somewhat flat hand, thumb pulled in tight, slight wrist extension, lateral index finger along suboccipital musculature.
Line of Drive: across the plane line of the atlas (send your thrust out the opposite TVP of atlas)
For AI listings: The patient is on the knee-chest table with the side of laterality turned upward. The doctor is standing on the side the patient's face is turned toward (i.e. AIR: Rule - RIGHT side up, RIGHT hand contact, Doc on the Pt's RIGHT) remember: "right,right,right/left,left,left"
> "squashing the grape" under your arm as you thrust helps you produce the appropriate torque and improves your speed.
> AS listings may be performed on the knee -chest with reversed torque. Al listings may be performed in the chair with the patient's chin raised and torque reversed; the notes in the grid above represent, however, the preferred methods


| Occipital Listings (C0) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| AS-RS | Seated | Overlaid Pisiforms or 2nd-4th phalanges | Right Supra-orbital ridge | A-P, S-I, R-L in a scooping Preload condyles by turning chin motion toward the reion of slightly down and laterally flexing head the Dr's opposite kidney to right |
| AS-LS | Seated | Overlaid Pisiforms or 2nd-4th phalanges | Left supra-orbital ridge | A-P, S-I, L-R in a scooping Preload condyles by turning chin motion toward the reion of slightly down and laterally flexing head the Dr's opposite kidney to left |
| AS-RS-RP | Seated | Overlaid Pisiforms or 2nd-4th phalanges | Right Supra-orbital ridge | A-P, S-I, R-L in a scooping motion toward the reion of <br> Preload condyles by turning chin the Dr's opposite kidney. slightly down, laterally flexing head to Pt's head is pre-positioned right and turning nose away from in left rotation. contact |
| AS-RS-RA | Seated | Overlaid Pisiforms or 2nd-4th phalanges | Right Supra-orbital ridge | A-P, S-I, R-L in a scooping motion toward the reion of Preload condyles by turning chin the Dr's opposite kidney. slightly down, laterally flexing head to Pt's head is pre-positioned right and turning nose toward contact in right rotation. |
| AS-LS-LP | Seated | Overlaid Pisiforms or 2nd-4th phalanges | Left supra-orbital ridge | A-P, S-I, L-R in a scooping motion toward the reion of Preload condyles by turning chin the Dr's opposite kidney. slightly down, laterally flexing head to Pt's head is pre-positioned left and turning nose away from contact in right rotation |
| AS-LS-LA | Seated | Overlaid Pisiforms or 2nd-4th phalanges | Left supra-orbital ridge | A-P, S-I, L-R in a scooping motion toward the reion of Preload condyles by turning chin the Dr's opposite kidney. slightly down, laterally flexing head to Pt's head is pre-positioned left and turning nose toward contact in left rotation. |
| PS-RS | Seated | Palmar aspect of the metacarpophalangeal joint of thumb. | Right Supra-mastoid notch | P-A, S-I, R-L through the Preload condyles by bringing chin C0-C1 joint plane line, in a slightly up and laterally flexing head to scooping motion the right |
| PS-LS | Seated | Palmar aspect of the metacarpophalangeal joint of thumb. | Left Supra-mastoid notch | P-A, S-I, L-R through the Preload condyles by bringing chin Co-C1 joint plane line, in a slightly up and laterally flexing head to scooping motion the left |
| PS-RS-RP | Seated | Palmar aspect of the metacarpophalangeal joint of thumb. | Right Supra-mastoid notch | P-A, S-I, R-L through the C0-C1 joint plane line, in a slight scooping motion. Pt's head is prepositioned in left rotation <br> Preload condyles by bringing chin slightly up, laterally flexing head to the right and turning nose away from the contact |
| PS-RS-RA | Seated | Palmar aspect of the metacarpophalangeal joint of thumb. | Right Supra-mastoid notch | P-A, S-I, R-L through the C0-C1 joint plane line, in a slight scooping motion. Pt's head is prepositioned in right rotation <br> Preload condyles by bringing chin slightly up, laterally flexing head to the right and turning nose toward the contact |
| PS-LS-LP | Seated | Palmar aspect of the metacarpophalangeal joint of thumb. | Left Supra-mastoid notch | P-A, S-I, L-R through the C0-C1 joint plane line, in a slight scooping motion. Pt's head is prepositioned in right rotation <br> Preload condyles by bringing chin slightly up, laterally flexing head to the left and turning nose away from the contact |
| PS-LS-LA | Seated | Palmar aspect of the metacarpophalangeal joint of thumb. | Left Supra-mastoid notch | P-A, S-I, L-R through the C0-C1 joint plane line, in a <br> Preload condyles by bringing chin slight scooping motion. Pt's head is prepositioned left and turning nose toward the in left rotation contact |

$>$ All AS listings require a cervical blocker
$>$ To make it easier to remember which hand to use and which side to contact, think of the first and third letters of the listing. I.e. PS-RS-RA The first letter "P" and the the third letter "R" tell you to put your "R"ight hand on the "P"osterior "R"ight side of the patient's head, and then lean the

Gonstead Technique Study Sheet
Fall 2006

| Listing | Patient Position <br> (P.P.) | Contact Point <br> (C.P.) | Segmental Contact <br> Point (S.C.P.) | General Finger <br> Position | Approximate <br> Line of Correction (L.O.C.) |
| :---: | :---: | :---: | :---: | :---: | :---: |

patient's head to the "P"osterior "R"ight. Then just remember to pre-load the condyle based on the very last " P " or " A " in the listing (if present).
An AS-RS-RP would be done the same way: "R"ight hand on the "A"nterior "R"ight and lean pt's head "A"nterior and "R"ight.

Gonstead Technique Study Sheet
Fall 2006

| Listing | Patient Position (P.P.) | Contact Point (C.P.) | Segmental Contact Point (S.C.P.) | General Finger Position | Approximate Line of Correction (L.O.C.) | Miscellaneous |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Thoracic Adjustments |  |  |  |  |  |  |
| PR | Prone with doctor on right | Pisiform | Right posterior spinous process, as high on the shaft as possible | 45, across the spine (hand relaxed) | P-A, R-L, *** along plane line of disk | LOC must take into account facets and disk plane. Disk planes vary from patient to patient so set angles are inappropriate. The doctor must align him/herself with the patient's disk and then align slightly lower to accommodate the facets. |
| PL | Prone with doctor on left | Pisiform | Left posterior spinous process, as high on the shaft as possible | 45, across the spine (hand relaxed) | P-A, L-R, *** along plane line of disk |  |
| PR-T | Prone with doctor on left | Pisiform | Left Transverse Process of involved segment (opposite of the listing) | Parallel to the Spine (not crossing the spine) | P-A, *** along plane line of disk |  |
| PL-T | Prone with doctor on right | Pisiform | Right Transverse Process of involved segment (opposite of the listing) | Parallel to the Spine (not crossing the spine) | P-A, *** along plane line of disk |  |
| PRS | Prone with doctor on right | Pisiform | Right posterior spinous process, as high on the shaft as possible | 45, across the spine (hand relaxed) | P-A, R-L, CW torque, *** along plane line of disk | Each segment will require an I-S lift (relative to that segment) and then the thrust should aim along the plane of the disk (which is essentially perpendicular to the patien's back at that level). |
| PLS | Prone with doctor on left | Pisiform | Left posterior spinous process, as high on the shaft as possible | 45, across the spine (hand relaxed) | P-A, L-R, CCW torque, *** along plane line of disk |  |
| PRI-T | Prone with doctor on left | Pisiform | Left Transverse Process of involved segment (opposite of the listing) | Parallel to the Spine (not crossing the spine) | P-A, De-rotate spinous with P-A, *** along plane line of disk with a CCW torque |  |
| PLI-T | Prone with doctor on right | Pisiform | Right Transverse Process of involved segment (opposite of the listing) | Parallel to the Spine (not crossing the spine) | P-A, De-rotate spinous with P-A, CW torque, *** along plane line of disk with a |  |

## GENERAL NOTES FOR THORACICS:

> Thoracic adjustments should be performed on the knee-chest, or the Zenith Hi-Lo table (with abdominal piece unlocked)
> Dr stands on the side of CONTACT, angled toward the patient's head slightly.
> Modify the disk plane to suit the individual patient during a thrust.
$>$ For the T1-T3 use your inferior hand for the primary contact, your support hand will produce the necessary S-I thrust
$>$ We do not reach across the spine for the transverse-process contacts in the thoracic spine.
> Keep your muscles relaxed until you actually thrust, a tight muscle has no speed.
> All gonstead adjustments are a thrust and HOLD for a beat - this takes advantage of ligamentous creep.

Gonstead Technique Study Sheet
Fall 2006

| Listing | Patient Position (P.P.) | Contact Point (C.P.) | Segmental Contact Point (S.C.P.) | General Finger Position | Approximate Line of Correction (L.O.C.) | Miscellaneous |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pelvis Push Moves |  |  |  |  |  |  |
| PI | ISU | Pisiform | Posterior Inferior PSIS | Straight up the spine | P-A, I-S |  |
| AS | ISU | Pisiform | Gonstead Fossa * | Straight up the spine | P-A, S-I (Along line of femur) | Fingers may be turned toward the Doctor to accomodate S-I line of drive |
| Ex | ISU | Pisiform | Lateral PSIS | Down to the table | P-A, L-M | Pull move recommended for this adjustment (in other words PULL THIS ONE) |
| In | ISU | Pisiform | Medial PSIS | Point to Doctor | P-A, M-L |  |
| PIEx | ISU | Pisiform | Posterior inferior <br> Lateral PSIS | 45 degrees down to opposite iliac crest | P-A, I-S, L-M, Torque pisiform medially ( R - CW, L - CCW) | Unless Ex component is very small compared to PI, pull this one |
| Plin | ISU | Pisiform | Posterior inferior medial PSIS | 45 degrees up toward same side iliac crest | P-A, I-S, M-L, Torque pisiform laterally ( R CCW, L - CW) |  |
| ASEx | ISU | Pisiform | Gonstead Fossa* | 45 degrees down | P-A,S-I, L-M, Torque pisiform medially ( $R-C W$, L - CCW) | Generally, this one pulls much better than it pushes, so a pull is preferred. Especially pull this one if Ex component is greater than AS. |
| ASIn | ISU | Pisiform | Gonstead Fossa* | 45 degrees up | P-A, S-I, M-L, Torque pisiform laterally ( R CCW, L - CW) |  |


| Pelvis Pull Moves |  |  |  | ALL PULLS HAVE A "KICK" |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| In | ISU | "High C" | Medial PSIS | P-A, M-L |  |
| Ex | ISD | Pisiform | Lateral PSIS | P-A, L-M | Reach around patient, and tissue pull medially to the PSIS |
| PlIn | ISU | "High C" | Posterior inferior medial PSIS | P-A, I-S, M-L, Torque fingers laterally ( R - CCW, L-CW) |  |
| PIEx | ISD | Pisiform | Posterior inferior Lateral PSIS | P-A, I-S, L-M, Torque pisiform medially ( $\mathrm{R}-\mathrm{CW}$, L - CCW) | Reach around patient, and tissue pull medially to the PSIS. You should be leaning toward the patient's head. If PI component is greater than Ex, consider pushing this one. |
| ASEx | ISD | Pisiform | Gonstead Fossa* | P-A,S-I, L-M, Torque pisiform medially ( $\mathrm{R}-\mathrm{CW}$, L - CCW) | Begin by reaching around patient, and tissue pulling with the pisiform medially toward PSIS, then inferiorward toward the Gonstead Eminence. You should be leaning toward the patient's feet, and as you move to this position, your SCP should swing down to the correct point near the Gonstead Eminence. |

Gonstead Technique Study Sheet
Fall 2006

| Listing | Patient Position (P.P.) | Contact Point (C.P.) | Segmental Contact Point (S.C.P.) | General Finger Position | Approximate Line of Correction (L.O.C.) | Miscellaneous |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sacrum Moves |  |  |  |  |  |  |
| P-R/P-L Push | ISU | Pisiform | Between S2 tubercle and PSIS on involved side | Straight down to table | P-A |  |
| P-R/P-L Push | ISD | Pisiform | Between S2 tubercle and PSIS on involved side | 45-45-45* | P-A |  |
| P-R/P-L Pull | ISU | "High C" | Between S2 tubercle and PSIS on involved side |  | P-A | All Pull moves have a "kick" |
| Base Posterior | Either | Pisiform | S1 Tubercle | Down to Table | P-A |  |
| L5 <br> Spondylolist hesis | Either | Pisiform | S1 Tubercle | Down to Table | S-I, then P-A | Only adjust if symptomatic and grade 1 or 2 |

* Patient rotated to 45, contact hand at 45 away from midline, and thenar lifted 45 degrees off the patient's body for specificity.

| Coccyx |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | Prone (Dr. on either side) | Thumb-tip of cephalad hand with Coccyx (tissue pull from pisiform of caudad low on coccyx straight hand on contact up midline) thumb nail | Caudad forearm parallel to ground | I-S ONLY | Only adjust if symptomatic |
| A-R/A-L | Prone (Dr. on either side) | Thumb-tip of cephalad hand with Coccyx (tissue pull from pisiform of caudad low on open wedge side hand on contact of coccyx straight up thumb nail midline) | Caudad forearm parallel to ground | I-S ONLY | Only adjust if symptomatic - Dr. may have slight advantage by standing on side of open wedge |

Gonstead Technique Study Sheet

| Listing | Patient Position (P.P.) | Contact Point (C.P.) | Segmental Contact Point (S.C.P.) | General Finger Position | Approximate Line of Correction (L.O.C.) | Miscellaneous |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lumbar Push Adjustments |  |  |  |  |  |  |
| P | Side Posture | Pisiform | Posterior inferior spinous | 45, across the spine | P-A, *** along plane line of disk |  |
| PR | Left Side Posture (spinous rotation up) | Pisiform | Right lateral posterior inferior spinous of involved segment | 45, across the spine | P-A, R-L, *** along plane line of disk |  |
| PL | Right Side Posture (spinous rotation up) | Pisiform | Left lateral posterior inferior spinous of involved segment | 45, across the spine | P-A, L-R, *** along plane line of disk |  |
| PR-M | Right Side Posture (Spinous rotation DOWN) | Pisiform | Left Mammillary (opposite spinous rotation) | Straight up the spine | P-A, De-rotate spinous with P-A, *** along plane line of disk | LOC must take into account facets and disk plane. Disk planes vary from patient to patient so set angles are |
| PL-M | Left Side Posture (spinous rotation DOWN) | Pisiform | Right Mammillary (opposite spinous rotation) | Straight up the spine | P-A, De-rotate spinous with P-A, *** along plane line of disk | appropriate. The doctor must align $\mathrm{m} /$ herself with the patient's disk and en align slightly lower to |
| PRS | Left Side Posture (spinous rotation up) | Pisiform | Right lateral posterior inferior spinous of involved segment | 45, across the spine | P-A, R-L, *** along plane line of disk, with a CW Torque | Each segment will require an I-S lift (relative to that segment) and then the |
| PLS | Right Side Posture (spinous rotation up) | Pisiform | Left lateral posterior inferior spinous of involved segment | 45, across the spine | P-A, L-R, *** along plane line of disk, with a CCW torque | thrust should aim along the plane of the disk (which is essentially perpendicular o the patien's back at that level). |
| PRI-M | Right Side Posture (Spinous rotation DOWN) | Pisiform | Left Mammillary (opposite spinous rotation) | Straight up the spine | P-A, De-rotate spinous with P-A, *** along plane line of disk, with a CCW torque |  |
| PLI-M | Left Side Posture (spinous rotation DOWN) | Pisiform | Right Mammillary (opposite spinous rotation) | Straight up the spine | P-A, De-rotate spinous with P-A, *** along plane line of disk, with a CW torque |  |
| L5 Special Listings |  |  |  |  |  |  |
| PRI-Sp | Left Side Posture (spinous rotation up) | Pisiform | Right lateral posterior inferior spinous of involved segment | 45, across the spine | P-A, R-L, S-I along plane line of disk, with a CCW Torque | Knee Chest - Use caudal hand, Torque UP the spine |
| PLI-Sp | Right Side Posture (spinous rotation up) | Pisiform | Left lateral posterior inferior spinous of involved segment | 45, across the spine | P-A, L-R, S-I along plane line of disk, with a CW torque | Knee Chest - Use caudal hand, Torque UP the spine |
| PRS-M | Right Side Posture (Spinous rotation DOWN) | Pisiform | Left Mammillary (opposite spinous rotation) | Straight up the spine | P-A, De-rotate spinous with P-A, S-I along plane line of disk, with a CW torque | Knee Chest - Use caudal hand, fingers 90 degrees away from Dr. Torque UP the spine |
| PLS-M | Left Side Posture (spinous rotation DOWN) | Pisiform | Right Mammillary (opposite spinous rotation) | Straight up the spine | P-A, De-rotate spinous with P-A, S-I along plane line of disk, with a CCW torque | Knee Chest - Use caudal hand, fingers 90 degrees away from Dr. Torque UP the spine |


$\left.\begin{array}{|l|llllll|}\hline \text { Lumbar Pull Adjustments } & & & \text { ALL PULLS HAVE A "KICK" } \\ \hline \text { PR } & \begin{array}{c}\text { Right Side Posture } \\ \text { (Spinous rotation } \\ \text { DOWN) }\end{array} & \text { "High C" } & \begin{array}{c}\text { Right lateral posterior } \\ \text { inferior spinous of } \\ \text { involved segment }\end{array} & \text { P-A, R-L, *** along plane } \\ \text { line of disk }\end{array}\right]$

Notes:

* The Gonstead point is 2" lateral and $3^{\prime \prime}$ inferior to the PSIS
*** See the note concerning disk planes under "Miscellaneous"
General Notes:
$>$ Motion for the "Kick" in pulls is like kicking a soccer ball under the table - Try not to induce excess rotation in the Lumbar/Thoracic spine
$>$ L5 special listings are identical to other listings as far as setup. You must take care that your LOC's are correct, particularly that the torque is the right direction.
> In all push adjustments, the Dr. is stabilizing the patient's pelvis or thigh into the table with a light "gluteal flex"
> Left Side Posture means the patient's left side is down, Right Side Posture means the patient's right side is down
> The word "PULL" is a misnomer... it is really a FINGER PUSH and the contact point is the figer tip.
> For -M listings, the mammillary you are contacting will be up
$>$ For Side-posture work (pull or push), the spinous will be down to the table. EXCEPTION: spinous push move.
$>$ Directions of fingers is incidental to the line between your elbow and your pisiform... This is where the LOC really occurs
$>$ The disk planes listed are generic for purposes of drill. Modify the disk plane to suit the individual patient during a thrust.


Lumbar Knee-Chest Adjustments

| P | Standard Knee-Chest Position | Pisiform | Posterior inferior spinous | 45, across the spine | P-A, *** along plane line of disk |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PR | Standard Knee-Chest Position with doctor on right | Pisiform | Right lateral posterior inferior spinous of involved segment | 45, across the spine | P-A, R-L, *** along plane line of disk |  |
| PL | Standard Knee-Chest Position with doctor on left | Pisiform | Left lateral posterior inferior spinous of involved segment | 45, across the spine | P-A, L-R, *** along plane line of disk |  |
| PR-M | Standard Knee-Chest Position with doctor on right | Pisiform | Left Mammillary (opposite spinous rotation) | Perpendicular to spine ( 90 degrees to spine) | P-A, De-rotate spinous with P-A, *** along plane line of disk | LOC must take into account facets and disk plane. Disk planes vary from patient to patient so set angles are |
| PL-M | Standard Knee-Chest Position with doctor on left | Pisiform | Right Mammillary (opposite spinous rotation) | Perpendicular to spine (90 degrees to spine) | P-A, De-rotate spinous with P-A, *** along plane line of disk | him/herself with the patient's disk and then align slightly lower to accommodate the facets. |
| PRS | Standard Knee-Chest Position with doctor on right | Pisiform | Right lateral posterior inferior spinous of involved segment | 45, across the spine | P-A, R-L, *** along plane line of disk, with a CW Torque | Each segment will require an I-S lift (relative to that segment) and then the thrust should aim along the plane of the disk (which is essentially perpendicular |
| PLS | Standard Knee-Chest Position with doctor on left | Pisiform | Left lateral posterior inferior spinous of involved segment | 45, across the spine | P-A, L-R, *** along plane line of disk, with a CCW torque | to the patien's back at that level). |
| PRI-M | Standard Knee-Chest Position with doctor on right | Pisiform | Left Mammillary (opposite spinous rotation) | Perpendicular to spine (90 degrees to spine) | P-A, De-rotate spinous with P-A, *** along plane line of disk, with a CCW torque |  |
| PLI-M | Standard Knee-Chest Position with doctor on left | Pisiform | Right Mammillary (opposite spinous rotation) | Perpendicular to spine (90 degrees to spine) | P-A, De-rotate spinous with P-A, *** along plane line of disk, with a CW torque |  |
| L5 Special Listings on the Knee Chest |  |  |  |  |  |  |
| PRI-Sp | Standard Knee-Chest Position with doctor on right | Pisiform | Right lateral posterior inferior spinous of involved segment | 45 , across the spine | P-A, R-L, S-I along plane line of disk, with a CCW Torque | Knee Chest - Use caudal hand, Torque UP the spine |
| PLI-Sp | Standard Knee-Chest Position with doctor on left | Pisiform | Left lateral posterior inferior spinous of involved segment | 45, across the spine | P-A, L-R, S-I along plane line of disk, with a CW torque | Knee Chest - Use caudal hand, Torque UP the spine |
| PRS-M | Standard Knee-Chest Position with doctor on right | Pisiform | Left Mammillary (opposite spinous rotation) | Perpendicular to spine ( 90 degrees to spine) | P-A, De-rotate spinous with P-A, S-I along plane line of disk, with a CW torque | Knee Chest - Use caudal hand, fingers 90 degrees away from Dr. Torque UP the spine |
| PLS-M | Standard Knee-Chest Position with doctor on left | Pisiform | Right Mammillary (opposite spinous rotation) | Perpendicular to spine (90 degrees to spine) | P-A, De-rotate spinous with P-A, S-I along plane line of disk, with a CCW torque | Knee Chest - Use caudal hand, fingers 90 degrees away from Dr. Torque UP the spine |

> Notes For the Knee-Chest table -
-The doctor stands on the side of spinous rotation

## - The doctor reaches across the spine for mammillary contacts and pulls the patient into himself/herself

- The doctor's fingers are pointed 90 degrees away from the spine for mammillary contacts, 45 degrees across the spine for spinous contacts
> At L5, it may be necessary to turn the fingers slightly headward on the patient to keep the thrust off of the iliac crest.
$>$ Modify the disk plane to suit the individual patient during a thrust.

