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ADJUSTING THE PEDIATRIC PATIENT

Jenny Brocker, DC, DICCP, FICC

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OVERVIEW

- Safety of chiropractic care for kids
- General contraindications to adjusting
- The etiology of joint dysfunction in children
- Modifications to adjusting kids
- Cervical adjusting techniques
- Thoracic adjusting techniques
- Lumbar and sacroiliac adjusting techniques
- Benefits of craniosacral therapy for pediatric patients
- How to learn more about pediatrics

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SAFETY OF CHIROPRACTIC CARE FOR KIDS

- Vohra et al performed a systematic review of the incidence of adverse events (AE) following spinal manipulation in children.
  - Review covered all published literature for 110 years.
  - Found 9 cases of serious AE, with estimated 30 million annual pediatric visits to the chiropractor.

Vohra S, Johnston BC, Cramer K, Humphreys K. Adverse events associated with pediatric spinal manipulation: a systematic review. *Pediatrics*. 2007;119:275-283.

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SAFETY OF CHIROPRACTIC CARE FOR KIDS

Miller et al examined 781 pediatric patients under 3 years of age (73.5% under 13 weeks) who received a total of 5242 chiropractic treatments at a chiropractic teaching clinic in England from 2002-2004.

- No serious adverse effects (reaction lasting >24 hours or needing hospital care)
- 7 reported minor adverse effects.
- 85% of parents reported improvement in their children's symptoms.

Miller JE, Benfield K. Adverse effects of spinal manipulation therapy in children younger than 3 years: a retrospective study in a chiropractic teaching clinic. *Jour Manip Physiol Ther* 2008;31(6):419-422.

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SAFETY OF CHIROPRACTIC CARE FOR KIDS

- Carnes et al did a systematic review of AE and manual therapy (MT) in all age groups (8 prospective cohort studies, 31 RCTs).
- Found no reports of serious or catastrophic AE.
- Conclusion: "The risk of major AE with MT is low… the relative risk of AE appears greater with drug therapy…"

Carnes D, Mars TS, et al: Adverse events and manual therapy: A systematic review. *Manual Therapy* 2010;15(4):355-363.

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SAFETY OF CHIROPRACTIC CARE FOR KIDS

- Jevne et al examined compensation claims for chiropractic in Denmark & Norway 2004-2012.
  - 338 claims filed, with 15% approved for compensation.
  - Found children <10y regularly visit DC in both countries
    - In Denmark, 35% of these are infants.
- Authors stated: "Our data did not reveal a single claim in this (<10y) age group."

Jevne J, Hartvigsen J and Christensen HW. Compensation claims for chiropractic in Denmark and Norway 2004–2012. *Chiropractic & Manual Therapies* 2014 22:37

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SAFETY OF CHIROPRACTIC CARE FOR KIDS

- Todd et al performed a literature review of all reported cases of AE due to "chiropractic and other manual therapies" in infants and children ever published.
  - 15 serious AE (7 involved a DC), including 3 deaths (none involved a DC). High-velocity, extensional and rotational SM reported in most cases. Underlying pre-existing pathology was present in the majority of cases.
  - Conclusion: 1)"Published cases of serious AE… are exceedingly rare." 2) Manual therapists should perform a thorough history/exam and modify techniques to suit the age, anatomy & physiology of the young patient.

Todd AJ et al. Adverse events due to chiropractic and other manual therapies for infants and children: A review of the literature. Jour Manip Physio Ther 2015;38(9):699-712.

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SAFETY OF CHIROPRACTIC CARE FOR KIDS

- Pohlman et al conducted study evaluating active vs passive AE reporting with 69 chiropractors and over 3896 pediatric visits.
  - DCs randomized into 2 groups: active (n=34) & passive (n=35)
- Findings
  - Incidence of reported AE: 8.8% (n=140) in active arm vs. 0.1%(n=2) in passive arm
  - Panel of experts determined all reported AEs to be mild.
  - Of 34 DCs in active arm - 30 DCs reported 11 AEs, while remaining 4 DCs reported 21 AEs.

Pohlman KA, et al. Comparison of active vs. passive surveillance adverse event reporting in paediatric ambulatory care setting: a cluster randomized controlled trial. BMJ Open Quality 2020;9:e000972.

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SAFETY OF CHIROPRACTIC CARE FOR KIDS

- Corso et al reviewed studies evaluating safety of SMT in children <10yo.
  - 25 studies were evaluated – 2 RCTs, 1 cohort study, 22 case reports/series.
- AEs found:
  - One direct – fx'd ribs in 16-day-old tx'd with activator.
  - One indirect – delayed dx of congenital spinal cord astrocytoma in 4-month-old tx'd for head tilt.
  - Remainder (3) were mild and transient AEs.
- Conclusions
  - Most studies report minor and transient AEs in children <10yo (such as increased crying, soreness).
  - Risk of moderate to severe AEs unknown because to date no studies done on large enough populations tocatch such rare events

Corso, et al. The safety of spinal manipulative therapy in children uder 10 years: a rapid review. Chiropractic & Manual Therapies 2020;28:12.

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SAFETY OF CHIROPRACTIC CARE FOR KIDS

- Vos et al asked pediatricians to report all incidences of pediatric adverse events (AE) related to all CAM therapies over 3-year period in the Netherlands.
- Dutch pediatricians treat >500,000 children per year.
  - 32 reported incidences, 3 related to manual therapies.
    - 1 Indirect AE - DC tx'd infant later dx'd with severe malnutrition due to a "problem in breastfeeding technique"
      - Delayed treatment due to failure to dx failure-to-thrive
    - 2 direct AEs related to cervical manipulation in infants, one by an osteopath, one "manual therapy" with no practitioner identified.
- Conclusion: CAM-related AEs are rare.

Vos B, Rake JP, Vlieger A. Adverse events associated with pediatric complementary and alternative medicine in the Netherlands: a national surveillance study. *European J of Ped* 2021 180:2165-2171.

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GENERAL CONTRAINDICATIONS TO CMT

- Head trauma and non-accidental trauma
  - **No CMT until confirmed by imaging that head trauma did not result in upper cervical instability or fracture**
- **Hydrocephalus**
  - **Increased intracranial pressure can change the cord-medulla angle and adjusting may contribute to a fatal neurovascular event**

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GENERAL CONTRAINDICATIONS TO CMT

- Rheumatic syndromes
  - **Possible pathologic instability, especially at the transverse ligament**
  - **Example conditions: acute arthritides, systemic lupus erythematosus (SLE), chronic juvenile arthritis, and Morquio's syndrome (rare form of spondyloepiphyseal dysplasia)**

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GENERAL CONTRAINDICATIONS TO CMT

- Congenital Syndromes
  - **Potential for instability, hypotonia, and bone/joint anomalies.**
    - **Adjusting is possible if able to rule out instability and bone/joint anomalies via appropriate imaging studies**
  - **Example conditions: Down Syndrome, Arnold-Chiari malformation, genetic syndromes such as Schauff Yang, arthrogryposis, or Ehler's Danlos (EDS)**
  - **Approach with caution the spine of any child that presents with a genetic condition or known syndrome that affects bony formation and joint stability**

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GENERAL CONTRAINDICATIONS TO CMT

- **Bone des**truction or infection
  - **Use history and physical exam to rule out possibility of lytic bone changes or infection**
    - **Always err on the side of caution and wait for imaging as indicated**
- Fracture
  - **Use history and physical exam to indicate the need for imaging in cases of suspected fracture**

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GENERAL CONTRAINDICATIONS TO CMT

- **Parental anxiety** and informed consent
  - **No treatment should be rendered prior to the parents giving their consent, especially in a child that is non-verbal.**
  - **Address parental anxiety with patience and education, however if no consent is given, no treatment should be provided**
- Patient consent and tolerance
  - **For verbal patients, account for their preferences and tolerance for CMT when choosing a technique.**
  - **Communication is key!**

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CONTRAINDICATIONS FOR SPECIFIC TECHNIQUES

- Side posture adjusting techniques should be avoided for hip pathologies
  - SCIFE
  - Perthes
  - Septic Arthritis
  - Transient Synovitis
- Upper cervical adjusting should be avoided for conditions that present with instability
  - Down Syndrome
    - Flexion/extension films can indicate if instability is present, but always use caution

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CONTRAINDICATIONS FOR SPECIFIC TECHNIQUES

- Parental anxiety
  - Parents may have specific requests for techniques used in various spinal regions. Respect these requests or do not adjust that region
    - Example: parent requests activator be used in cervical adjusting, whereas manual adjusting is ok in other spinal regions
- Patient tolerance and preference
  - Patients may request a specific technique as it is more comfortable for them.
    - Example: Prone cervical vs supine diversified
  - Effort should be made to honor these requests if the adjustment can be performed safely.

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CAUSES OF JOINT DYSFUNCTION

- Trauma
  - Falls, car accidents, or sports injuries
  - Intrauterine constraint
  - Malposition, malpresentation
  - Prolonged or precipitous birth
  - Assisted delivery
    - Forceps, vacuum extraction, cesarean section
  - Gravitational stress

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FALLS

- Baby rolling off the, couch, bed, or changing table
- Toddler tripping while learning to walk or falling down the stairs
- Bike falls, skateboard falls, skiing falls
- Falls from activities- climbing a tree, playing at the playground, etc

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INTRAUTERINE CONSTRAINT

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MALPOSITION

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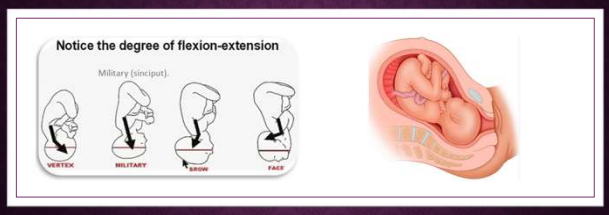

MALPRESENTATION

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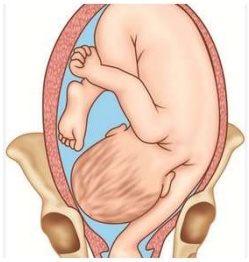

NUCHAL HAND

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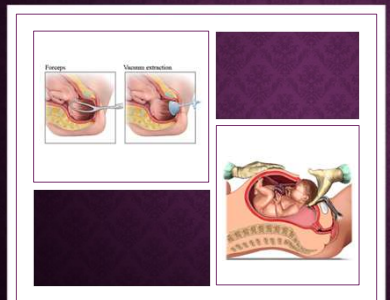

ASSISTED DELIVERY

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THE UNIQUE ASPECTS OF A PEDIATRIC SPINE

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MODIFICATIONS

- Contact point
- Patient positioning
- velocity
- Amplitude of the thrust
- Force

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FORCES

- Force in a keystroke → 13 N
- Force to fracture a femur → 4000 N
- Force of a horse kick → 10,000 N
- Crossed BL HVLA adult → 393 N*

*Triano JJ, et al. Consistency and malleability of manipulation performance in experienced clinicians: a pre-post experimental design. JMPT 2015; 38(6):542-553.

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FORCES

First forces proposed in pediatric adjusting were by Marchand

Force recommendations were based on failure rates in pediatric cadavers

- <3m → 20N
- 3m-23m → 50 N
- 2y-8y → 85N
- 9y-18y → 135N

At this time, specific force data on CMT in children had not been measured

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FORCES

First study to measure forces applied to mannequins conducted in 2017

Mannequins represented newborns through adolescents

Force plate tables used to measure the force of the thrust in newtons

	Neonate	Infant	Toddler
Cervical	19.5	27.9	30.5
Thoracic	17.4	19.9	34.8
Lumbar	17.6	29.1	89.5
Sacroiliac	52.3	84.9	101.8
(proposed safe limit	(20)	(50)	(85)

*Triano JJ, et al. Consistency and malleability of manipulation performance in experienced clinicians: a pre-post experimental design. JMPT 2018; 38(6):542-553.

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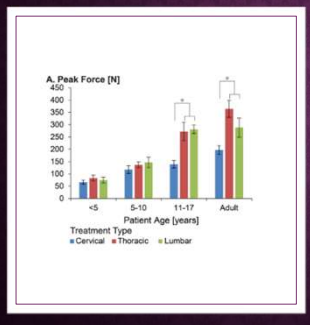

FORCES

- 2022 Feasibility Study for comparing forces on children and adults during HVLA
- 48 children (109 adjustments) and 20 adults (49 adjustments) included in the study

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FORCES

- 20 N → infant thoracic double thumb HVLA
- 393 N → adult crossed bilateral HVLA
- 20/393 N = 5.1% of the force used on an adult

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NEWBORN AND INFANT

- Occipital
- atlas
- Cervical C2-C7

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NEWBORN AND INFANT OCCIPUT

- Evaluation: palpation of joint play
  - Compare side to side
- Set up
  - Patient supine
  - Rotate head 90 degrees away from restricted side
  - Contact mastoid with distal lateral margin of index finger with I-S tissue pull
  - Rotate head back to 45 degrees away from restricted side
  - Line of drive toward the opposite axilla
- Adjustment: add impulse

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NEWBORN AND INFANT LATERAL ATLAS

- Evaluation
  - Palpation suboccipital region for tension and spasm
  - Palpate atlas TP
- Set up
  - Patient supine
  - lateral atlas- contact TP on side of restriction with tip of finger
- Adjustment
  - very little force- will often release with set up; if not, add very small impulse

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NEONATAL AND INFANT SUPINE CERVICAL SET UP

- Evaluation:
  - Motional palpation of Cervical spine segments
- Set up
  - Patient supine
  - C2-C7 contact articular pillar with lateral margin of index finger
- Adjustment:
  - C2-C7 thrust in lateral flexion (lock out rotation and no extension)

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TODDLER AND PRESCHOOLER OCCIPITAL SET UP

- Evaluation: palpation of joint play
  - Compare side to side
- Set up
  - Patient supine
  - Rotate head 90 degrees away from restricted side
  - Contact mastoid with middle lateral margin of index finger with I-S tissue pull
  - Rotate head back to 45 degrees away from restricted side
  - Line of drive toward the opposite axilla
- Adjustment: add impulse

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TODDLER AND PRESCHOOLER SUPINE CERVICAL SET UP

- Evaluation:
  - Palpate suboccipital region and cervical paraspinal musculature
  - Motional palpation of Cervical spine segments in all ranges of motion
- Set up
  - Patient supine on table, across parent's lap, supine on supine parent
  - C2-C7 contact articular pillar with lateral margin of index finger
- Adjustment:
  - C2-C7 thrust into direction of restriction

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ADOLESCENT OCCIPITAL SUPINE SET UP

- Evaluation: palpation of joint play
  - Compare side to side
- Set up
  - Patient supine
  - Rotate head 90 degrees away from restricted side
  - Contact mastoid with proximal lateral margin of index finger with I-S tissue pull
  - Rotate head back to 45 degrees away from restricted side
  - Line of drive toward the opposite axilla
- Adjustment: add impulse

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YOUNG CHILD TO ADOLESCENT SUPINE ATLAS SET UP

- Evaluation:
  - Palpate suboccipital and cervical paraspinal musculature
  - Motional palpation of the atlas in lateral flexion and rotation
- Set up
  - Patient supine on table
  - Posterior aspect of TP on restricted side with lateral margin of index finger
- Adjustment:
  - Bring the joint to tension, then thrust is small and fast in the direction of restriction

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YOUNG CHILD TO ADOLESCENT SUPINE CERVICAL SET UP

- Evaluation:
  - Palpate suboccipital region and cervical paraspinal musculature
  - Motional palpation of Cervical spine segments in all ranges of motion
- Set up
  - Patient supine on table or supine on a supine parent (if small enough!)
  - C2-C7 contact articular pillar with lateral margin of index finger
- Adjustment:
  - C2-C7 thrust into direction of restriction

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YOUNG CHILD TO ADOLESCENT PRONE OCCIPITAL SET UP

- Evaluation: palpation of joint play
  - Compare side to side
- Set up
  - Patient prone
  - Contact occipital rim with knife edge of superior hand I-S tissue pull
  - Mild rotation to get the joint to tension
  - Line of drive 45 degrees I-S towards the opposite side
- Adjustment: set drop piece tension and thrust lightly into the headpiece

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YOUNG CHILD TO ADOLESCENT PRONE CERVICAL SET UP

- Evaluation:
  - Palpate suboccipital region, cervical paraspinal, and SCM musculature
  - Motional palpation of Cervical spine segments in all ranges of motion
- Set up
  - Patient prone
  - Contact posterior arch of atlas with lateral margin of index finger
  - Mild rotation to get the joint to tension
  - Line of drive 45 degrees I-S towards the opposite side
- Adjustment: set drop piece tension and thrust lightly into the headpiece

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COMMON MISTAKES IN CERVICAL ADJUSTING

- Velocity to slow
  - Try to make your impulse faster if you're having difficulties.
- Joint not at tension
  - Make sure to move through the elasticity of the tissues to the point of tension
- Not waiting for moment of relaxation
  - Use distraction to help a child relax and keep their body soft

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NEWBORN AND INFANT THORACIC DOUBLE THUMB

- Evaluation
  - Palpate P->A translation with baby prone on table, over edge of table on doctor's lap, against doctor's chest, or against parent's chest. Older infant can also sit on doctor's or parent's lap
  - As baby gets older, also evaluate rotation and lateral flexion
- Adjustment
  - Patient seated or held facing away from the doctor
  - Tissue pull I-S with both thumbs contacting both TPs of the restricted segment.
  - Thrust is mostly I-S with a little bit of P-A

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NEWBORN AND INFANT THORACIC ANTERIOR

- Evaluation
  - Palpate P->A translation with baby prone on table, over edge of table on doctor's lap, against doctor's chest, or against parent's chest. Older infant can also sit on doctor's or parent's lap
  - As baby gets older, also evaluate rotation and lateral flexion
- Adjustment
  - Patient seated or held facing the doctor
  - Tissue pull I-S with distal tips of both index or middle fingers contacting both TPs of the restricted segment.
  - Thrust is mostly I-S with a little bit of P-A

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INFANT THORACIC PRONE EXTENSION

- Evaluation
  - Palpate prone on the table P->A translation prone on the table, over edge of table on doctor's lap, against doctor's chest, against parent's chest, or across doctor's lap with non-palpating hand supporting chest and distal shoulder
- Adjustment
  - Prone "thumb-index finger" thrust with child across doctor's lap
  - 3 parts: impulse with palpating hand, slight spreading of legs, slight lift with non-palpating hand

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TODDLER THORACIC DOUBLE THUMB

- Evaluation
  - Palpate P-A translation, rotation, and lateral flexion on doctor's lap or on parent's lap
  - Checking as well for thoracic paraspinal muscle tension
- Adjustment
  - Patient seated on doctor's lap or parent's lap
  - Tissue pull I-S with both thumbs contacting both TPs of the restricted segment.
  - Thrust is mostly I-S with a little bit of P-A

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TODDLER TO PRESCHOOLER THORACIC PRONE ON PARENT

- Evaluation
  - Palpate P-A translation, rotation, and lateral flexion while patient is prone on a parent
  - Checking as well for thoracic paraspinal muscle tension
- Adjustment
  - Patient prone on a parent
  - Tissue pull I-S with both thumbs or a knife edge with both hands contacting both TPs of the restricted segment.
  - Parent should take a breath and hold it to create the necessary resistance for the adjustment
  - Thrust is mostly I-S with a little bit of P-A

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YOUNG CHILD TO ADOLESCENT THORACIC BILATERAL CONTACT

- Evaluation
  - Palpate P-A translation, rotation, and lateral flexion while patient is prone on the table
  - Checking as well for thoracic paraspinal muscle tension
- Adjustment
  - Patient prone on the table
  - Tissue pull I-S with knife edge of both hands contacting both TPs of the restricted segment.
  - Thrust is mostly I-S with a little bit of P-A

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YOUNG CHILD TO ADOLESCENT ANTERIOR THORACIC SET UP

- Evaluation
  - Palpate P-A translation, rotation, and lateral flexion while patient is prone on the table
  - Checking as well for thoracic paraspinal muscle tension
- Adjustment
  - Patient supine on the table
  - Tissue pull I-S with open hand thenar eminence on the restricted segment.
  - Patient with arms wrapped tightly around a pillow or a stuffed animal
  - Thrust is a light body movement into the table

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YOUNG CHILD TO ADOLESCENT COMBO THORACIC SET UP

- Evaluation
  - Palpate P-A translation, rotation, and lateral flexion while patient is prone on the table
  - Checking as well for upper trap and thoracic paraspinal muscle tension
- Adjustment
  - Patient prone on the table
  - Tissue pull I-S and medial to lateral on the TP of the restricted segment with inferior hand; superior hand on the mastoid process.
  - Superior hand brings the joint to tension by rolling the head in slight rotation and lateral flexion, thrust is a slight impulse with the inferior hand

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YOUNG CHILD TO ADOLESCENT THORACIC SIDE POSTURE SET UP

- Evaluation
  - Palpate P-A translation, rotation, and lateral flexion while patient is prone on the table
  - Checking as well for thoracic paraspinal muscle tension
- Adjustment
  - Patient side-lying on the table
  - Tissue pull I-S and medial to lateral on the TP of the restricted segment with inferior hand; superior hand stabilizing the shoulders.
  - Thrust is with whole arm to prevent over twisting

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COMMON MISTAKES

- Incorrect thrust
  - Lifting with hands instead of thumbs
- Velocity
  - Quicken the impulse
- Line of drive
  - Too much P-A and not enough I-S

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INFANT PRONE ASSISTED LUMBAR SET UP

- Evaluation
  - Palpate lumbar spine with child sitting on the doctor's lap or prone on the table
  - Motion or prone palpation in all ranges of motion
- Adjustment
  - Patient prone on the table
  - Contacting the spinous process with knife edge of superior hand and the inferior hand holding the thigh of the opposite leg
  - Inferior hand creates tension with gentle traction on the leg, thrust comes from the superior hand

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INFANT PRONE EXTENSION LUMBAR SET UP

- Evaluation
  - Palpate P->A translation prone with baby across lap
  - Non-palpating hand supports chest and distal shoulder
- Adjustment
  - Prone "thumb-index finger" thrust with child in same position
  - 3 parts: impulse with palpating hand, slight spreading of legs, slight lift with non-palpating hand

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TODDLER PRONE ASSISTED LUMBAR SET UP

- Evaluation
  - Palpate lumbar spine with child sitting on the doctor's lap or prone on the table
  - Motion or prone palpation in all ranges of motion
- Adjustment
  - Patient prone on the table
  - Contacting the spinous process with knife edge of superior hand and the inferior hand holding the thigh of the opposite leg
  - Inferior hand creates tension with gentle traction on the leg, thrust comes from the superior hand

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YOUNG CHILD TO ADOLESCENT LUMBAR SIDE POSTURE SET UP

- Evaluation
  - Palpate lumbar spine in all ranges of motion prone on the table
  - Checking muscle tension in lumbar paraspinals and
- Adjustment
  - Patient side lying on the table
  - Contacting the spinous process with pisiform inferior hand and the superior hand stabilizing the shoulder, doctor's thigh contacting the patient's thigh
  - Thrust comes from the inferior hand and doctor's leg

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YOUNG CHILD TO ADOLESCENT LUMBAR PRONE DROP SET UP

- Evaluation
  - Palpate P-A translation, rotation, and lateral flexion while patient is prone on the table
  - Checking as well for lumbar paraspinal muscle tension
- Adjustment
  - Patient prone on the table
  - Contacting the spinous process with knife edge of superior hand and stabilize with inferior hand
  - Set drop piece and thrust lightly into the drop in the direction of restriction and following the plane of the joint

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COMMON MISTAKES

- Prone assisted- too much leg lift, not enough traction
- Velocity
  - Quicken your impulse
- Distraction
  - For older children- asking them to think about something or look at something
  - For younger children- toys, parent's voices, or just patience for their breathe

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LEG CHECKS

- Infant
  - Gluteal folds and gluteal creases
- Toddler to adolescent
  - Leg length
  - Heel to buttock test

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INFANT PRONE ASSISTED SACRUM SET UP

- Evaluation
  - Gluteal creases- side the crease deviates indicates posterior sacral base
  - Palpate SI joints with child prone on the table
- Adjustment
  - Patient prone on the table
  - Contacting the posterior sacral base with knife edge of superior hand and the inferior hand holding the thigh of the same leg
  - Inferior hand creates tension with gentle traction on the leg, thrust comes from the superior hand

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INFANT PRONE ASSISTED ILIUM SET UP

- Evaluation
  - Gluteal folds- low side indicates PI side
  - Palpate SI joints with child prone on the table
- Adjustment
  - Patient prone on the table
  - Contacting the PSIS of the restricted side with knife edge of superior hand and the inferior hand holding the thigh of the same leg
  - Inferior hand creates tension with gentle traction on the leg, thrust comes from the superior hand

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TODDLER PRONE ASSISTED SACRUM SET UP

- Evaluation
  - Gluteal creases- side the crease deviates indicates posterior sacral base
  - Heel to buttock test- increased heel to buttock distance indicates posterior sacral base
  - Palpate SI joints with child prone on the table
- Adjustment
  - Patient prone on the table
  - Contacting the posterior sacral base with knife edge of superior hand and the inferior hand holding the thigh of same leg
  - Inferior hand creates tension with gentle traction on the leg, thrust comes from the superior hand

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TODDLER PRONE ASSISTED ILIUM SET UP

- Evaluation
  - Gluteal folds- low side indicates PI side
  - Leg length inequality- short leg indicates PI side
  - Palpate SI joints with child prone on the table
- Adjustment
  - Patient prone on the table
  - Contacting the PSIS with knife edge of superior hand and the inferior hand holding the thigh of the same leg
  - Inferior hand creates tension with gentle traction on the leg, thrust comes from the superior hand

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YOUNG CHILD TO ADOLESCENT SACRUM SIDE POSTURE SET UP

- Evaluation
  - Heel to buttock test- increased heel to buttock distance indicates
  - Palpate SI joints prone on the table
  - Checking gluteal muscles and QL
- Adjustment
  - Patient side lying on the table
  - Contacting the posterior sacral base with pisiform of inferior hand and the superior hand stabilizing the shoulder, doctor's thigh contacting the patient's thigh
  - Thrust comes from the inferior hand and doctor's leg

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YOUNG CHILD TO ADOLESCENT ILIUM SIDE POSTURE SET UP

- Evaluation
  - Leg length check- short leg is the PI side
  - Palpate SI joints prone on the table
  - Checking gluteal muscles and QL
- Adjustment
  - Patient side lying on the table
  - Contacting the PSIS with pisiform of inferior hand and the superior hand stabilizing the shoulder, doctor's thigh contacting the patient's thigh
  - Thrust comes from the inferior hand and doctor's leg

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YOUNG CHILD TO ADOLESCENT PRONE DROP SACRUM SET UP

- Evaluation
  - Heel to buttock test- increased heel to buttock distance indicates posterior sacral base
  - Palpate SI joints with child prone on the table
- Adjustment
  - Patient prone on the table
  - Contacting the posterior sacral base with knife edge of superior hand and the inferior hand stabilizing superior hand
  - Set up the drop piece and thrust lightly into the table in the direction of restriction

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YOUNG CHILD TO ADOLESCENT PRONE DROP ILIUM SET UP

- Evaluation
  - Leg length- short leg indicates the PI side
  - Palpate SI joints with child prone on the table
- Adjustment
  - Patient prone on the table
  - Contacting the PSIS of the restricted side with knife edge of superior hand and the inferior hand stabilizing
  - Set drop piece with light tension and thrust into the table into the restriction

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COMMON MISTAKES

- Lifting leg on the prone assisted
  - Leg contact is for tension and is not part of the thrust
- Too much twisting for side posture
  - Over twisting will create cavitation, but will likely be global and not potentially more uncomfortable
- Distraction
  - Anything that takes their mind off what you're doing for a split second

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GENERAL CLINICAL TIPS

- Make it fun!
  - Toys and books are great for distraction
- Always demonstrate what you're going to do with an explanation before you do it
- Use friendly and fun language
- Be flexible!

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THE AUDIBLE

- Audibles do happen in pediatric patients, though its not necessary and does not indicate a successful adjustment
- Always preface an adjustment that it might happen for both the patient and the parents so there are no surprises
- Make it fun!
  - Embrace being the popcorn doctor!

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HOW TO LEARN MORE ABOUT PEDIATRICS

- ACA Pediatrics Council
  - Annual membership dues of $85
  - Membership benefits
    - JCM subscription included
    - Discounts on annual education events and on diplomate registration
- Textbooks
  - Anrig
  - Davies
- Postgraduate education
  - ACA Pediatrics Council Diplomate Program
  - Logan University Masters of Science in Integrative Pediatrics

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ACA PEDIATRICS COUNCIL PEDIATRIC DIPLOMATE PROGRAM

- The diplomate program goal is to provide an educational experience through an organized and progressive program
- Online program with 3 in person hands on workshop weekends for deepening your knowledge of pediatric chiropractic care completed over 2 years
- Courses include history and physical exam, organized patient care, clinical reasoning and knowledge, diagnostic evaluation, patient safety, evidence based and informed practice, research, and imaging
- Graduates of the program will be become board eligible to sit for the diplomate board exam administered by the American Board of Chiropractic Pediatrics
- First cohort starts in September 2023!

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MASTERS OF SCIENCE IN INTEGRATIVE CHIROPRACTIC PEDIATRICS

- Clinically-focused, evidence-based, expert-driven master's program in chiropractic pediatrics
- First MS degree in Pediatrics for Doctors of Chiropractic in the U.S.
- Accredited by the U.S. Department of Education's regional accrediting body (Higher Learning Commission)
- Program is part-time, 2-year, flexible format (majority online, asynchronous learning)
- Courses include pediatric manual therapies (spine, cranials, extremities), pediatric development, diagnostic imaging, examination, neurology, case management, nutrition, sports injuries and more.
- Annual in-person practicums for supervised practice of hands-on techniques learned in courses

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FOR MORE INFORMATION ON EDUCATION

ACA Pediatrics Council Diplomate Program

Logan University Master's Program

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CONTACT ME!

Jenny Brocker, DC, DICCP, FICC
Portland Chiropractic Group
2031 E Burnside St
Portland, OR 97214
503-224-2100
drjenny@portlandchiropracticgroup.com

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