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BIOGRAPHY

Dr. Robert Coté's Clinical Research

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Narrative: The late Dr Robert Coté was one of the top instructors working under Dr. DeJarnette. He has bequeathed his lifelong clinical research to assist us in our endeavour of bettering our clinical skills.

After all his years of clinical experience, he never stopped being amazed at how the basic SOT principles were proven to be correct and consistent with the new research in the field of neurophysiology.

He consistently studied the patients that were not responding positively to treatment and dedicated his life to understanding the underlying causal mechanisms.

His extensive clinical experience has led him to further his understanding of the body's compensatory mechanisms involving mechanical patterns, neurophysiology and bio- energy, all within the SOT model of indicators. Understanding, recognising and correcting these compensatory mechanisms can facilitate the resolution of some of our most difficult cases.

The objective of this paper is to discuss these compensatory mechanisms and their respective indicators.

Indexing Terms: Chiropractic; SOT; Robert Coté.

Introduction

The late Dr Coté was first introduced to Sacro Occipital Technique (SOT) in 1943 when his father returned from a seminar given by Dr. DeJarnette; he said that he remembered himself standing in front of the distortion analyser to demonstrate the new technique, SOT.

> *… Coté was all about getting the 'most bang for your buck' from clinical assessment …'*

Dr Coté graduated in 1959 from the Los Angeles College of Chiropractic and began studying and attending SOT seminars in 1961 and attended every year for 25 years. He was active with the Sacro Occipital Research Society supporting DeJarnette's work and from 1964 onward was a member of the board of directors for 25 consecutive years. This includes a presidency in 1973-74 and a chairman position in 1975-76.

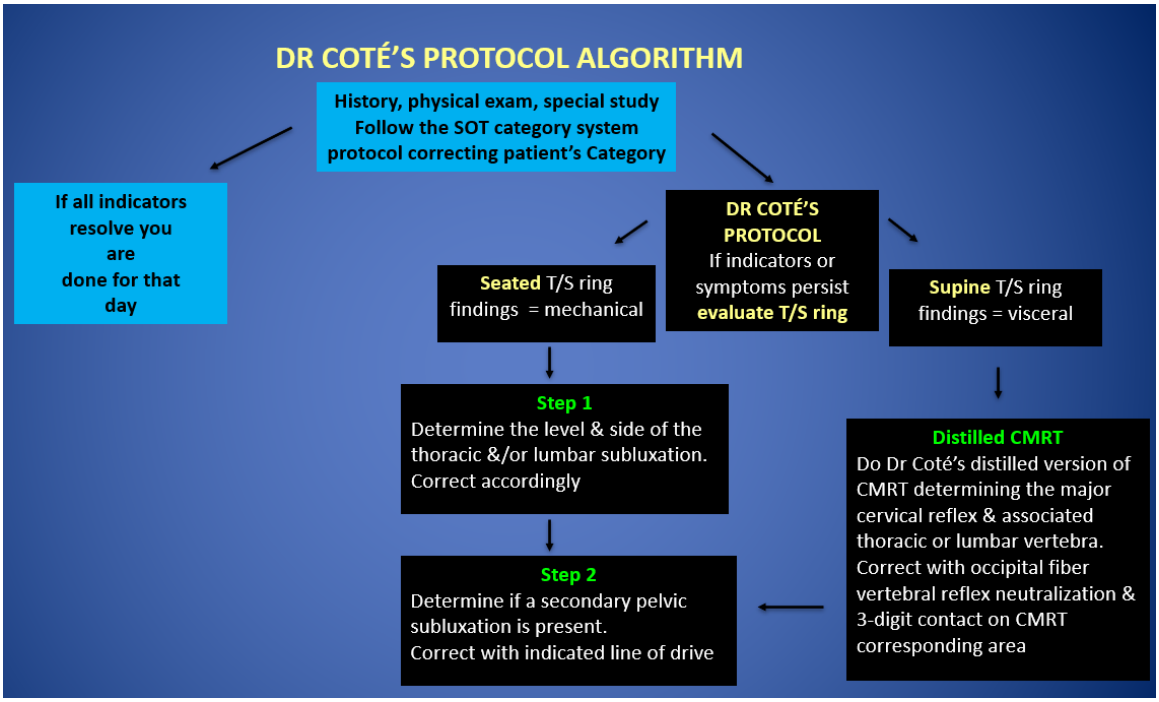
Dr.Coté was certified in craniopathy and had his Fellow and Diplomate with the *International Craniopathic Society* throughout his life. He held practice in Canada for over 50 years. He was a primary SOT instructor in the United States for over 20 years under DeJarnette. He has presented his innovative techniques and methods of care at the 2000, 2001, and 2003 SOTO- USA clinical symposiums and was awarded the 2003 SOTO-USA Lifetime Achievement Award.

He was all about doing as little as possible to get the most results in order to avoid disrupting the natural process of the body (getting the most bang for your buck). He always said with his usual laughter: 'Work WITH the body, it is telling you what you need to know. YOU just have to figure out what its saying'. A true master of his art. He taught us that nature has left a map on the body in the form of indicators for you to follow. He showed us that they are everywhere: on the arms, forearms, calves, gluteals, Temporosphenoidal (T/S) ring, trapezius, occipital bone and many others not covered in the following presentation.

Cotés protocol

First and Foremost

Coté would consistently remind us to always begin by following the entire procedure as covered by the SOT manual which is complete and should be followed as given, establishing and correcting the Category that the patient presents along with all rotatory pelvic subluxation. If all of the patient's indicators resolve, you are done treating the patient for that visit. If there are indicators that still persist or some of the patient's symptoms do not resolve after a few treatments with the SOT procedure, start Coté's protocol (in black in this algorithm).



Evaluate the patient's Temporo-Sphenoidal (T/S) ring in two positions to determine in which of the 2 positions the T/S ring findings are more predominant:

- 1st: seated, more indicative of musculoskeletal component involvement
- 2nd: supine, more indicative of organ malfunction component involvement

When a patient is in a horizontal position, the righting reflexes are deactivated, but this does not change the biofeedback from a malfunction at the organ level. If the T/S ring indicators seem to be equally present in both positions, the patient's history becomes an important source of information. When multiple T/S ring indicators are present in one of the 2 positions NEUTRAL POSITION BLOCKING is

done on 'non acute' patients to sort out the major T/S ring indicator reflexes.

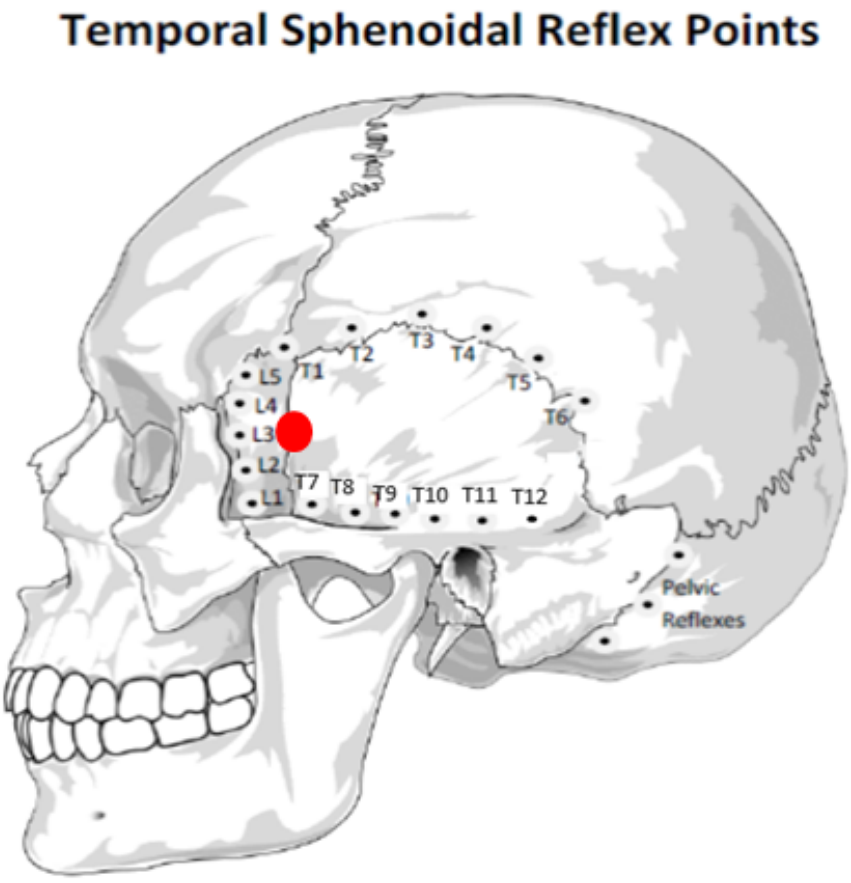
Blocks are put half way between the PSS and the ischium on the supine patient. For example: a patient with a right short leg supine, practitioner puts the blocks in the neutral position. Standing on the patient's right side contact his right 1st rib with your left hand. If it is painful, bring the right block cephalad 3-4mm (⅛") at a time until his 1st rib is pain-free. Then palpate the left 1st rib, if painful, bring the left block caudal 3-4mm (⅛") at a time until the 1st rib pain is gone.

Monitor with the reflex (meningeal reflex) located on the greater wing of the sphenoid, in the centre of the T/S ring, approximately at the L3 reflex area going towards the centre (see red circle on T/S ring figure below). Leave the blocks in until this reflex becomes tension-free/pain-free bilaterally. Reassess the T/S ring indicators; only the major reflex should remain.

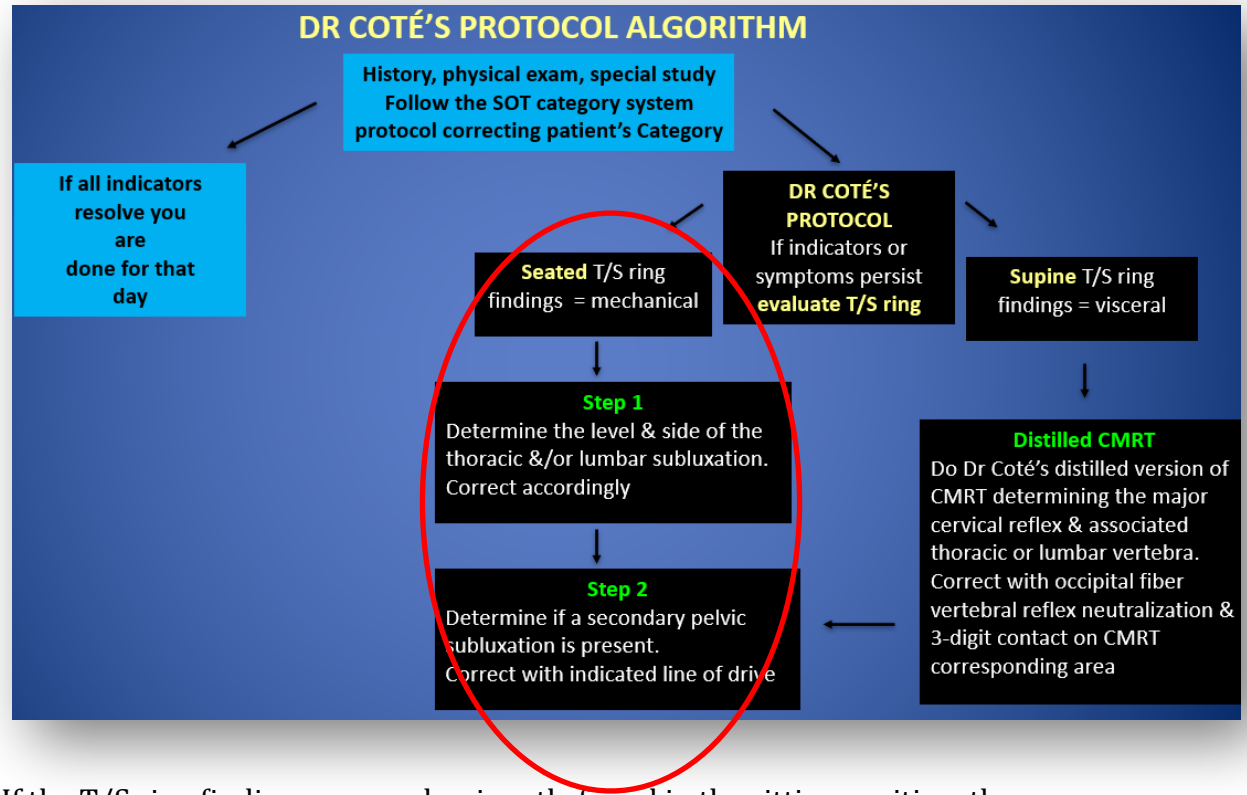
T1-T6: Located on the temporo-parietal suture (squamous suture)

T7-T12: Rest on the zygomatic arch (temporal bone)

L1-L5: Located on the anterior border of the sphenoid bone close to the zygomatic bone running vertically.



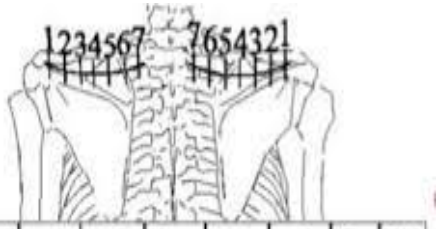
T/S ring indicator findings seated - Musculoskeletal



If the T/S ring findings are predominantly found in the sitting position, these are musculoskeletal in nature, perform step 1 (then step 2):

STEP 1: Determine the level and side of the lumbar and/or thoracic subluxation based on T/S ring indicator findings (that give a general sense of the potential lumbar and thoracic vertebras involved) and confirmed with palpatory findings of at least 2 of the following reflexes:

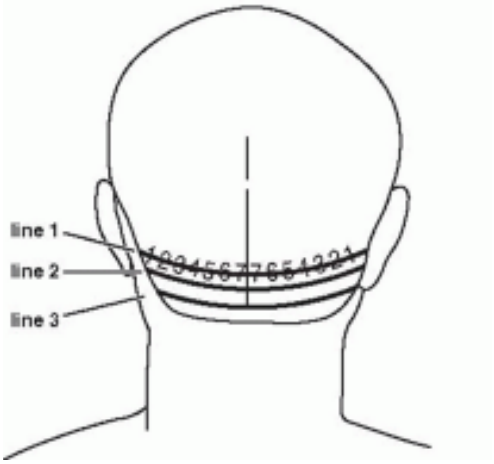
Trapezius fibers to confirm the cervical level involved and associated thoracic or lumbar vertebra, for example: left trap fibre 4→C4-T6-L2. The palpation of the trapezius muscle begins at the acromioclavicular (A/C) joint (trapezius fibre 1) and moves in medially in 7 equally spaced steps to finish at the lateral border of T1 (trapezius fibre 7).



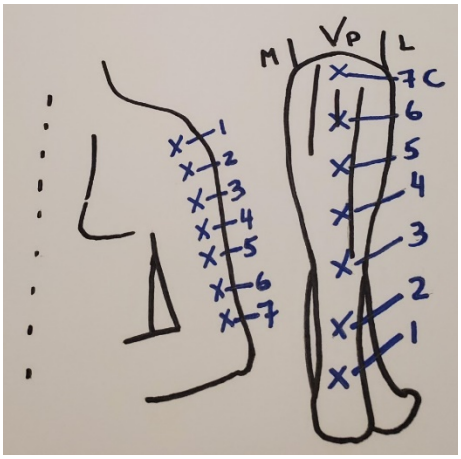
Trap. Fiber	1	2	3	4	5	6	7
Cervicals	1	2	3	4	5	6	7
Dorsals	1/2/10	3/11/12	4/5	6	7	8	9
Lumbars			1	2	3	4	5

Superior iliac crest reflexes are palpated to confirm if there is T11-L5 vertebra involvement directly (ex: left L2 reflex). The palpation begins just superior to the most medial part of the iliac crest, lateral and a little superior to the L5 transverse process (TP) and ends on the most lateral portion of the iliac crest (T11), separating that distance in 7 equally spaced steps.

Occipital fibres are used to confirm the cervical level involved and associated thoracic or lumbar vertebra (reflex arc), for example: left occipital fibre 4→C4- T6-L2. The palpation of the occipital fibres begins at the most lateral portion of the occiput (occipital fibre 1) and moves inward medially in 7 equally spaced steps to finish right before midline occiput (below the external occipital protuberance).



Calf or posterior arm reflexes (vertebral subluxation) to confirm the cervical level involved (identifies the cervical overload), for example left C4 calf reflex→C4-T6-L2. The palpation of the calf begins just below the popliteal fossa (C7) and moves caudally in 7 equally spaced steps to finish on the Achilles tendon above the heel (C1). Note that the palpation of C1, C2 and C3 reflexes is more difficult because we are on the Achilles tendon. The palpation of the posterior arm begins just above the elbow (C7) and moves cephalad in 7 equally spaced steps to finish below and posterior to the A/C joint (C1).



Important clinical point

If a lumbar vertebra is involved, determine the specific subluxation pattern based on cervical Indicators through the R + C palpation (Lovett brother relationship) and correct it

Cervical spinous process tender indicates lumbar inferior transverse process (TP) ipsilateral (ex: left C4-L2). Cervical TP tender indicates lumbar anterior rotation ipsilateral (ex: left C4-L2). The correction can be made with any method you would like to use as long as it clears the indicators. If the indicators reveal that a thoracic vertebra is involved, adjust at the corresponding thoracic level. The correction (ex: left C4-T6) can be made with any method you would like to use as long as it clears the indicators. Once the indicated lumbar or thoracic adjustment has been done, recheck your T/S ring indicators seated, they should be clear

STEP 2: Determine if the patient has a secondary Pelvic subluxation utilising indicators

The entire pelvic adjusting procedure as covered by the SOT manual is complete and should be followed as given. But it only covers the ilium subluxated in rotation: UMS (posterior) and LLL (anterior). Once this is corrected following the SOT procedure and your indicators are negative, your indicator system is void and no longer informative.

Does this mean that the pelvic is clear? Not always.

Have you ever seen a patient that had the classical symptoms of a category II (bursitis, tennis elbow, trapezius pain, pain at C5, low back discomfort with mild leg pain) but all of the indicators were negative? Clinically this does happen although not too often since Coté found that most patient's primary ilium involvements are rotations.

For example: If you treated your patient with a category II, you corrected the rotation of the ilium which does remove much of the pain and discomfort. But the ilium can also subluxate '*in block*', superior, inferior, lateral, medial (or anywhere in between) with the legs being even. In our category II protocol, you would not have any way of knowing if your patient has a secondary subluxation of the ilium because our system of indicators is specifically for ilium subluxating in rotation (UMS, LLL). Clinically, if symptoms persist after correcting the category II, there may be a secondary ilium subluxation. The same can be said of a category I.

Once you have made your indicated corrections according to the SOT protocol, and all indicators are negative, make a careful examination of the occipito-mastoid sutures bilaterally. If the occipito-mastoid sutures are painless, your correction is complete. But if you palpate pain or swelling, Coté determined that the ipsilateral SI joint is still under stress and further corrections are needed to correct a secondary pelvic subluxation:

ILIUM *subluxation* 'in block' C1

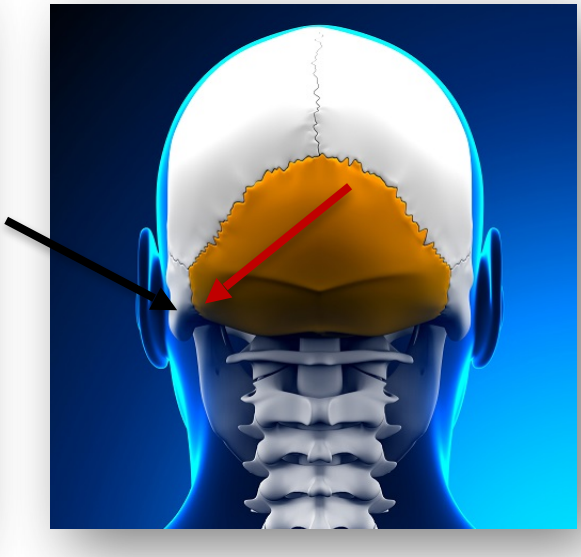
ILIUM indicators ipsilaterally swollen or painful upon palpation;

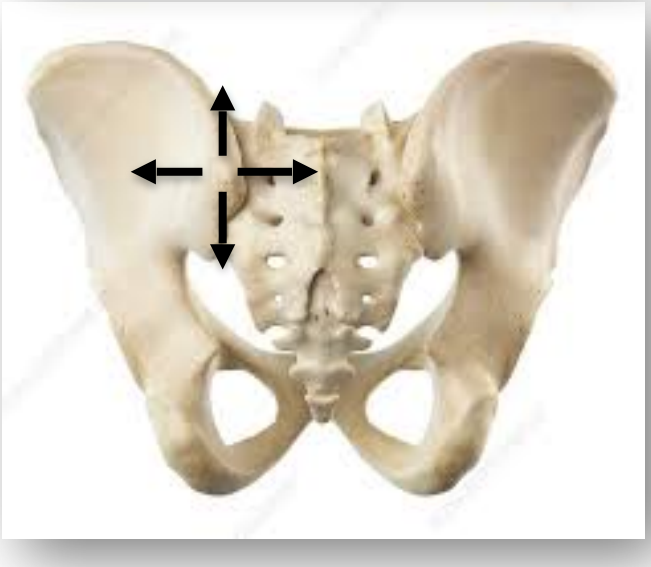
- Lateral occipito-mastoid suture (temporal bone)
- 3rd rib (scapula moved laterally)

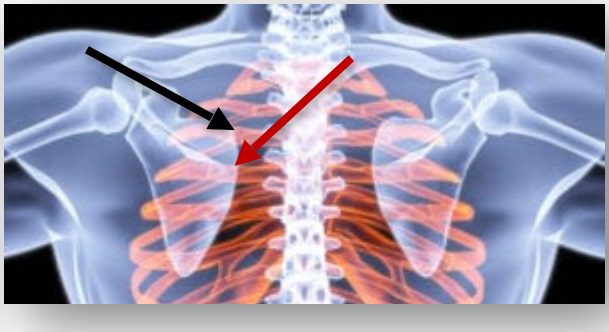
SACRUM subluxation (C2)

SACRUM indicators ipsilaterally swollen or painful upon palpation:

- Medial occipito-mastoid suture (occipital bone)
- 4th rib (scapula moved laterally)
- C2 spinous rotated ipsilaterally







Determine the line of drive required to correct the secondary subluxation of the ilium ''in block'' or of the sacrum. The patient is prone and the practitioner stands on the side of involvement. The practitioner contacts the corresponding occipito-mastoid suture (ex: occ-mast lateral suture left) or rib (ex: 3rd rib left) with one hand and the ipsilateral ilium PSIS or sacral 2-3 with the other.

- Ilium: lateral occipito-mastoid suture or 3rd rib → Ilium PSIS (black arrows)
  Sacrum: medial occipito-mastoid suture or 4th rib → Sacral 2 - 3 (red arrows)

For a left side ilium or sacrum, the practitioner stands on the left side (stands on the right side for a right side involvement). The doctor's left hand makes a finger contact on the painful occipito-mastoid suture (ex: lateral for left ilium) or rib (3rd rib left) while his right-hand contacts the ilium PSIS or sacrum (ex: left Ilium). The doctor then applies mild pressure with his right hand cephalad, caudal, lateral and medial. The direction that removes the corresponding occipito-mastoid or rib pain is the line of drive to be used to correct the ilium or sacrum subluxation.

If the vectored pressure at the PSIS or sacrum does not completely control the indicator pain, you will vector your contact at a slightly different angle (you can vector anywhere between these 4 directions) until the suture or rib indicator is pain-free.

NOTE (L3): If vectoring on the subluxated ilium or sacrum in all 4 directions does not decrease the corresponding occipito-mastoid or rib indicator pain, it is most likely because the body has shifted its area of compensation upward to lumbar 3 from sacral 3. Lumbar 3 will probably be subluxated in rotation or inferiority which you will identify using C3 in the way we just described in step 1 with the R + C palpation and Lovett brother relationship.

NOTE (Sacral): Sacral adjusting is performed with the thought in mind that you are attempting to close the minute separation (joint space) between the sacrum and ilium. Sacrum can subluxate anterior (under the ilium, still opening up the joint space) or posterior (away from the ilium).

Trauma to any part of the body that is beyond the ability of the local structures or tissues to handle will be transmitted to the centre of gravity, the sacrum.

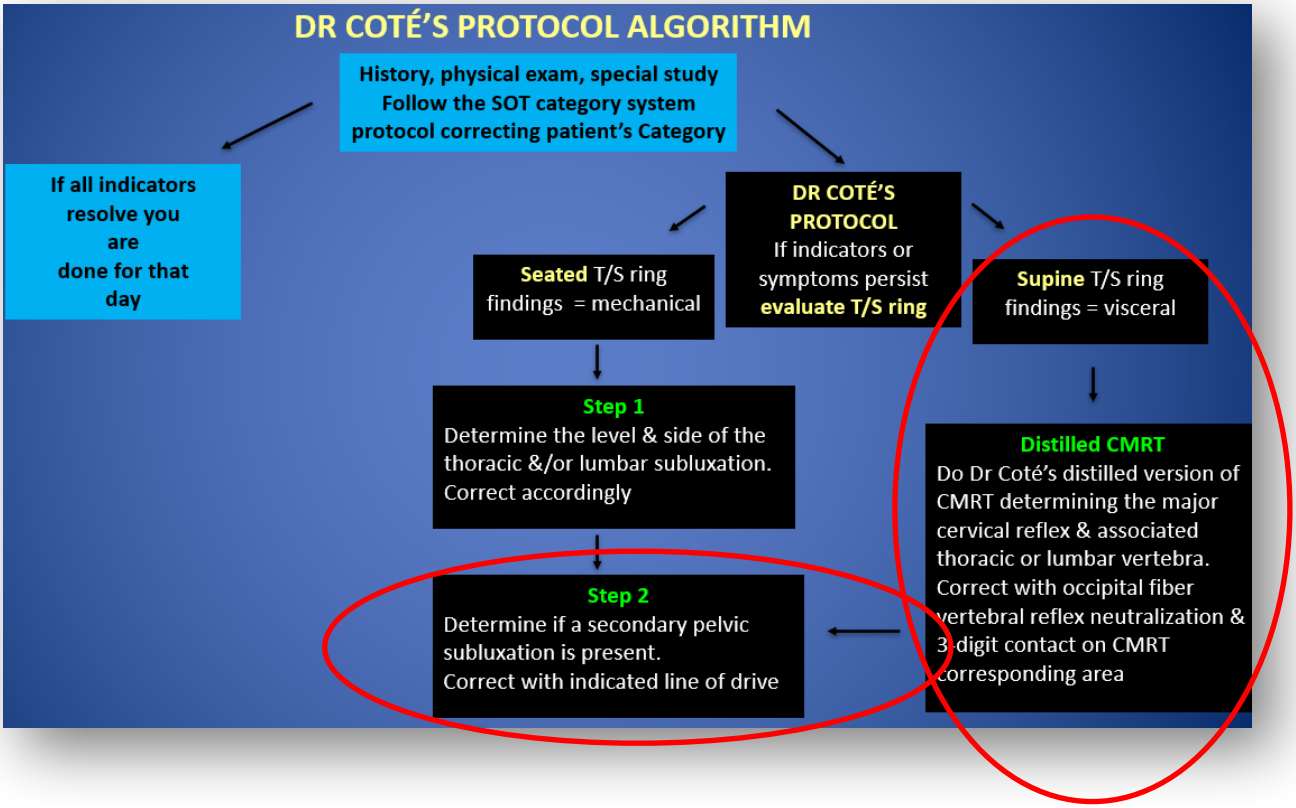
Correction of the ilium and sacrum secondary subluxation

The ilium or sacrum correction can be made with a side posture, drop, Logan Basic, sustained contact or any other method you would like to use as long as it allows the correction to be in the determined line of drive and clears the indicators. Recheck your occipito-mastoid suture or rib indicator: If it is not pain-free, go back and recheck your line of drive (if for example it was lateral, go back and vector still lateral but with a slight caudal or cephalad orientation). When the indicator is negative, you are done treating this patient for that visit.

T/S Ring indictors supine - visceral

If the T/S ring findings are predominantly found in the supine position, these indicate more of a visceral component:

- Dr Coté developed a distilled CMRT, giving us the essence of CMRT in an easy to follow, well-structured and concise procedure
- Perform the Distilled Chiropractic Manipulative Reflex Technique (CMRT) (and then you will go on to do STEP 2 described previously).



Distilled CMRT

This version of CMRT utilised to correct visceral malfunction consists of the following procedure (5 parts):

1. Confirm T/S ring findings with the palpatory findings of cervical overload reflex arc
2. Correct with occipital fibre-vertebral reflex neutralisation (reflex manipulation)
3. Adjust associated thoracic or lumbar vertebra
4. Perform the 3-digit contact on CMRT corresponding area and recheck the patient's T/S ring indicators, if clear; you are done with CMRT (go do step 2)
5. If the T/S ring indicators and other previously positive indicator reflexes persist correct the anterior misalignment of the associated cervical vertebra (painless and effortless adjusting) then recheck the patient's T/S ring indicators that should be clear.

Occipital fibers	1	2	3	4	5	6	7
Trapezius fibers	1	2	3	4	5	6	7
Cervicals	1	2	3	4	5	6	7
Thoracic	1,2,10	3,11,12	4,5	6	7	8	9
Lumbars			1	2	3	4	5
Sacrals		1	1	2	3	4	5

1. Confirm T/S ring thoracic or lumbar indicator findings with the palpatory findings of the following reflexes. This is accomplished by correlating T/S ring indicator findings (that give you a general sense of the potential thoracic or lumbar vertebra involved) with palpatory findings of at least 2 of the following reflexes.

a. Trapezius fibres also to confirm the cervical level involved and associated thoracic or lumbar vertebra, for example: right trap fibre 3→C3-T4-S1. The palpation of the trapezius muscle begins at the A/C joint (fibre 1) and moves in medially in 7 equally spaced steps to finish at the lateral border of T1 (fibre 7).

b. Occipital fibres line 2 revealing the cervical level involved and associated thoracic or of the occipital fibres begins at the most lateral portion of the occiput (occipital fibre 1) and moves in medially in 7 equally spaced steps to finish right before midline occiput (EOP).

c. Calf or anterior arm reflexes (visceral) to determine the cervical level involved (identifies the cervical overload), for example right C3 calf reflex→C3-T4-S1. The palpation of the calf begins just below the popliteal fossa (C7) and moves caudally in 7 equally spaced steps to finish on the Achilles tendon above the heel (C1). Note that the palpation of C1 - C3 reflexes is more difficult because we are on the Achilles tendon. The anterior arm reflex palpation begins above the cubital fossa (C7) and moves cephalad in 7 equally spaced steps to finish at the top of the arm (C1).

d. History/symptomatology/posture observation: to confirm the reflex arc and associated organ involved (ex: right C3-T4-gallbladder).

2. Correct with occipital fibre vertebral reflex neutralisation (reflex manipulation):

Once the main reflex arc has been determined along with the side of involvement, the doctor can begin occipital fiber vertebral reflex neutralisation.

Clinical theory of an organ malfunction according to Coté:

> The organ begins to malfunction with a loss of energy that occurs 1st on the right side. These impulses go up to the cervical area and down into the sacrum. The right side cervical overload creates the T/S ring indicators, occipital fibres, trapezius fibres and reflexes sent into the arm, forearm, calf and lateral to the sacrum. Abnormal impulses are returned into the posterior horn and paraspinous area of the vertebrae supplying the respective organ and a stress tension is created at the transverse and paraspinous tissues starting on the right (energy loss). If the body cannot sustain the loss of energy (from the organ malfunction), there will be a transfer of these impulses to the left paraspinous area which activates all the same reflexes on the left. This is how the body defends itself against the energy loss; it goes into a stress pattern (left side).

Remember that thoracic and upper lumbar vertebrae paraspinous area controls sympathetic nervous system (SNS) output. In neurology, the rule is that the neural tissue that is located above inhibits the neural tissue located below. Inhibition of the SNS at T1 to L1-2 can lead to a decrease of its inhibition on the sacral parasympathetic nervous system (ParaSNS) located below. This then facilitates increased ParaSNS output. This is important because, if the ParaSNS remains too inhibited by the SNS, the patients lose their ability to relax and the recuperative power of their sleep is lost, bringing on the '*chronic fatigue syndrome*'.

Bilateral occipital-thoracic or lumbar contact

Practitioner at the left of the prone patient, a bilateral contact is held by his left hand at the occipital fibres involved (ex: occipital fibre #3 line 2) and by his right hand on the corresponding paraspinous thoracic or lumbar area bilaterally (ex: T4) lightly putting a headward pressure until occipital pulsation is felt.

Cervical paraspinous-thoracic or lumbar 2 inches lateral contact

Doctor then moves his left hand to contact the corresponding paraspinous cervical area (ex: C3 right) while his right hand contacts 5cm (2 inches) lateral to the corresponding thoracic or lumbar paraspinal area (ex: T4 right) torquing into the area of ease (clockwise or counterclockwise). Both contacts make a soft tissue relaxing motion to release tissue stress until pain is absent in the thoracic or lumbar contact (ex: right T4).

Cervical paraspinous-sacral contact

Once the thoracic or lumbar area is pain-free, move your right hand to the corresponding sacral segment (sacral 1). Palpate from medial to lateral at that level (S1), 1/4 inch at a time, making 4 pressure contacts, identifying the most painful one. Hold that contact making a soft tissue relaxing motion until the cervical paraspinal area (C3) is pain-free.

Sacral-occipital fibre contact

If pain persists at the sacral area (while the cervical contact has become pain-free), maintain that contact with your right hand and contact the corresponding occipital fibre (#3 line 2) with your left hand until the sacral contact is pain-free.

3. Adjust the thoracic or lumbar vertebra involved

   At this point if the indicators initially revealed a thoracic involvement (ex: T4), make a bilateral thenar contact at the corresponding thoracic area, making a very light head ward adjustment (this is repeated to the next 2 vertebrae above that thoracic segment because many times the locking mechanism is 2 segments above the subluxation). If that does not release the indicated thoracic segment (ex: T4), do a light anterior dorsal correction at that level (ex: T4).

   If the indicators had initially revealed a lumbar involvement, determine the specific subluxation pattern based on cervical Indicators through the R + C palpation (Lovett brother relationship) and correct it.

4. Perform the 3-digit contact on CMRT corresponding area

The patient then moves into a supine position, while the doctor is standing on the right side of the patient, and makes a 3-digit contact at the CMRT area for the organ corresponding to the previously determined indicators and side (ex: gallbladder, right C3- T4-S1):

- clockwise if done on the right side (energises the organ)

- counterclockwise on the left (de-stresses the stressed organ).

When an organ begins to malfunction it loses its energy, this occurs on the right side (clockwise motion to energise the organ). When the body cannot compensate for this loss at the sacral area, there occurs a switching of the energy field to the left side of the segment (ex: T4). The indicators and symptoms of pain/discomfort will then be on the left side (Counterclockwise motion to destress the organ).

Recheck the patient's T/S ring indicators supine and other previously positive indicator reflexes, if clear you are done with CMRT (go to step 2 and check to determine if the patient has a secondary pelvic subluxation)

5. If the T/S ring indicators persist correct the anterior misalignment of the associated cervical vertebra: '*Pain-free and effortless adjusting*'.

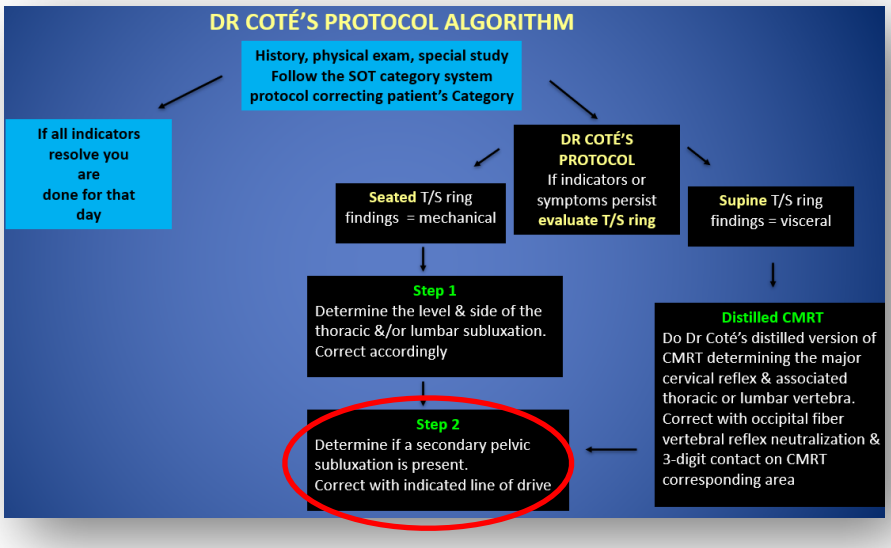
The patient supine, palpate the tissue on the anterior body of the cervical vertebra with your thumb at the indicated level and side looking for pain (ex: C3-gallbladder right): the abnormal reflex coming from an organ malfunction is located on the anterior portion of the cervical vertebra.

The painful contact is held with the doctor's thumb on the anterior cervical vertebral body (ex: C3 right), then slowly passively rotates and laterally flexes the patient's head away towards a position where no more palpatory pain is noted by the patient under your thumb contact. Hold that painless head position, pumping the painless anterior cervical vertebra tissue cephalad, for approximately 1 minute, releasing all tensions at that level: this is anterior cervical vertebra adjusting. You may feel the release of the 'grasp' of the tissues, and sometimes, the simple positioning of the head in the painless position is enough to release the vertebra.

After about 1 minute, passively bring the head back to neutral (holding your thumb contact) and recheck your cervical reflex indicator that should be pain-free. If not, redo the procedure until it is. Then recheck the T/S ring indicators that should be clear. Coté used to call this cervical vertebral treatment '*pain free and effortless adjusting*'.

Following the Coté 5-Step Distilled CMRT Procedures

Once the CMRT procedures are completed then it is appropriate to determine if the patient has any secondary pelvic subluxation and, if so, correct it as described previously in Step 2: when T/S Ring indicators were not predominant in the seated position, but were in the supine position then CMRT was performed, the treatment being focused on CMRT but followed by step 2. If the indicators were more predominant in the seated position then Step 1 would be performed prior to step 2 and no CMRT.



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#VitezCoteResearch

Caroline Vitez, DC is a board certified (DACNB) chiropractic neurology Diplomate. She has graduated from Palmer College of Chiropractic in Davenport almost 30 years ago and has been in practice since, both in Canada and in the United States, incorporating SOT, Atlas Orthogonal upper cervical work and functional neurology. In recent years she has published and lectured on the neurovascular ramifications of a cranio-cervical junction misalignment.

See https://soto-usa.com/dr-caroline-vitez-2024-symposium/