IN SEARCH OF CLINICAL EXCELLENCE WITHIN S.O.T
Dr Robert Coté's Lifetime Clinical Research

WE will go over:

- Who was Dr Robert Coté DC, DICS and what was his contribution to SOT during his 50 plus years of clinical work?
- Dr Coté's protocol that is intended to be applied when patient indicators or symptoms persist after performing the entire SOT procedure as covered by the SOT manual, as you have always done

WHO WAS DR COTÉ DC, DICS, FICS AND WHAT WAS HIS CONTRIBUTION TO SOT DURING HIS 50 PLUS YEARS OF CLINICAL WORK?

- The late Dr Coté was first introduced to 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 analyzer to demonstrate the new technique, SOT.

- Dr. Coté graduated in 1959 from the Los Angeles College of Chiropractic and began studying and attending SOT seminars since 1961, every year for 25 years.

- He was active with the Sacro Occipital Research Society supporting Dr. DeJarnette's work and from 1964 on, he 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 US for over 20 years under Dr DeJarnette.

- He has presented his innovative techniques and methods of care at the 2000, 2001, and 2003 SOTO-USA clinical symposiums.

- Robert A. Coté, DC was awarded the 2003 SOTO-USA Lifetime Achievement Award.

- Dr Coté 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.

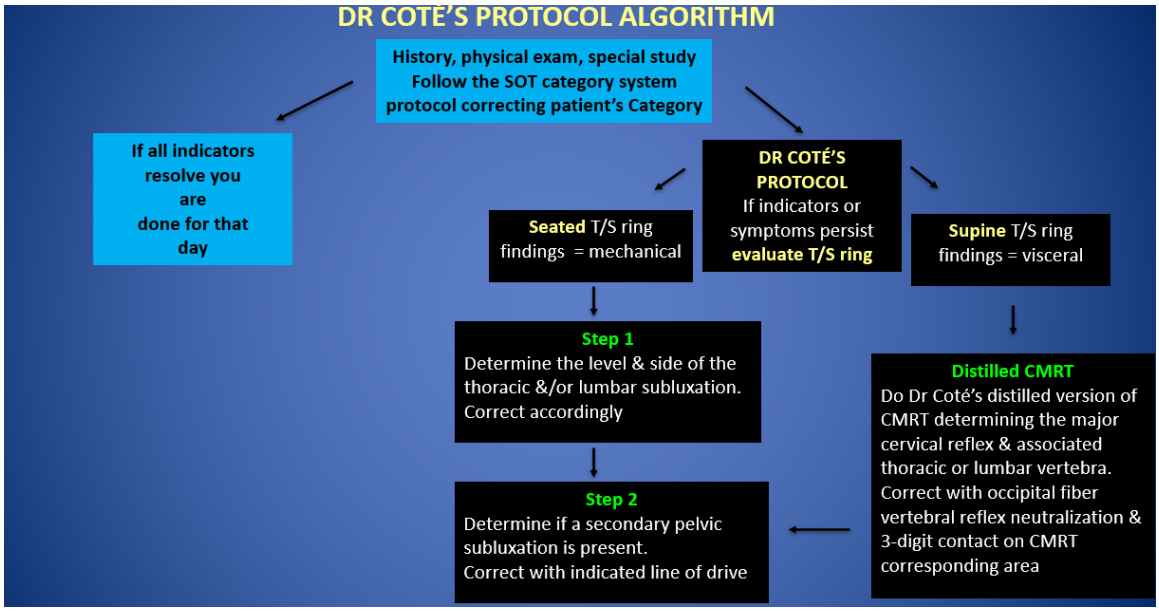
- He taught us that nature has left a map on the body in the form of indicators for you to follow.

He showed us that they are everywhere: on the arms, forearms, calves, gluts., T/S ring, traps., occipital bone and many others that we will not cover today.

DR COTÉ'S PROTOCOL

First and foremost:

• Dr 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 Dr Coté's protocol.



Evaluate the patient's Temporo-Sphenoidal (T/S) ring in two positions:

Determine in which of the 2 positions the T/S ring findings are more predominant:

1st- seated, more indicative of musculoskeletal component involvement

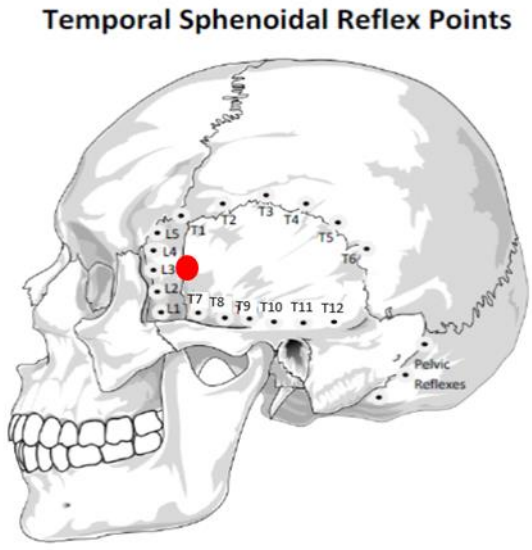
2nd- supine, more indicative of organ malfunction component involvement.

- When a patient is in a horizontal position, the righting reflexes are deactivated, but this does not alter the biofeedback from a malfunction at the organ level.

- If in both positions the T/S ring indicators seem to be equally present, 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 facing each other, half way between the PSS and the ischium on the supine patient.
For example: A patient with a right short leg supine, the practitioner puts the blocks in the neutral position. Then, palpate the patient's right 1st rib. If it is painful, bring the right block cephalad 1/8'' at a time until his right 1st rib is pain-free. Then palpate the left 1st rib, if painful, bring the left block caudal 1/8'' at a time until the left 1st rib pain is gone.
Monitor with the reflex (meningeal) located on the greater wing of the sphenoid, approximately at the level of the L3 reflex area going towards the center (see red circle in T/S ring drawing).
Leave the blocks in until this reflex becomes tension-free/pain-free bilaterally.
Reassess the T/S ring indicators: only the major reflexes should remain.

*T1-T6: located on the temporo-parietal suture (squamous suture)
T7-T12: resting on the zygomatic arch (temporal and zygomatic bone)
L1-L5: located on the ant border of the sphenoid bone close to the zygomatic bone running vertically



A. 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

STEP 1:

- **Confirm T/S ring thoracic &/or lumbar indicator findings with palpatory findings of at least 2 of the following reflexes:**
  (Let's use the example where right side T/S ring T6 & L2 where painful upon palpation)

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

II- Occipital fibers **line 1** to confirm the cervical level involved and associated thoracic or lumbar vertebra, for example: right occipital fiber 4→C4-T6-L2. The palpation of the occipital fibers begins at the most lateral portion of the occiput (fiber 1) & moves in medially in 7 equally spaced steps to finish right before midline occiput, below the EOP (fiber 7).

III- Calf or posterior arm reflexes (vertebral subluxation) to confirm the cervical level involved (identifies the cervical overload) and associated thoracic or lumbar vertebra, for example, right C4 calf reflex→C4-T6-L2.
The palpation of the calf begins just below the popliteal fossa (C7) & moves caudally in 7 equally spaced steps to finish on the Achilles tendon above the ankle (C1). Note that the palpation of C1-C3 reflexes is harder for the patient to perceive because they are located 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 at the top of the arm (C1).

IV- Superior iliac crest reflexes to confirm if there is T11-L5 vertebra involvement directly (ex: right 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. Palpate in the soft tissue just above the iliac crest.

Note: There is another test that I have seen Dr Coté use. He was experimenting at the time with something that I am pretty sure Dr DeJarnette called ''mind language'', a type of muscle testing resembling the muscle testing in AK except without actually challenging muscle strength. Instead, it is done by a visual observation of the reaction of the pelvis to the thought of the practitioner.

- **If your indicators reveal that 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:** [2,3]

  - Cervical spinous process tender indicates lumbar inferior transverse process (TP) ipsilateral (ex: right C4-L2).
  - Cervical TP tender indicates lumbar anterior rotation ipsilateral (ex: right 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: 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 seated and the other previously positive Indicator reflexes, they should be clear.

STEP 2:

- **Determine if the patient has a secondary Pelvic subluxation utilizing 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 pelvis is clear? Not always.

- Have you ever come across a patient that had the classical symptoms of a Category II (bursitis, tennis elbow, trap pain, pain at C5, low back discomfort with mild leg pain) while all of the indicators were negative?
This does happen on occasion clinically, since, according to Dr Coté, most of your primary ilium involvements are rotations.

- 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, the ipsilateral SI joint is still under stress and further corrections are needed to correct a **secondary pelvic subluxation of**:

- ILIUM subluxation **''in block''** (C1)
- SACRUM subluxation (C2)

(If C1 or C2 is misaligned it must be corrected first)

- ILIUM indicators ipsilaterally swollen, painful upon palpation:
  - Lateral occipito-mastoid suture (temporal bone)
  - 3rd rib (scapula moved laterally)
- SACRUM indicators ipsilaterally swollen, 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-mastoid 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 → Iium PSIS
    - Sacrum: medial occipito-mastoid suture or 4th rib → Sacral 2-3

- 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: area lateral for left ilium) or rib (3rd rib left) while his right-hand contacts the ilium PSIS or sacrum S2-S3 (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 **completely** 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 corresponding suture or rib indicator is pain-free.

NOTE: 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 from sacral 3 to lumbar 3.[7]
Lumbar 3 will probably be subluxated in rotation or inferiority, a subluxation that you may have missed in step 1. You will then determine its specific subluxation pattern using C3 in the way we just described in step 1 with the R + C palpation and Lovette brother relationship. Correct the L3 subluxation then recheck the corresponding occipito-mastoid suture and rib indicator pain. If they are clear, you are done treating this patient for that day. If they are still present, go back and correct the secondary pelvic subluxation. On rare occasions, you may have to go back and correct T12 in order for the pelvis indicators to clear. If you have a C1 or a C2 misalignment, this can also prevent you from clearing your indicators (C1 for ilium and C2 for sacrum). You then need to correct the C1 or C2 misalignment before adjusting the secondary pelvic subluxation.

NOTE: 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).

- **Correction of the secondary ilium and sacrum subluxation:**

- The ilium or sacrum correction can be made with a side posture, drop, logan basics, 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 the corresponding 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).
- If the indicator is negative, you are done treating this patient for that visit.

B. T/S RING INDICATOR FINDINGS SUPINE - Visceral

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

- Perform the DISTILLED CMRT and then go on to do STEP 2 described previously.
- Dr Coté has taught us a distilled CMRT, giving us the essence of CMRT in an easy to follow, well-structured and concise procedure.

DISTILLED CMRT:

- **This version of CMRT utilized to correct visceral malfunction consists of the following Procedure (5 parts):**

1. Confirm T/S ring findings with the palpatory findings of cervical overload reflexes: Reflex arc
2. Correct with occipital fiber-vertebral reflex neutralization (reflex manipulation)
3. Adjust associated thoracic or lumbar vertebra.
4. Perform the 3-digit contact on CMRT corresponding area.
   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 persist correct the anterior misalignment of the associated cervical vertebra (painless and effortless adjusting).
   Then recheck the patient's T/S ring indicators and the other previously positive indicator reflexes (occipital or trapezius fibers, calf or anterior arm reflexes) that should be clear

Occipital fiber chart							
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 cervical overload reflexes: Reflex arc

This is done by correlating T/S ring indicator findings with at least 2 of these major cervical overload reflex palpatory findings and symptomatology.

I- Trapezius fibers to confirm the cervical level involved and associated thoracic or lumbar vertebra, for example: right trap fiber 3→C3-T4-S1. The palpation of the trap muscle begins medial to the A/C joint (fiber 1) & moves in medially in 7 equally spaced steps to finish at the lateral border of T1 (fiber 7). [1,4]

II- Occipital fibers **line 2** to confirm the cervical level involved and associated thoracic or lumbar vertebra, for example: right occipital fiber 3→C3-T4-S1. The palpation of the occipital fibers begins at the most lateral portion of the occiput (fiber 1) & moves in medially in 7 equally spaced steps to finish lateral to midline occiput, below the EOP (fiber 7).

III- 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) & moves caudally in 7 equally spaced steps to finish on the Achilles tendon at the ankle (C1). Note that the palpation of C1-C3 reflexes is harder for the patient to perceive because they are located on the Achilles tendon. The anterior arm reflex palpation begins above the cubital fossa (C7) & moves cephalad in 7 equally spaced steps to finish at the top of the arm (C1).

IV- History/symptomatology/posture observation: to confirm the reflex arc and associated organ involved. For example: C3-T4-S1→ gallbladder, the patient's posture may be curled up around the gallbladder.

2. Correct with occipital fiber-vertebral reflex neutralization (reflex manipulation):

Once the main reflex arc involved has been determined along with the side of involvement, the practitioner can correct it with the occipital fiber-vertebral reflex neutralization.

▪ Dr Coté's clinical theory of an organ malfunction to assist us in better understanding this occipital fiber-vertebral reflex neutralization:
An energy loss is the first manifestation of an organ malfunction and that occurs 1st on the right side. These impulses are transferred to the cervical area and down into the sacrum. The T/S ring indicators, occipital fibers, trapezius fibers and reflexes sent into the arm, forearm, calf and lateral to the sacrum are created by the right side cervical overload. 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 tissue starting on the right (energy loss) [5,6]. 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. The body defends itself against the energy loss by going into a stress pattern (left side).

The thoracic and upper lumbar vertebrae paraspinous area is associated with the output of the sympathetic nervous system (SNS).
In neurology, the rule is that the neural tissue that is located above inhibits the neural tissue located below. Inhibition of the SNS (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 ParaSN output. This is important because, if the ParaSNS remains too inhibited by the SNS, the patients lose their ability to relax which can impair the quality of their sleep. This can evolve into a ''chronic fatigue syndrome''.

▪ Bilateral occipital-thoracic or lumbar contact:
Practitioner always at the **left** of the prone patient, a bilateral contact is held by his left hand at the occipital fibers involved (ex: occ fiber #3 line 2) and by his right hand on the corresponding paraspinous thoracic or lumbar area bilaterally (ex: T4) lightly putting a headward pressure with both hands 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 and side (ex: C3 right) while his right hand contacts 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 (ex: sacral 1). Palpate from medial to lateral at that level (ex: right S1), ¼ 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 (ex: right C3) is pain-free.

▪ Sacral-occipital fiber 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 fiber (ex: #3 line 2) with your left hand until the sacral contact is pain-free.

3. Adjust the thoracic or lumbar vertebra involved

- Now if the indicators initially revealed a **thoracic** involvement (ex: T4), make a bilateral thenar contact at the corresponding thoracic area, making a very light headward 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 thoracic 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). [2,3]
The correction can be made with any method as long as it clears the indicators.

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

- The patient then goes supine, always standing on the **right** side of the patient, you will make a 3-digit contact at the C.M.R.T. area for the organ corresponding to the previously determined reflex arc and side (ex: gallbladder, right C3-T4-S1):

    - clockwise circular motion if done on the right side (energizes the organ)
    - counterclockwise circular motion if done on the left (destresses the stressed organ)

An organ begins to lose its energy as it starts to malfunction. This occurs on the right side (clockwise motion to energize 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) possibly indicating a more chronic condition.

- Recheck the patient's T/S ring supine and the other previously positive indicator reflexes (occipital/trapezius fibers, calf or anterior arm reflexes), if clear, you are done with CMRT.
Then go do step 2 = check 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: ''Painless 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.
- Holding the painful contact with your thumb on the anterior cervical vertebral body (ex: C3 right), slowly **passively** rotate and laterally flex the patient's head **away** to a position where no more pain is felt under your thumb.
- Hold that head position, while making a soft tissue relaxing motion on the painless anterior cervical vertebra tissue cephalad, for about 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 palpate your cervical reflex indicator that should be pain-free. <u>If not, redo the procedure until it is</u>.
Dr Coté used to call this **''painless and effortless adjusting''.**
-Then recheck the patient's T/S ring supine and the other previously positive indicator reflexes, if clear, you are done with CMRT.
Then go to step 2.

STEP 2:

- **Determine if a secondary Pelvic adjustment is required utilizing indicators**, see entire step 2 described in step 2 section above.

REFERENCES

1. Cashman S, Blum C. Trapezius fibre muscle analysis: A pilot inter/intra-examiner reliability study. Asia-Pac Chiropr J. 2020;1.2:online only.
2. Blum CL. R + C Factors and Sacro Occipital Technique Orthopedic Blocking: a pilot study using pre and post VAS assessment. J Can Chiropr Assoc. 2015 Jun;59(2):134-42. PMID: 26136605; PMCID: PMC4486986.
3. Blum C, Lovett Brothers: The Relationship Between the Cervical and Lumbar Vertebra The Journal of Vertebral Subluxation Research Apr 2004; 6(1): 1-3.
4. Monk R, 2006 SOT Manual, SOTO-USA: Winston-Salem, NC, 2006
5. Bath M, Owens J. Physiology, Viscerosomatic Reflexes. 2023 May 1. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan–. PMID: 32644644.
6. Watari, BS, OMS IV, Jessica, et al. “Etiology, Evaluation, & Osteopathic Management of Adult Constipation”. Osteopathic Family Physician, vol. 8, no. 4, July 2016
7. Legaye J, Duval-Beaupere G. Gravitational forces and sagittal shape of the spine. Clinical estimation of their relations. Int Orthop. 2008 Dec;32(6):809-16. doi: 10.1007/s00264-007-0421-y. Epub 2007 Jul 25. PMID: 17653545; PMCID: PMC2898950.