Exercises: refining cranial palpation skills

CHAPTER CONTENTS

Exercise 1 To enhance awareness of palpated inherent tissue sensation

Time suggested 10 minutes

Frymann (1963) suggests that you sit at a table opposite a partner, one of whose arms rests on the table, flexor surface upwards. This arm should be totally relaxed. Place a hand onto that forearm with attention focused on what the palmar surfaces of the fingers are feeling. The other hand should lie on the firm table surface in order to provide a contrast reference as the living tissue is palpated, distinguishing a region in motion from one without motion. Your elbows should rest on the table so that no stress builds up in the arm or shoulders.

With eyes closed, concentration should then be projected into what the fingers are feeling, attuning to the arm surface. Gradually, focus should be brought to the deeper tissues under the skin as well, and finally to the underlying bone.

When structure has been well noted, the function of the tissues should be considered. Feel for pulsations and rhythms, periodically varying the pressure of the hand. At this stage Frymann urges you to: 'Pay no attention to the structure of skin or muscle or bone. Wait until you become aware of motion: observe and describe that motion, its nature, its direction, its

Exercise continues

Exercise 1 To enhance awareness of palpated inherent tissue sensation—*continued*

rhythm and amplitude, its consistency or its variation'.

This entire palpatory exercise should take not less than 5 minutes, ideally 10 minutes and should be repeated with the other hand to ensure that palpation skills are not one-sided.

Exercise 2 To enhance bilateral perception of palpated tissue sensation

Time suggested 5–10 minutes

When you have palpated an arm (or any other part of the body) to the point where you are clearly picking up sensations of motion and rhythmic pulsation, place your other hand on the other side of the same limb.

Is this hand picking up the same motions?

Are the sensations noted in each hand moving in the same direction, with the same rhythm and is there the same degree of amplitude to the motion?

In health they will be the same. When there is a difference it may represent the residual effects of trauma or some other form of dysfunction.

Exercise 3 To enhance perception of subtle sensations in neurally connected areas

Time suggested 5 minutes

Place one hand gently but fully on a spinal segment from which derives the neurological supply to an area which is simultaneously being palpated by the other hand.

By patiently focusing for some minutes – eyes closed – on what is being felt, Frymann states, 'a fluid wave will eventually be established between the two hands'.

Can you feel this or anything which approximates it?

Exercise 4 To discriminate between palpated sensations deriving from indirectly related areas

Time suggested 5–10 minutes

Frymann (1963) suggests that on another occasion (or at the same session) you palpate one limb with one hand (say the upper arm) and another limb (a thigh, for example) with the other and that you 'rest in stillness until you perceive the respective motions within'.

Ask yourself whether the rhythms you are feeling are synchronous and moving in the same direction. Are they consistent or do they undergo cyclical changes, periodically returning to the starting rhythmic pattern?

You may actually sense, she says, that the force being felt seems to carry your hands to a point beyond the confines of the body, pulling in one direction more than another, with little or no tendency to return to a balanced neutral position. This may represent a pattern established as a result of trauma which is still manifest in the tissues. Careful questioning might confirm the nature and direction of a blow or injury in the past.

Exercise 5 To discriminate between various sensations deriving from a palpated pulsation

Time suggested 5–7 minutes with each hand

Upledger (Upledger & Vredevoogd 1983) suggests that palpation and assessment of obvious pulsating rhythms should be practiced, for example involving the cardiovascular pulses. He describes the first stages of this learning process thus:

> *With the subject lying comfortably supine, palpate the radial pulses. Feel the obvious peak of the pulsation. Tune in also to the rise and fall of the pressure gradient.*
>
> *How long is diastole?*
>
> *What is the quality of the rise of pulse pressure after diastole?*

Exercise 5 To discriminate between various sensations deriving from a palpated pulsation—*continued*

Is it sharp, gradual, smooth? How broad is the pressure peak?

Is the pressure descent rapid, gradual, smooth or stepped?

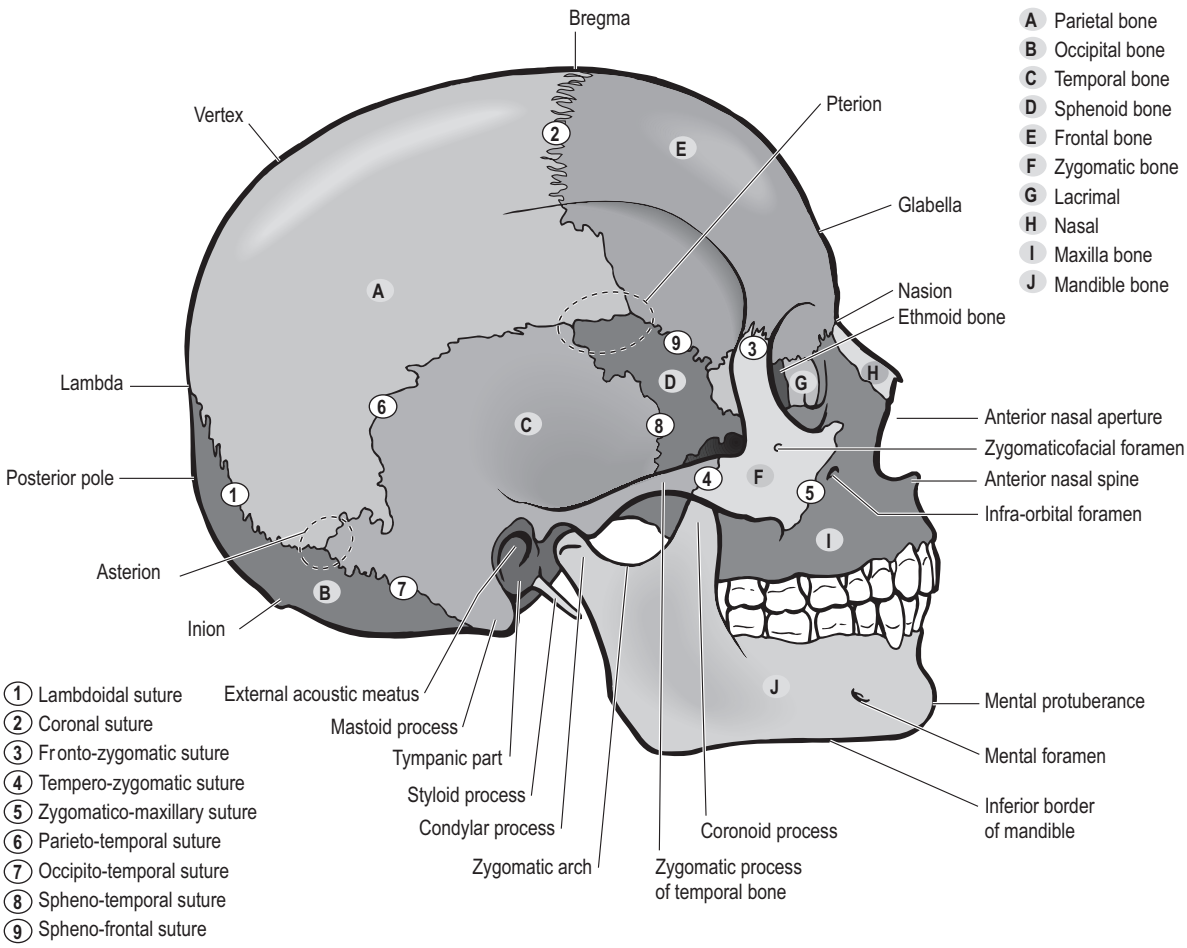
Memorize the feel of the subject's pulse so that you can reproduce it in your mind after you have broken actual physical contact with the subject's body. You should be able to mentally reproduce your palpatory perception of the pulse after you have broken contact.

Upledger then suggests you do the same thing with the carotid pulse and subsequently palpate both radial and carotid at the same time and compare them.

Exercise 6 Global suture palpation

Time suggested 10–15 minutes

Greenman's cranial palpation exercise (supine) (see Exercise Figs 1A–E)

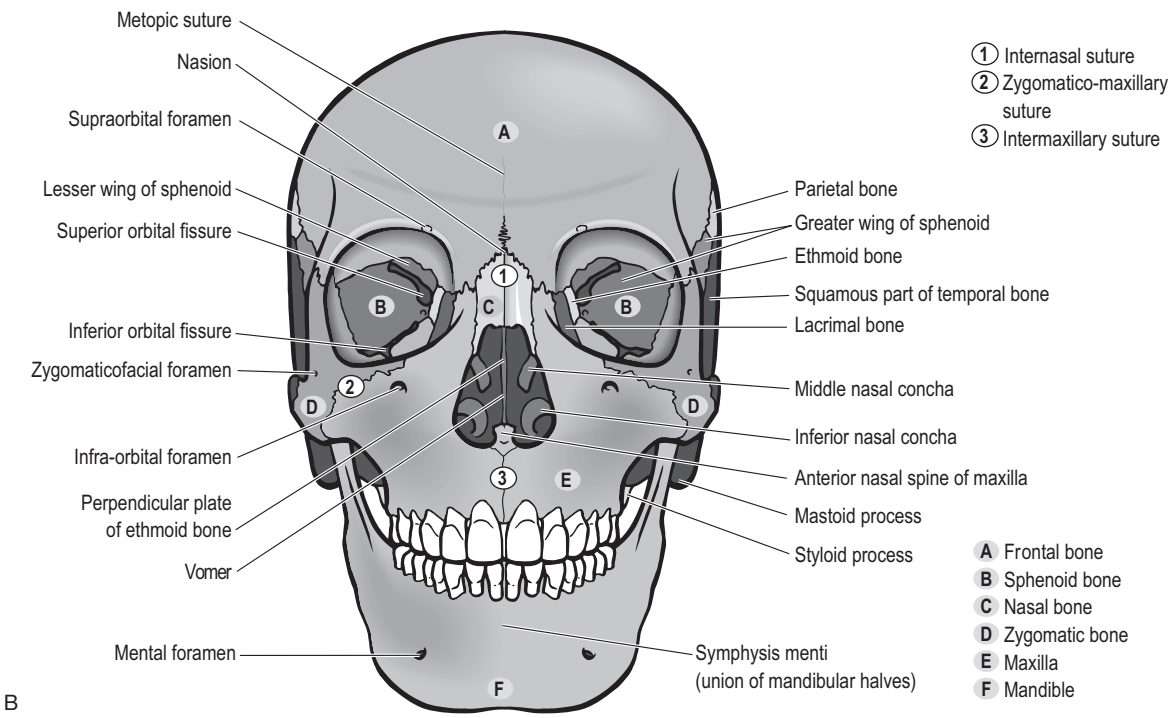


A

Exercise Figure 1 **A** Lateral view of the cranium and its major landmarks and sutures.

Exercise continues

Exercise 6 Global suture palpation—*continued*

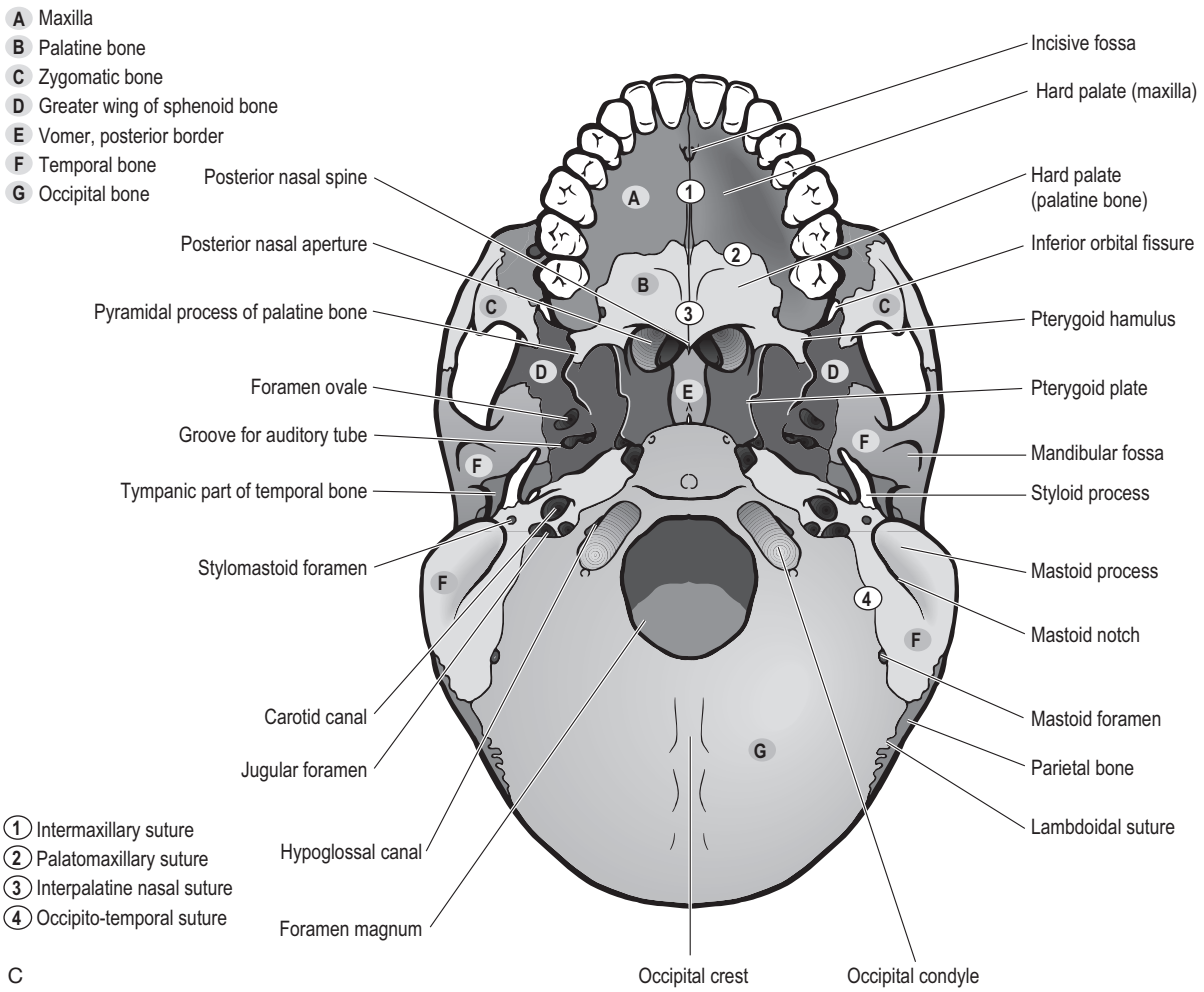


B

Exercise Figure 1 **B** Frontal view of cranium and its major landmarks and sutures.

1. Sit at the head of the table with your partner lying face upwards, no pillow.
2. Palpate the vertex of the skull with your thumb or fingerpads. Moving them gently from side to side, feel the serrated contours of the sagittal suture. Locate the posterior aspect of the sagittal suture, the L-shaped lambda.
3. Follow the sagittal suture from where it begins at the lambda, where the parietal and occipital bones meet. Try to note irregularities, asymmetries (for example, one side being raised compared with the other), areas of contrast in terms of hardness/softness, etc. Palpate with fingers or thumbs lightly criss-crossing the suture, moving anteriorly in this manner until you reach the bregma, a triangular depression, the junction of the sagittal and the coronal sutures. It is normal for the posterior third of the suture to feel more 'open' than the anterior third. This is due to the size of the serrations rather than being an abnormality.
4. Starting from the bregma, lying in a slight depression, palpate bilaterally (both ways at the same time) sideways along the coronal suture. You are feeling the junction between the parietal and the frontal bones. Compare what one fingerpad feels with what the other is sensing, trying to determine any indication of the frontal or the parietal bone being more prominent on one side compared with the other, assessing for irregularities, hard and soft areas, rigidity, etc., seeking evidence of any asymmetry. Pick (1999) describes the area between the bregma and the great wing as feeling 'like an open trench', as though the suture has 'spread apart'.

Exercise 6 Global suture palpation—*continued*

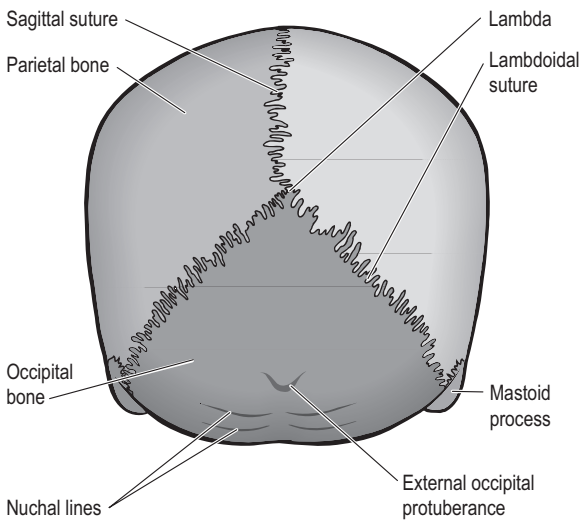


Exercise Figure 1 **C** Inferior view of cranium and its major landmarks and sutures.

5. As you come to the end of the coronal suture you will feel a bony prominence and then a depression, the pterion, the junction of the sphenoid, frontal, parietal and temporal bones. Compare one side with the other, carefully, using a feather-light touch.
6. From the pterion move onto the great wing of the sphenoid and palpate its contours and sutures. This is a very important landmark in cranial methodology. Are the two sides of the sphenoid symmetrical; is one side higher or lower on the head? Is there any sense of one side being more 'rigid' than the other or more prominent?
7. The sphenofrontal suture between the great wing of the sphenoid and the lower, outer aspect of the frontal bone is relatively easy to palpate as the great wing is flat, while the lateral aspect of frontal bone bulges laterally.

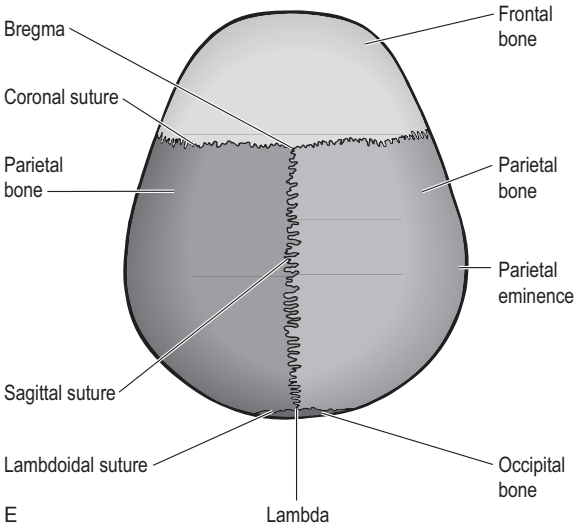
Exercise continues

Exercise 6 Global suture palpation—*continued*



D

Exercise Figure 1 **D** Posterior view of cranium and its major landmarks and sutures.



E

Exercise Figure 1 **E** Superior view of cranium and its major landmarks and sutures.

8. The superior aspect of the great wing meets the parietal bone at the sphenoparietal suture.
9. The junction of the posterior aspect of the great wing with the temporal bone is at the sphenosquamous suture, where a slight ridge-like prominence is a normal feature of this intersection.
10. From the great wings return to the pterion and follow the squamoparietal (or parieto-temporal) suture between the temporal squama and the parietal bone on each side. This travels backwards and curves over the ear. Use a light fingerpad contact on each side which gently, repetitively and thoughtfully travels superiorly and inferiorly to cross and recross this border. Feel carefully (this is not an easy suture to locate) for the sense of greater fullness as the fingers move superiorly, where the parietal bone overlaps the temporal bone. Sense for irregularities on one side compared with the other, of a sense of rigidity or of soft tissue 'congestion', tension or fibrosis in the musculature.
11. At the end of this suture is the asterion, which is the junction of the temporal, parietal and occipital bones. Again compare one side with the other in the ways suggested above. Is there symmetry? Unusual rigidity? Is there any irregularity of feel?
12. Just anterior to the asterion it is possible to palpate a small amount of the suture between the parietal bone and the mastoid process (parietomastoid suture). Compare these for symmetry and irregularities and also for differences in the attachments of the sternomastoid muscles that apply such force at their attachment sites.
13. Moving back to the asterion, feel for the meeting place of the mastoid and the inferior edge of the occiput, the occipito-mastoid suture. This feels like a depression or furrow, running along the posteromedial border of the mastoid. Allow your fingers to follow the occipitomastoid suture until it is lost under the soft tissues inserting onto the cranium. Assess these soft tissues bilaterally for evenness of feel.

Exercise 6 Global suture palpation—*continued*

14. From the asterion move medially and superiorly along the serrated lambdoidal suture. Bilaterally, using the same sutural evaluation method of crossing from side to side of the suture, evaluate for irregularities and asymmetries. It normally feels wide and open.
15. Your fingers will meet when you reach the L-shaped lambda, commonly sensed as a depression, lying on the midline, where the occipital bone meets the sagittal suture. Carefully evaluate the feel of this vital junction for evidence of crowding, distortion or asymmetry. This is close to where you began the palpation exercise.
16. Palpate back down, along the lambdoidal suture, to the asterion on each side and take your searching fingerpads onto the mastoid process. Palpate the mastoids for symmetry. Do they seem to lie at the same angle on each side? Are there signs of soft tissue imbalance (sternomastoid attachments here can produce marked differences of one side from the other)? Are they symmetrical in feel and do they have the same sense of ease when you lightly (half ounce maximum) ease them posteromedially or is one side more resistant?
17. Now move your hands to the face. Starting at the upper outer margin of the orbit, palpate laterally and inferiorly until you feel the frontozygomatic suture, sensing for irregularities.
18. Follow the lateral aspect of the orbit until you find the zygomaticomaxillary suture.
19. Palpate medially along the inferior orbit and up the medial wall to feel the nasomaxillary junction and the frontomaxillary junction. Seek evidence of asymmetry and/or unusual tissue feel.
20. Repeat these palpation moves until you are familiar with the contours, landmarks and feel of the skull in people of all ages and in as many different states of health as possible.

Exercises 7a–7e Static (passive and kinetic) cranial suture palpation exercises – supine, seated and sidelying

Time suggested 20–25 minutes

There are suggestions that palpating the cranial sutures with the patient supine, as in the previous exercise, creates pressures that distort the accuracy of the findings, as well as making access to the posterior aspects of the cranium (lambdoidal suture, for example) more difficult. (Pick 1999). Pick notes: 'Gravity could conceivably initiate a compressive strain on the sutures touching the table … and consequently cause a global articular fixation throughout the cranial vault'.

The sheer weight of the head, resting on the occipital bone, is seen as preventing normal sutural compliance during the palpation process. With the person seated and the practitioner standing at the front, back or side, access to the cranium is more readily available, without distorting pressures.

Exercise 7a Assessing gravity effect when palpating

Time suggested 2–3 minutes Before performing seated cranial palpation (Exercise 7b), Pick suggests that the supine position be adopted in order to appreciate the effect of weight/gravity on supine palpation.

1. The hands should be cupped to hold the supine patient's head. Does one side feel heavier than the other?
2. Rotate the head to face the side that feels lighter and sense the change in weight perceived by the supporting hands.

Exercise continues

Exercises 7a–7e Static (passive and kinetic) cranial suture palpation exercises – supine, seated and sidelying—*continued*

3. Return the head to the upright position and again note the change in perceived weight in the hands.
4. Gently elevate the head so that it is supported on your extended fingertips and note the degree of stress this causes over a short period as the effect of gravity acts on the mass of the cranium.

Exercise 7b Seated global suture palpation

Time suggested 5–7 minutes

1. Patient is seated and practitioner stands (or sits on a high stool) in front (slightly to one side) – see Exercise Figure 2A.
2. Palpation should start at the bregma and more or less follows the sequence described in Exercise 6, despite starting in a different place (i.e. at the bregma rather than the lambda).
3. The sutural palpation sequence should be: start at the bregma (see Exercise Fig. 2B) – palpate along the coronal suture to the pterion – then move onto the great wing of sphenoid and palpate its sutures with the frontal and parietal bones, as well as the sphenosquamous (aka sphenotemporal) suture – from the pterion palpate over the ear toward the asterion (finger movement should be superior-inferior-superior), following the squamoparietal suture (aka parietotemporal) – and from the asterion, move inferiorly to the parietomastoid and occipitomastoid sutures, then back to the asterion and up the lambdoidal sutures to the lambda – then palpate along the parietal suture to return to the start, at the bregma. (For more detail of what to look for and what to expect, reread Exercise 6.)

The light to-and-fro, zig-zag motions of the palpating fingers or thumbs over the sutures and junctional unilateral (lambda, bregma) and bilateral landmarks (asterion, pterion, mastoids, etc.) should be constantly focused on key features such as asymmetry and altered sense of tone/tissue feel (hard/edematous, etc.). As with Exercise 6, the more people's heads that are palpated, of different ages, genders and states of health, the sooner awareness will be achieved as to what 'normal' feels like. This awareness becomes a foundational marker to be used for recognizing what feels abnormal, asymmetrical, unusual, questionable or frankly dysfunctional.

Exercise 7c Kinetic sutural palpation, left side (coronal and other sutures)

Time suggested 4–5 minutes Patient is sidelying on the right or supine, head on a cushion, with head turned to the right to examine the left side. The practitioner is on the patient's right, at head level.

The practitioner's cephalad (left) hand holds the head to support and stabilize it, with the fingerpads (usually index and/or middle) placed strategically to palpate whichever suture is being examined (see Exercise Fig. 2C).

For the coronal suture the left (palpation) hand rests so that the index and/or middle fingers lie on the left side of the coronal suture (see Exercise Fig. 2D), the thumb rests on the frontal bone.

The gloved right hand is placed so that the index and middle fingers (spread apart) are in contact with the crown surfaces of the posterior molars, allowing these contacts to be used to introduce rocking movements, from side to side or forward and backward, as motion at the suture is evaluated.

This is then compared with findings on the right side coronal (or other) suture being palpated, with all hand and patient positions reversed.

This same basic position can be used to palpate motion at the sphenofrontal, spheno-parietal, sphenosquamous, squamoparietal and even the parietomastoid sutures, by altering the palpating left hand contacts to rest on the appropriate suture, as the same rocking motion is introduced via the action of the right hand contacts on the maxillae.

Exercises 7a–7e Static (passive and kinetic) cranial suture palpation exercises – supine, seated and sidelying—*continued*

Exercise 7d Occipitomastoid suture

Time suggested 4–5 minutes Patient is sidelying on the right or supine, head on a cushion, with head turned to the right to examine the left occipitomastoid suture.

The practitioner is on the patient's right, at head level. The practitioner's cephalad (left) hand holds the occiput to support and stabilize it, with thumb placed strategically to palpate the left occipitomastoid suture (see Exercise Fig. 2E).

The gloved right hand is placed so that the index and middle fingers (spread apart) are in contact with the crown surfaces of the posterior molars, allowing these contacts to be used to introduce rocking movements, from side to side or forward and backward, as motion at the suture is evaluated.

The right suture is assessed with all patient and practitioner positions, as described above, reversed.

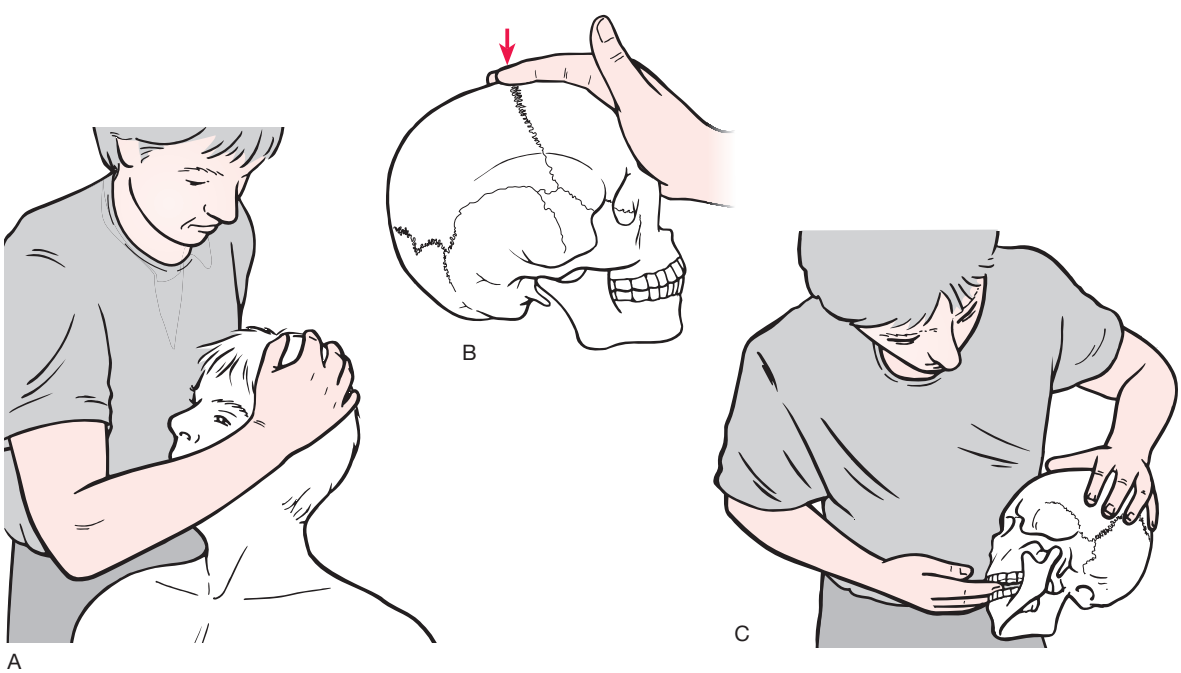
Exercise 7e Sagittal suture

Time suggested 4–5 minutes The patient is supine, head on a cushion. The practitioner is on the patient's right, at shoulder level.

The practitioner's cephalad (left) hand holds the head, thenar eminence resting on the patient's right temporal bone, with the index, middle and ring fingerpads placed strategically to palpate the anterior or posterior aspects of the sagittal suture (see Exercise Fig. 2F).

The gloved right hand is placed so that the index and middle fingers (spread apart) are in contact with the crown surfaces of the posterior molars, allowing these contacts to be used to introduce rocking movements, from side to side or forward and backward, as motion at the suture is evaluated.

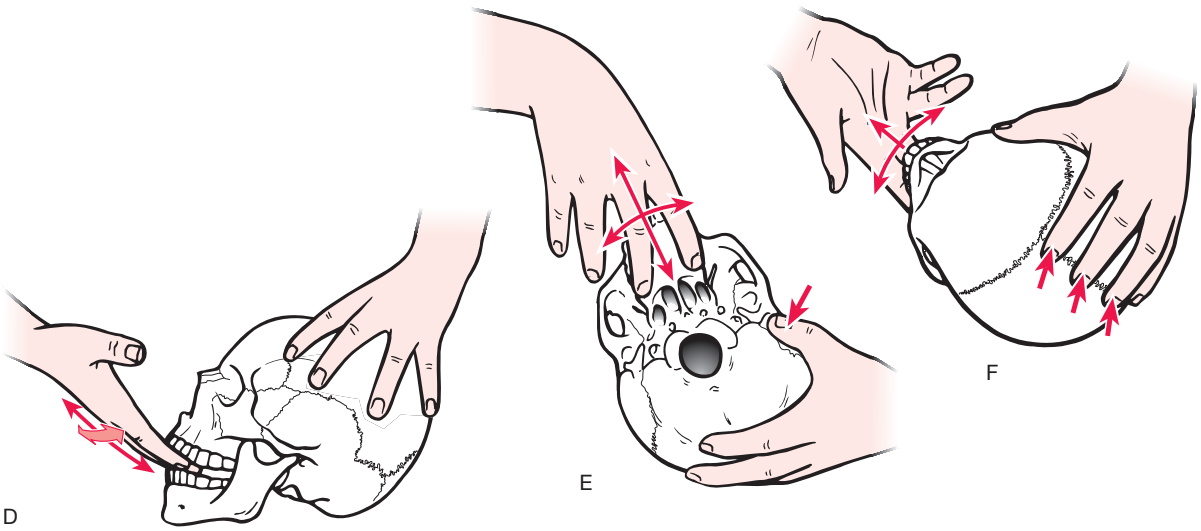
The anterior and posterior half, or any local feature, of the suture should be evaluated for a sense of motion as the maxillary contacts introduce rocking motions.



Exercise Figure 2 **A** Position for palpation of cranium with patient seated, practitioner standing. **B** Position of hand to help locate the bregma. **C** Examiner's position relative to patient for sidelying passive kinetic palpatory examination of the cranial vault. (Redrawn with permission from Pick M 1999 Cranial sutures: analysis, morphology and manipulative strategies. Eastland Press, Seattle.)

Exercise continues

Exercises 7a–7e Static (passive and kinetic) cranial suture palpation exercises – supine, seated and sidelying—*continued*



Exercise Figure 2 **D** Hand positions for passive kinetic palpatory examination of the coronal suture. **E** Hand positions for passive kinetic palpatory examination of the occipitomastoid suture. **F** Passive kinetic palpation of sagittal suture. (Redrawn with permission from Pick M 1999 Cranial sutures: analysis, morphology and manipulative strategies. Eastland Press, Seattle.)

Notes on cranial motion and palpatory accuracy

In classic craniosacral theory, motion of the cranial bones is described as involving a flexion and an extension phase of the cranial cycle at the sphenobasilar synchondrosis.

The concept of any flexion potential at all at this junction in the adult remains questionable. There is, however, an undoubted – if minute – degree of pliability at the sutural junctions of the cranium and a powerful pivot point between the occiput and the temporal bone, which allows the temporals to 'externally rotate' (moving into what is termed cranial flexion) when mobility is normal.

In palpating the occiput the motion noted, of this bone, is seemingly one of easing anteriorly on inhalation and returning to its start position on exhalation. Some believe this to be driven by respiratory influences, although a definite sense of motion is palpable even during a held breath. Is this due to the influence of the reciprocal tension membrane responding to intrinsic brain, glial cell, CSF and other pulsations/motions? Or is it a more direct response to muscular or circulatory/fluid influences? The discussions in Chapter 2 will have offered thoughts on what may or may not be happening and on the many different opinions and theories relating to cranial motion.

In palpating the bones of the skull it is suggested that the slight degree of motion that is available be felt for, with no preconceptions as to degree or rate or, for that matter, what motive force might be involved.

Based on research evidence, it is possible to accept that sutural motion is a fact. However, since a sense of movement seems to be palpable where osseous motion is unlikely (e.g. at the synchondrosis) we need to reflect that manual assessment skills remain poorly tested by researchers. When such skills are subjected to scrutiny both inter- and intraexaminer results are anything but encouraging.

For example, McPartland & Goodridge (1997) report that less than 30 interexaminer studies have

been published involving palpatory diagnosis. Most of these studies evaluate 'traditional' palpatory tests (assessments performed at a single joint articulation as used by clinicians to determine the need for joint manipulation) using up to four criteria: joint tenderness; symmetry of position; range of motion (ROM); and tissue texture change. In examination of range of motion at C1–C2 segments, only a slight degree of agreement was noted amongst senior chiropractic students. Osteopathic students and professors fare no better in similar studies.

Where cranial palpation is concerned, Hartman & Norton (2002) report an almost non-existent degree of interexaminer agreement.

If it is possible to achieve only modest agreement amongst highly skilled practitioners (or even none) in assessing range of motion changes in mobile structures, should we not pause before accepting any sense of movement at all in structures where movement is measured in microns?

What is undeniable, based on the research discussed in Chapter 2, is that there is a degree of cranial motion available at the sutures. This falls into a range that is palpable. What significance sutural mobility has on health, when absent, is as yet unproven, despite the impressive results achieved by cranial practitioners and therapists for over half a century.

Where palpation of CRI (see below) is concerned, it is as well to recall the suggestion (see Ch. 2) that what is being palpated relates to an interaction between yourself and the patient, making interrater reliability unlikely. It is suggested that this does not discredit, nor should it preclude, such palpation.

Exercise 8 Cranial vault palpation for cranial motion

Time suggested not less than 10 minutes

The patient is supine and you are at the head of the table, thumbs resting on the bregma, fingerpads on the parietals, superior to the suture and carefully avoiding the temporal articulation with the parietals (see Exercise Fig. 3).

The hands will palpate, stabilize and monitor as well as allowing the thumbs to apply light pressure to the bregma, the triangular depression which is the junction of the sagittal and coronal sutures.

The patient inhales very deeply and, at the same time, moves the feet into dorsiflexion, as you apply palpatory pressure (grams only) to the bregma (this is achieved by pressing the heels of your hands together, which lifts the parietals and presses the thumbs gently against the bregma).

On exhalation the patient is asked to plantarflex the feet, as your hand contacts monitor the motions resulting from the fascial tug caused by inhalation and dorsiflexion, followed by exhalation and plantarflexion.

A wave-like sensation is being looked for in the cranial structures as these movements and functions produce their influences. If the falx cerebelli is restricted and there is a depressed cranial bowl, this wave-like motion will be less easily achieved.

Additional fascial maneuvers which amplify the effects can include clenching of fists on inhalation, tightening of abdominal muscles, using one foot only or alternating foot involvement in the process and/or introducing sucking (thumb/pacifier, etc.) coincidental with inhalation.

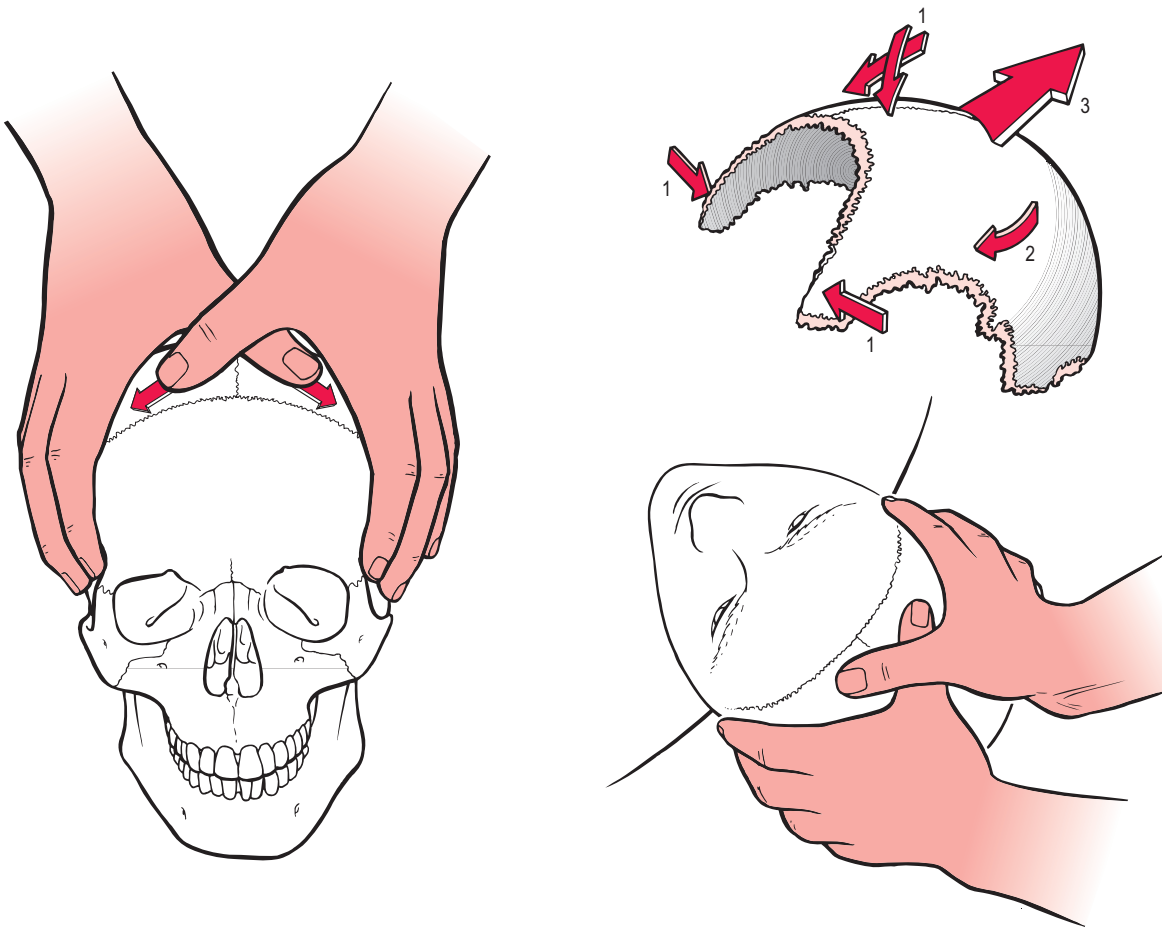
The motion should be felt at both the bregma and the occiput. As well as palpating at the bregma with your thumbs, you can alter your hand position to cradle the occiput while the thumbs rest on the bregma.

What do you feel?

How do you account for the movements you sense other than as a result of fascial and/or muscular influences?

Exercise continues

Exercise 8 Cranial vault palpation for cranial motion—*continued*



Exercise Figure 3 Fingers should be placed superior to the temporal suture with the parietals and the thumb either directly onto the bregma or, as a variation, crossed (as in the figure) and lying on the parietal bones close to the bregma.

Exercise 9 Cranial rhythmic impulse (CRI) palpation

Time suggested not less than 10 minutes

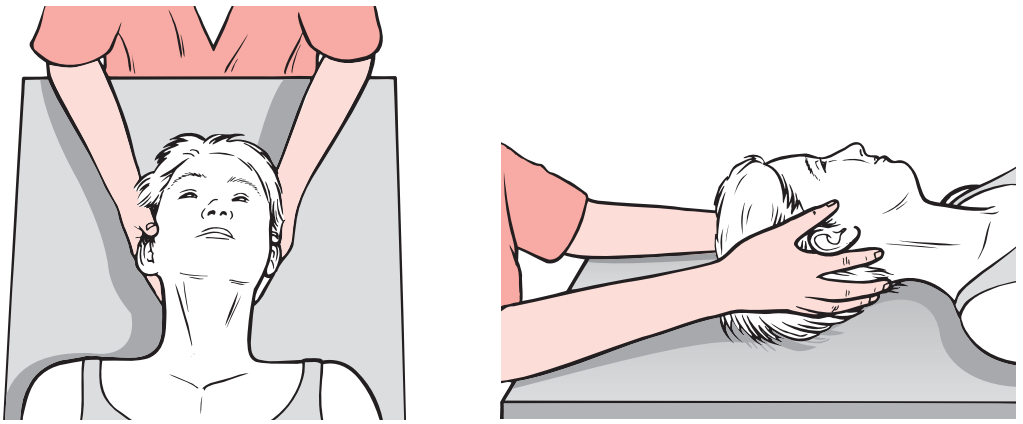
The 'normal' CRI rate remains a matter for debate (see Ch. 2) and it is suggested that you try to perform this exercise with no preconceptions as to what you might sense or feel.

To accomplish palpation of CRI you need to be relaxed, focused and centered.

The amount of contact pressure required to accomplish CRI palpation is around 5 grams.

CRI is said to best be felt at the parieto-temporal squama, using what is known as the vault hold 9 (see Exercise Fig. 4). This is achieved with the palms centered on the posterior surface of the parietal bones. The fingers are usually placed so that the small finger rests on the occipital bone, the ring and middle finger are resting one behind and one in front of the ear, with the index finger on the great wings of the sphenoid, thumbs crossed and supporting each other, but not in contact with the head. (Exercise Fig. 4 shows a variation on this hand position, thumbs resting on the great wing.)

Exercise 9 Cranial rhythmic impulse (CRI) palpation—*continued*



Exercise Figure 4 Hand placement for palpation of cranial rhythmic impulse. Note that the forearms are supported by the table to prevent undue fatigue.

It is important that your forearms are supported on the table, your feet flat on the floor, eyes closed, with all tension in the shoulders, arms and hands eliminated.

Spend the first 2–3 minutes noting the various pulsations and subtle motions under your hands, both cardiovascular and respiratory and possibly others.

After several minutes bring the focus of your attention to the motions of the head in relation to respiration only.

Have your patient/partner breathe normally as well as, at times, with increased emphasis on inhalation and/or exhalation.

Compare what you feel as the breathing pattern alters.

Have the person hold the breath for 10–15 seconds and again see whether you notice any difference in the motions under your hands.

Then for a minute or two screen out respiratory motion and try to pick up subtle cardiovascular pulsations.

Now screen out and temporarily ignore both cardiovascular and respiratory motions and see what else you can feel in the background.

Imagine that your hands are totally molded to the head, without more than a few grams of pressure and with this whole hand contact shift your focus to the proprioceptors in your wrists and lower arms. Sense what these, rather than the neural receptors in your hands, are feeling.

Magnify in this way the very small amount of actual cranial motion available for palpation and you might gradually begin to feel as though quite a considerable degree of motion is taking place, as though the entire head were expanding and contracting laterally to a very slow rhythm, unrelated to cardiovascular or respiratory function, anything from 4 to 10 times per minute (or more?). A faint, wave-like 'pushing' might be noted.

At this stage trust what you feel uncritically. Can you sense a rhythm?

Can you describe what you feel in words?

Is there a periodic 'prickling' or pressure sensation in the palms of the hand?

Does it feel like a 'tide' coming in and then receding?

What words would you use to describe what you feel?

Once you are sensing a rhythmic impulse start to time it by counting silently to yourself as each impulse begins ('one-hundred', 'two-hundred', etc. counts roughly a second at a time).

Remember what the count was as the sensation appeared and as it receded and later,

Exercise continues

Exercise 9 Cranial rhythmic impulse (CRI) palpation—*continued*

after the exercise, count at the same rate and check the number of seconds it takes from the start of one cranial impulse to the start of the next. Work out the rate per minute.

See also what happens when your patient/partner holds his/her breath as you continue to assess the CRI.

Does it change?

As time goes by and you palpate more heads, become aware of not just the rate of any rhythmic pulsation you may sense but also the amplitude of these pulsations.

Does the impulse feel sluggish and labored or energetic and brisk or something else?

And are the feelings symmetrical or is there a difference felt by one hand or the other?

Record all your findings in a journal or onto tape.

Variation It is possible to palpate the CRI on your own head if you are seated, elbows on a table and hands resting on the head, fingers interlaced or with a palm on each asterion.

The feeling you are seeking, in your own or anyone else's head, is of a 'fullness' in your palms, a warmth, a wave-like pushing, a sensation rather than an actual osseous movement.

Exercise 10 Cranial motion and CRI palpation

Time suggested not less than 10 minutes

Once you feel competent at sensing CRIs, of being able to count the rate and sense the amplitude – whatever the origin of the rhythm you are sensing – try a different approach. This time perform palpation of the head using a different hold.

The tips of the ring and little fingers should be placed on the occipital bone. The middle and index fingers rest on the mastoid bone and the thumbs are resting gently on the parietal bones.

Using your fingertip contacts to assess motion, ask yourself whether you sense a very slight dipping forward of the occiput at any stage of the cranial rhythmic pulsation – as lateral expansion occurs, producing a sense of increasing 'fullness' in the palms.

Does this 'fullness' slowly recede periodically, as the head 'narrows' again?

Can you, through the available contact of your middle and index fingers (resting on the mastoid bone and temporal bone respectively), sense what is happening to these during the various phases of the cranial cycle?

Do you have any sense of a change in the tissues under these very light but adherent contacts?

Describe this in your journal or onto tape.

And can you, through your thumb contact, sense what the parietal bones are doing during the cycles of rhythmic activity which your palms and (perhaps) other finger contacts are sensing?

Describe this as well.

What can you sense when the subject is breathing lightly, as well as when they are deliberately breathing deeply and when they hold their breath?

What do these finger contacts sense when you ask the subject to periodically dorsiflex and plantarflex the feet, at the same time or only on one side?

Can you sense osseous motion in response to the fascial pulls that these movements exert at any of the contacts or only at one or some?

Suggestion As you begin to explore these cranial palpation and assessment sensations, it is suggested that you keep a journal of your feelings and findings, as well as the answers to the queries posed in the exercise descriptions. By referring back to the words you use to describe your first tentative explorations you will note the progress you are making, as time passes and practice produces palpatory literacy.

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