Standard Number:	
Effective Date:	

Interprofessional Practice & Clinical Standards

☐ **Policy** ☐ **Guideline** ☐ **Protocol** ☒ **Procedure** ☐ **Plan of Care**

Professional Responsible/For Use By: **Occupational Therapy and Physical Therapy**

Title: **Seating/ Mobility Assessment Procedure**

Indications:

A. The purpose of this Seating/Mobility Assessment Procedure is to provide step by step directions to perform assessment tasks, and gather and analyze information when recommending seating and/or mobility equipment for purchase, long-term use or for complex clients.

B. Assessment Requirements: This Seating/ Mobility Assessment has been modularized to allow for flexibility with prescribing seating/ mobility devices for different purposes. Please see the decision tree on page 2 to ensure that the appropriate sections of the Seating/ Mobility Procedure and Documentation Standard are being used. Write N/A on the assessment form if there are boxes not applicable to the client – i.e. position in current seating system - if they do not already have a seating system.

For example, when prescribing a manual wheelchair for transportation purposes, look on the decision tree. Note that the only sections of the Seating/ Mobility Assessment Documentation form a therapist needs to use to document the prescription process for a transport wheelchair are: Section 1 - General Information and Client Goals; Section 5 – Analysis and Recommendations, and Section 6 – Outcomes. Section 2 only needs to be done if the therapist does not already have an assessment on the chart (such as an Initial Assessment) that takes into account the client's functional abilities in relation to wheelchair use – transfers, environment, transportation, etc. **Relevant, current assessment information already in the client record does not need to be duplicated. This information must be referenced on the General Information and Client Goals form – Section 1**.

C. Goals must be based on functional issues. Use your clinical judgment.

Care Outcomes: To achieve a standardized seating assessment process for seating/mobility prescription that:

- Is evidence based; is client centered; and promotes consistency of care within VIHA.
- Supports practitioner competency.
- Reduces repeat funding of equipment.
- Ensures best equipment match to meet client needs.

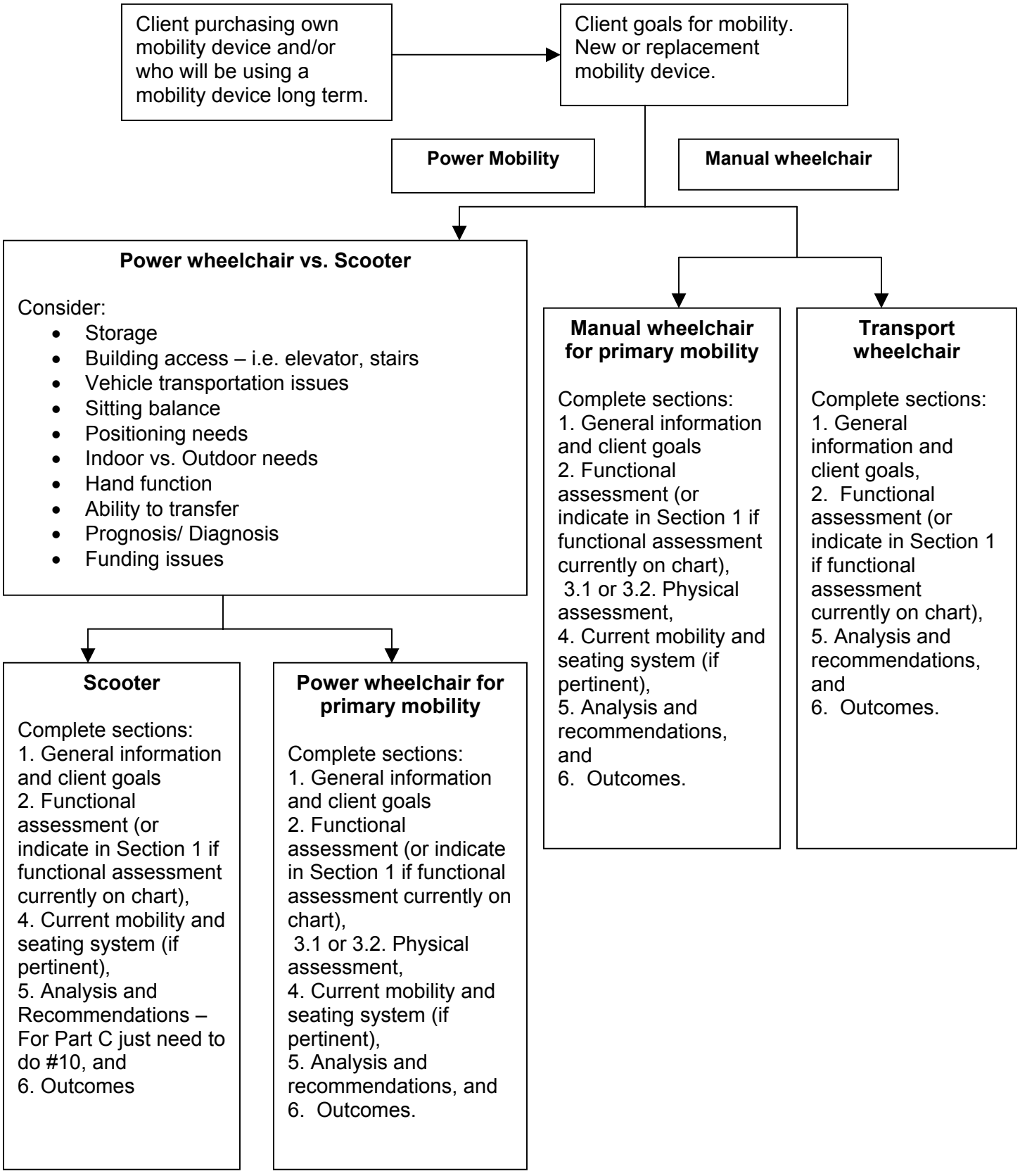
Definitions:

Long Term Use: use of seating/mobility equipment for more than 6 months.

Complex clients: have multiple functional and physical issues requiring custom and/or customized commercial seating/mobility equipment.

Relevant Implications: These are the "So What??" areas on the form where the therapist notes issues to be considered when choosing seating and mobility equipment, i.e. if a client does a standing pivot transfer and you have noted the optimal seat to floor height, this is a "Relevant Implication" for the equipment choice OR if your client travels by accessible van, you need to be aware of the limitations of the van lift with respect to weight and size of mobility device.

Decision Tree for Documenting Required Sections of Seating and Mobility Assessment



Section 1 – General Information and Client Goals

A. General Information	
Client Information	Basic information about the client.
B. Client/ Caregiver Concerns and Goals for Seating	
	Identify client's/caregiver's primary concerns and functional difficulties – e.g. reason for change in equipment. Outline client/ caregiver goals of new seating system.

Section 2 – Functional Assessment

A. Weightbearing/ Transfers and Lifts	
Walking:	With or without aid, type of aid, tolerance, terrain. Any impact on type of wheelchair? Crutch/cane holders necessary on wheelchair?
Transfers:	Client must be able to bear some weight during the move. Comment on method/equipment used, assistance required, number of times/day, optimal seat to floor height, type of armrest support needed, or do armrests need to be removable. These factors impact on decision for type of wheelchair frame and design.
Lifts:	Client does not bear any weight. Comment on equipment used, assistance required, mechanical vs. non-mechanical. Is a lift sling left under the client – this may be a positioning issue. Is more than one person available or necessary to assist with positioning the client after the lift.
B. Wheelchair Mobility	
Manual: **Stroller:** **Power mobility:** **Comments:**	Indicate method of propulsion and/or provide further description. Comment on type of terrain client encounters, distances that need to be traveled and endurance/strength of client. If client is dependent on caregiver for mobility, indicate caregiver limitations. These factors impact on decision for: a) type of wheelchair frame and design – more durable vs. lightweight frame; rigid vs. folding frame, degree of adjustability needed in frame, tilt; b) type of power mobility – scooter, midwheel drive, rear wheel drive c) type of rear wheels and front casters – pneumatics vs. solids, size of front casters. These factors are also important for supporting your rationale with funding agencies.
C. Self Care	
Method of eating:	Does the client feed him/herself or is assistance required. Are eating aids used? Access to tables? Does the eating set-up/equipment required impact wheelchair components?
Bowel & bladder management:	Continent vs. incontinent, toileting routine/schedule, equipment. Access to toilet? Assistance required. Does the set-up/equipment required impact wheelchair components?
Other activities of daily living (ADL/IADL):	Comment on other aspects of ADL that may be affected by wheelchair/seating components. Comment on set-up required for maximum independence or ease of caregiving. Use of technology and environmental controls should be noted.
D. Work/ School and Leisure	
	Describe client's activities. Is seating and mobility limiting these activities?

E. Perceptual/ Cognitive Status

Vision: **Hearing:** **Functional cognitive ability:** **Cognitive/ perceptual testing:**	Comment on general cognitive/perceptual ability ie. vision, visual perception, hearing as related to safe wheelchair operation. Also note client's orientation (to person/place/time) and ability to remember where he/she is and safely travel on their own. Motor planning – can the client plan and execute complex motor function? Cognition – are there any cognitive issues that will impact client's ability to operate wheelchair safely? (e.g. ability to problem solve) For power mobility, more detailed/formalized cognitive/perceptual assessment may be necessary. Refer to the VIHA Power Mobility Safety Toolkit which includes the North Shore Health Region Power Mobility Assessment in the Community Tool.

F. Communication

	Verbal vs. non-verbal. Communication aids, adaptive technology used. How is volume of speech or use of equipment affected by head and body position? What is the ideal position and access set-up for function? Is a tray needed? How will technology equipment be mounted?

G. Environment

1. Home Accessibility

Entrances: **Stairs/ Ramps:** **Elevator:** **Flooring:** **Table heights:** **Access:** **Charging Area:** **Community Accessibility:**	Home Accessibility: Describe living environment as indicated on the worksheet. Does the current seating system limit access to the environment? Home environment may impact the chair chosen with respect to type, size or turning radius. Any accessibility issues? How will the overall size of the wheelchair impact their community/vocational activities?

2. Transport

Method of transport: **Method of loading:**	Comment on type of vehicle used (i.e. car, van, taxi, accessible bus system, public transit etc.). Consider weight and portability of wheelchair. Does the wheelchair need to be tied down in the vehicle? Is the client transferring into a car seat? Note the clearance required in the vehicle for wheelchair (i.e. van lift door height and width). If a lift is used, will it accommodate the weight and size of the wheelchair with client? How easy is it to re-assemble and disassemble the system for transport? (i.e. could an unfamiliar driver/caregiver easily transport the chair?)

Section 3 – Physical Assessment

Choose between long or short form version of physical assessment. Short form is only to be used after considerable experience with using the long form. The long form prompts the assessor to consider all relevant information necessary to identify all factors required for an appropriate wheelchair/ seating prescription.

A. 3.1 Position in Current Seating System / 3.2 A. Physical Evaluation in Seating System/Supine/Sitting

	Prior to assessing current sitting posture, try to obtain optimal positioning in the chair. Now observe, palpate and describe the client's resting posture. Use tick boxes and/or comment where appropriate. Neutral refers to a position that appears comfortable, and symmetrical.

B. 3.1 Supine Evaluation / 3.2 A. (continued) Physical Evaluation in Seating System/ Supine/ Sitting

Key:
See Appendix A for Postural Terms and Appendix B for Postural Landmarks

Use an assistant whenever possible. Ask or assist the client to transfer to a firm surface. Ask or assist client to lie down on the firm surface and align to straighten the body, head and pelvis (to neutral) prior to describing the body posture.

- ***Correctable –***refers to ability to return to neutral posture; active correction – client is able to achieve neutral posture; passive correction – client is unable to achieve neutral posture so correction is done passively by the evaluator; use the key provided; note the degree of effort required to achieve correction.

Key:	**FA** = Full Active Correction	**PA** = Partial Active Correction
	NA = No Active Correction	**FP** = Full Passive Correction
	PP = Partial Passive Correction	**NP** = No Passive Correction
	WNL = Within Normal Limits	

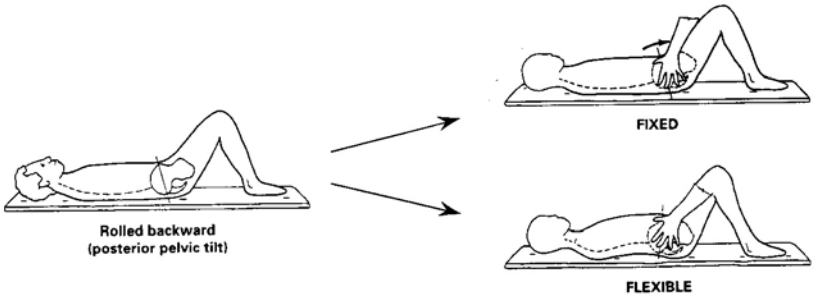
Use Key to Describe "Correctable"

1. Pelvic Mobility

Pelvic tilt/ lumbar lordosis:

- *Pelvic tilt/lumbar lordosis.* Client should be lying flat with hips and knees extended. Use your flattened hand to feel the lumbar space. What is the resting tendency of the pelvis – is the lumbar area flat or arched? The normal position should be slightly arched. Now try to flatten the lumbar spine by putting your hand behind their knees and then flexing their hips and knees until the client is rolled up into a ball, lumbar spine rounded and pelvis posteriorly tilted if possible. Keep one hand underneath the lumbar spine and feel for the movement. Check for the degree and ease of flattening – is it flexible or fixed?

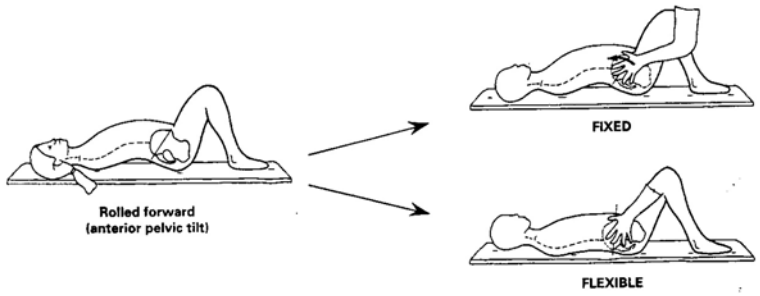
Posterior Pelvic Tilt



- If the resting tendency of the pelvis presents as flattened, check for movement in the anterior direction by placing your hands behind the top of the pelvis and rock your own body back while pulling on the top of the pelvis. Check for the degree and ease of correction.

Pelvic tilt/ lumbar lordosis (continued):

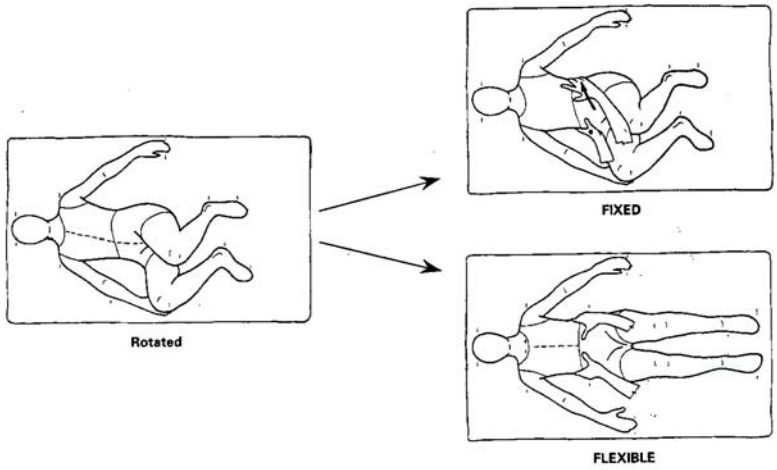
Anterior Pelvic Tilt



Pelvic Rotation:

- *Pelvic Rotation.* Check the resting tendency of the pelvis by locating the ASIS hooks (find the ASIS and place thumb just below tip where the sartorius tendon attaches to the pelvis) and note whether one side is higher than the other one. Start with the pelvis in a centered position if possible. Position yourself in a half kneeling position next to the person. Rest your thumb under the ASIS hook and place your fingers over the iliac crest on the side closest to you. With your other hand reach across the person and place your hand behind the pelvis. Push down on the ASIS on one side, and at the same time pull up from behind the pelvis on the opposite side to rotate the pelvis. Is the pelvis flexible? Reverse your hand position. Repeat the rotation, this time in the opposite direction. Can you return the pelvis to a neutral position? If not, which side is rotated forward?

Pelvic Rotation

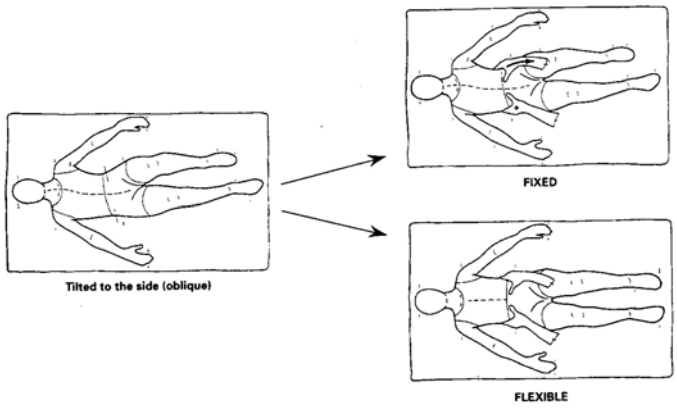


Pelvic Obliquity:

- *Pelvic Obliquity.* Rest your thumbs under the ASIS hooks and place your fingers over the iliac crest. Note the 'resting' orientation of the pelvis. Then, kneeling next to the person, place one arm under the knees, support the legs in a flexed position while keeping your other hand on the iliac crest to feel the pelvic movement. Slide both legs toward you, side-flexing the trunk on the side closest to you and extending the opposite side. Ensure that you are isolating the movement of the pelvis from that of the upper trunk. Maintaining this side-flexed trunk position, let the feet rest on the mat and re-palpate the ASIS. The side closest to you should be higher than the opposite side. Move yourself to the other side and repeat the procedure. Can you return the pelvis to a midline position? If not, which side is higher?

Pelvic Obliquity (continued):

Pelvic Obliquity



2. Range of Motion

Lower extremity range of motion related to sitting:

Client should be in a supine position. Note starting position and ranges within parameters of movement possible. Attempt to align pelvis in neutral position prior to measuring range. Remember the purpose of doing range in a seating assessment is to understand what seated position is physically achievable and comfortable.

It is critical to determine available passive range and not position the client in neutral, if range is not available. Be aware of whether the aim(s) of your interventions will be prevention (ie: of pressure, of further deformity), correction (ie. of partially flexible scoliosis) or accommodation (ie: of windswept legs). ROM may be measured at the range that is easily achieved and comfortable for the client – "comfort range" or the maximum range that can be obtained at that joint – "end range". Indicate which range has been measured by ticking appropriate box. Be aware of fluctuations in tone between supine and sitting positions. For example a client may appear to have less hip flexion in supine vs. sitting due to increased tone.

Hips:

Hip Flexion with stable pelvis:

Kneel next to the person. Place your hand under the lumbar spine and hold the leg closest to you under the knee and begin to flex the hip. As you flex the hip toward 90 degrees, slow down and concentrate on the lumbar curve. When the lumbar curve starts to flatten, stop and note the amount of hip flexion. Repeat the movement starting back with 45 degrees of flexion and slowly flex the hip again until you feel the lumbar curve flatten. To record hip flexion you are noting the angle between a neutral hip position (leg is straight) to the amount of hip flexion that can be achieved before the pelvis moves. Record results. Repeat the procedure for the other hip.

Alternate Procedure- Hip Flexion with stable pelvis:

Kneel next to the person. With your hand, which is closest to client's head, hold the pelvis. Thumb on ASIS, web space and index finger on crest. With your other hand, hold the leg closest to you under the knee and begin to flex the hip. As you flex the hip toward 90 degrees, slow down. Concentrate on your thumb and index finger and feel for any movement of the pelvis, stop and observe the amount of hip flexion once you feel the pelvis move or 'rock'. Repeat the movement starting back with 45 degrees of flexion and slowly flex the hip again until you feel the pelvis start to 'rock'. This is the hip flexion end range with a neutralized pelvis. Record results. Move to the other side of the client and repeat the procedure.

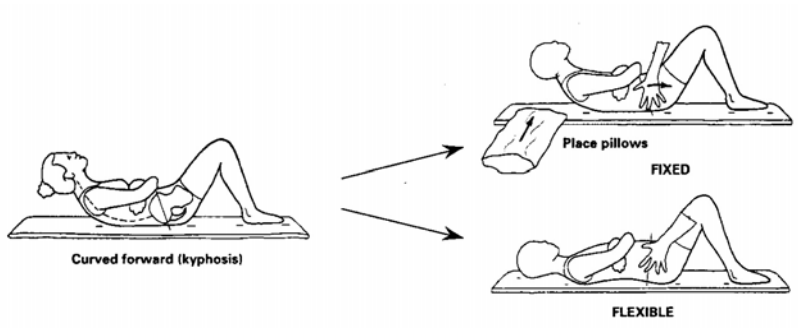
*Hamstring length is not important yet as we are determining only true joint range at the hip

Hips (continued): **Hip abduction/ adduction and rotations:**	Start with one leg extended on the mat. Flex the other leg at the hip. Slowly abduct the hip and then adduct. Normal range for abduction is 45 degrees, adduction 20 degrees. Return the leg to midline and position in 90/90 at the hip and knee or as close as possible to this position. Rotate the lower leg, internally then externally. Normal range for external rotation is 45 degrees, internal rotation 35 degrees. Repeat procedure on the other leg and record findings. Caution - subluxed or dislocated hips often have limitations in joint range, especially in abduction and possibly external rotation. If your client naturally assumes a windswept deformity, it is critical to determine the available passive abduction and adduction range, and not position the hip into a neutral position if range is not available.
Knees (hamstring length):	Hamstring range is a 2 joint movement. Maintain your position kneeling next to the client. Place your thumb under the ASIS hook and your fingers over the pelvic crest. Slide the other arm under the knee and wrap your hand onto the knee cap. Your elbow and forearm should be supporting the lower leg. Flex the hip to range available without rocking the pelvis. Now extend the knee. Ensure the hip remains flexed and does not adduct or abduct. As the knee extends, concentrate on any movement you may feel under your thumb, indicating the pelvis is being pulled into a posterior tilted position. When you feel pelvic movement, stop as you will no longer be measuring hamstring length with a neutral pelvis. Note the amount of knee extension at this point and record. Repeat the procedure on the other side. If you try to seat the client in a position that requires more knee extension (i.e. elevating legrests) than they have available, you will be promoting posterior pelvic tilt/sacral sitting.
Feet/ ankles:	Start with the hip and knee in 90/90 or as close as possible to this position. Support the leg while slowly moving the ankle. Check dorsiflexion, plantarflexion, inversion and eversion. Can the foot be positioned so that the sole of the foot is a weight bearing area?

3. Trunk

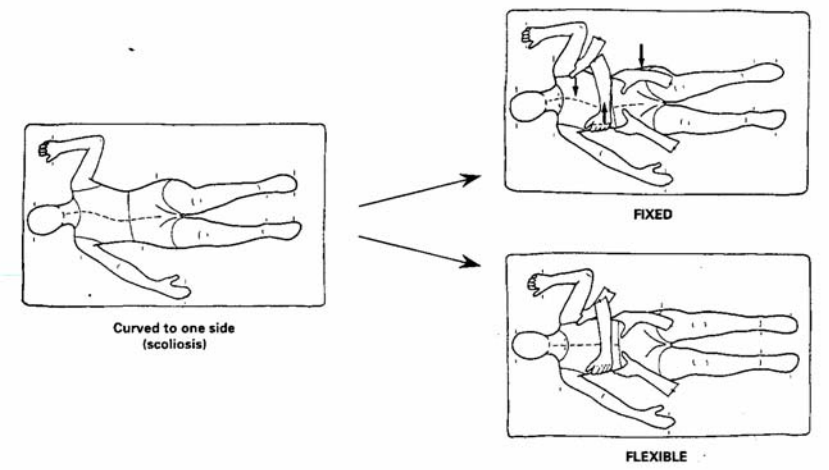
Have the client lying in a neutral position with the pelvis corrected as much as possible and legs extended.
***NOTE** - This needs to be assessed in more depth in the sitting position.

Kyphosis:	Can the client lie flat without pillows supporting the head and keep his neck in a neutral position?



Spinal Alignment:

Place one finger on the sternal notch and place a finger on your other hand on the belly button and note alignment. Also look at the curves and creases/skin folds at the side of the trunk – does one side appear more shortened than the other?



Rotation:

Does one side of the trunk appear higher/more forward than the other?

Rib Hump:

Look at the trunk/rib area. Does any area of the rib cage appear more prominent than another?

4. Shoulders/ Neck / Head

Shoulders:

Observe position in relation to trunk.

Head/ Neck:

Observe position in relation to trunk. Are there any flexion, extension or rotation postures in the 'resting' orientation? Can you correct these postures?

C. 3.1 Dimensional Documentation – for Supine and Sitting / 3.2 B. Dimensional Documentation

Tips for Measuring:

Some measurements are more appropriate to measure in supine and others are more appropriate in sitting and some need to be done in both positions to allow comparison. I.e. thigh length should be measured in supine and sitting as the position of the pelvis can cause this measurement to vary greatly (posterior tilt in sitting will increase seat depth, but if this posterior tilt is correctable more back support is required to maintain proper seated position). The therapist needs to analyze/address the reasons for differences in sitting versus supine measurements.

When measuring in supine, remember to measure the individual in simulated 'seated' position (i.e. 90/90/90). These measurements should be 'tight' - as close to anatomical landmarks as possible. Think about the reason for doing the measurement, i.e. chest width will help you decide the width needed between lateral supports, thigh length will translate into seat depth with different considerations for clients who use their feet to propel versus having legs supported.

Hip Width:

With an assistant's help, place rigid books/clipboards along each hip, holding books at 90º to surface. Measure in between the books at the widest point. For obese people, the seated position is likely to give the most accurate measurement.

Tips for Measuring (continued):	Feel for the medial hamstring tendon and use that as your "tight" landmark. Always measure left and right sides in the same manner, i.e. from lateral or medial sides of the limb. Ensure the pelvis is in a neutral position (based on client findings) for thigh length measurement and measure from mat to popliteal fossa (tight to medial hamstring tendon). For lower leg length, make sure the ankle is in as neutral a position as possible- record longest measurement.
Thigh and Lower Leg Length:	
Scapula Height	Measure to the inferior angle. If the back height is too high, it may limit scapular movement.
ASIS Span	May be needed for custom belt system or rigid pelvic blocks.

D. 3.1 Sitting Evaluation / 3.2 A. (continued) Physical Evaluation in Seating System/Supine/Sitting

5. Sitting Ability

Assist the individual to sit up on a firm mat surface with legs over the edge of the mat and feet supported. The sitting evaluation is easier to complete safely and accurately with a therapist and an assistant.

It is important to compare the findings from the supine evaluation with those of the sitting evaluation. In the seated position, gravity is influencing all aspects of posture. I.e. if a fixed deformity is present in supine, you cannot expect to achieve a neutral position in sitting or conversely, if a deformity is flexible in supine, you may find it to be less flexible in sitting due to effects of tone, gravity, etc.

Observe the individual in an unsupported sitting position if possible. Describe their sitting ability against gravity and tick the appropriate box.

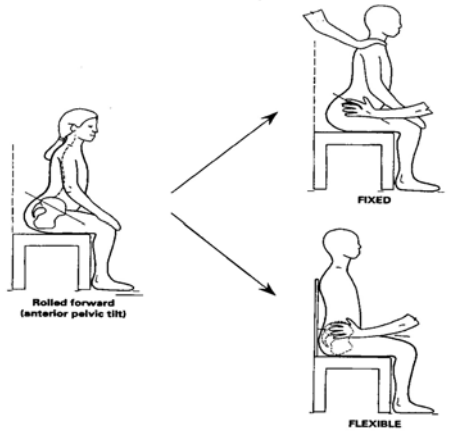
2. Pelvis

To focus on the pelvis/lumbar spine, allow for (accommodate) any limitations in hip flexion. Use the same bony landmarks to assess the pelvic position as were used in the supine assessment (i.e. ASIS). Is the pelvis flexible or is it fixed in a position? Will your intervention need to reduce/correct a flexible deformity or accommodate a fixed deformity?

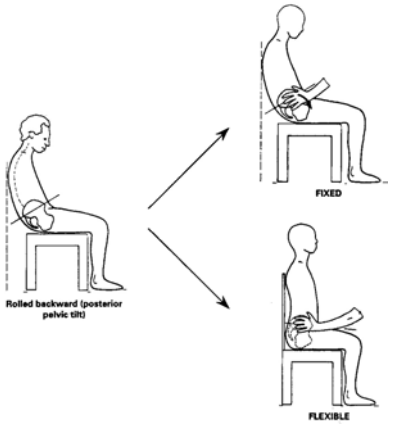
Tilt/ Lumbar Lordosis:

If the person's pelvis tends to assume a posterior or anterior pelvic tilt / pelvic obliquity / pelvic rotation, and he/she is unable to independently move his/her pelvis to neutral, assess the flexibility passively. With your hands behind the pelvis, have the client lean forward over your shoulder and then move back into a tall sitting position. Are you feeling movement at the pelvic/lumbar area? How much support do you need to provide with your hands to maintain a neutral pelvic position? Use the key provided to describe the amount of correction possible. If the pelvis is fixed, we cannot expect the seating system to correct the pelvis to the neutral posture.

Anterior Pelvic Tilt



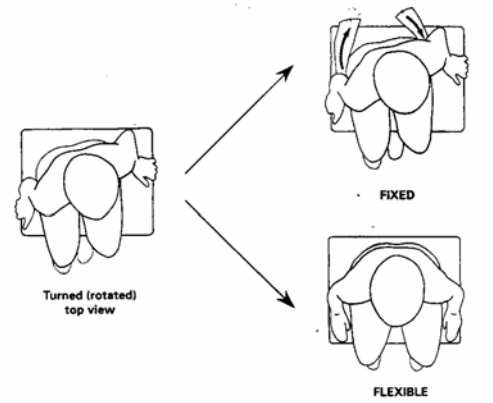
Posterior Pelvic Tilt



Rotation:

Note whether the pelvis is truly rotated or if it is a trunk rotation or a thigh length discrepancy that makes the pelvis appear rotated.

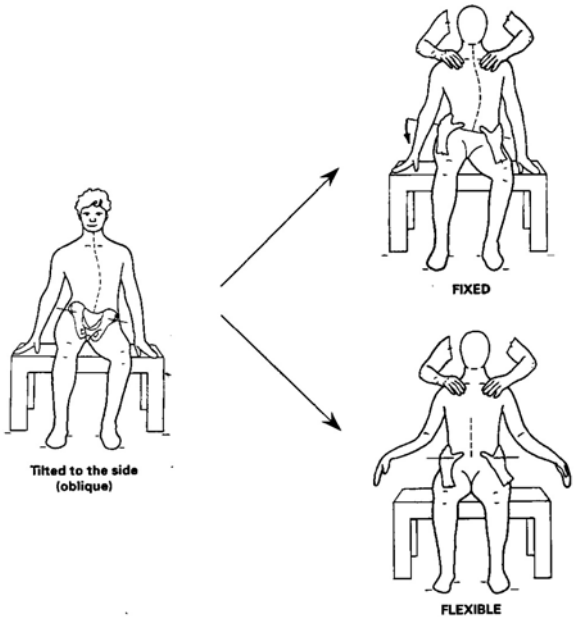
Pelvic Rotation



Obliquity:

Note whether the pelvis is truly oblique or does it appear so due to decreased balance, scoliosis, muscle imbalance, etc.

Pelvic Obliquity



3. Range of Motion

Hips:

Is the person able to move his/her hips and legs into the neutral posture? Can the legs and feet be used as a stable base of support? If the person is unable to move his/her hips and legs to the neutral posture, assess the amount of flexibility passively. Stabilize the pelvis and move the leg at the hip joint. If the hips and legs can be corrected to the neutral posture, without changing the posture of the pelvis, then the hip is flexible and not fixed. Think about the recorded hip range in terms of the angle between the seat surface and the backrest.

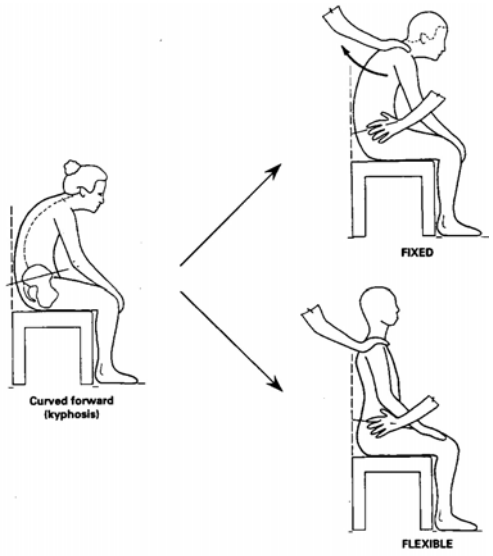
Knees: Can the person bend her/his knees so that the bottoms of her/his feet contact the floor/footrests? If the knees cannot be placed in the neutral posture, assess the knee flexibility passively. Refer to your findings in the supine evaluation. Does your client have tight hamstrings or strong extensor tone at the knee? If possible, assess other possible knee flexion angles to allow the person to better use their legs and feet as a stable base of support. Note the comfortable available knee range and resulting foot position. Ensure that the footplate position accommodates any limitations in hamstring length. Footplates with anterior/posterior adjustment may be necessary. Taut hamstrings, if not accommodated, may pull the pelvis into a posterior tilt.

Feet /Ankles: Can the person actively bend her/his ankles so that her/his feet rest on the floor or support surface? If foot deformities prevent the sole from being a weight bearing area, determine which part of the foot will need to be supported while in the sitting position. If full ankle range is not available, angle adjustable footplates may be necessary.

4. Trunk

Kyphosis: If possible, ask to remove or raise your client's shirt to expose their back to see the spine and pelvis. Is the person able to move her/his trunk into the neutral posture and maintain that posture? Is she/he able to move her/his trunk through different postures and control that movement?

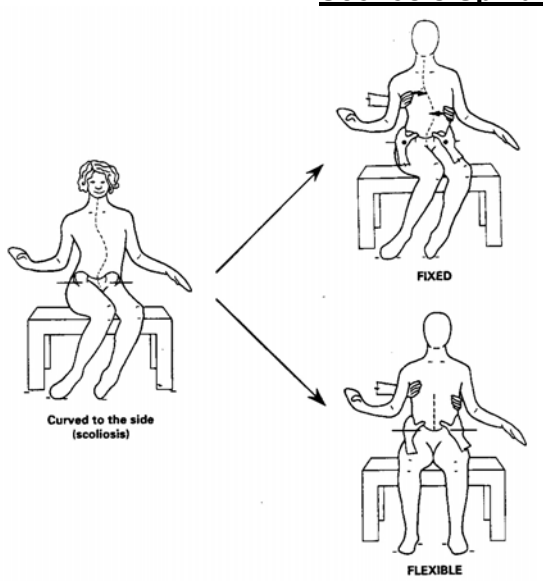
Kyphosis



If the person is unable to move his/her trunk into the neutral posture, assess the trunk flexibility passively. Sit behind your client and place your legs on either side of theirs to provide pelvic support with the inside of your thighs. If you have a helper, ask him/her to hold your client's pelvis in the neutral posture or its limit of flexibility. With the pelvis stable, what is the posture of his/her trunk? Is there a scoliosis / kyphosis / rotation / rib hump present?

Spinal Alignment:

Scoliosis/Spinal Alignment



Rotation: Can you correct the person's posture so that the spine is in a neutral alignment? Is the spine flexible or fixed? In what posture of the spine does the head feel most balanced? Where are your hands supporting, correcting or stabilizing the trunk? Where will the supports need to be located? How much force are you using to correct the person's trunk posture? What is the least amount of support necessary to stabilize and/or control the trunk?

Rib Hump: Determine whether you are able to correct or do you need to accommodate a fixed position. Can you find a 'mutually agreed' upon position? – a position which allows the person to be relaxed, functional and feel well supported? Precisely where is the trunk and mid-back flexible and fixed. Palpate spinous processes from cervical through sacral regions to verify your postural findings. Record your findings.

5. Shoulders/ Neck/ Head

Shoulders: With the pelvis and spine stable, assess the posture(s) and movement of the shoulder girdles. Is the person able to actively bring her/his shoulders and arms into a neutral posture? If the person is unable to bring her/his shoulders to neutral, are any of the atypical postures assumed? – elevated / protracted / retracted / internally rotated? Can the posture(s) be corrected passively?

Neck/ Head: Are there any flexion, extension or rotational postures in the 'resting' orientation? Can you neutralize these postures?

E. 3.1 Skin Integrity / 3.2 C. Skin Integrity

Sitting Tolerance: How long is client able to sit properly at a time? How long is the client expected to sit at a time? What limits sitting tolerance? Is the client able to weight shift independently and is he/she aware of the importance of doing so? Does the client's physical status fluctuate during the day/week?

Weight Shift: How does client do weight shift?

Sensation: Is sensation absent, intact, impaired – relevance to seating and to pressure distribution.

Edema:	Describe location, measure circumference, describe skin condition. Do positional changes influence edema? Note: Elevating legrests are not effective in treating LE edema. Legs/feet must be positioned at or above level of heart to promote venous return (i.e. in bed or with tilt wheelchair). With arterial insufficiency or mixed etiology, leg elevation may be contraindicated.
Skin Condition:	History of pressure ulcers – any pressure areas that are old, open, reddened (for how long does the area stay red), size, etc. Is there any old scarring present? Does client know how to inspect his/her skin or does someone else do this? Is the client aware of danger areas for pressure? What methods of treatment have worked in the past for pressure areas? Inspect the skin yourself! A picture may be useful.
Measurement Tools:	To access the Braden Scale on the Intranet: http://intranet.viha.ca/home_and_community_care/procedures/interdisciplinary_procedures/skin_and_wound_manual_pdf/section_9_2pdf Pressure Mapping: i.e. (Fisher Seating Services, Queen Alexandra Centre for Children's Health-Victoria, 250-721-6732)

F. 3.1 General Physical Function / 3.2 D. General Physical Function

Upper extremity function:	Describe general ranges, strength, functional abilities, and set-up required to facilitate maximum function**.** What is the client's dominant hand for driving – consider joystick type?
Lower Extremity function:	Describe general ranges, strength, and functional abilities**.**
Respiration/Cardio Status:	Is there shortness of breath, cardiac problems, assisted ventilation? Is this affected by positioning? Consider power vs. manual mobility. Is the wheelchair equipment required to carry ventilation, oxygen equipment? If there are any chest infections – describe frequency. Do you need to use a pulse oximeter to check O_2 saturation of blood with different seated positions?
Swallowing/Reflux/ Digestion:	Does client need to be better supported in their wheelchair to swallow safely? Are there any noted changes in swallowing/reflux/digestion with position changes? Is there a Dysphagia Consultant involved?
Pain:	Describe type of pain, location and movements or positions that exacerbate pain.
Seizures:	Describe history, severity, type of seizures. Does client know when seizures will occur? Consider stability of wheelchair, chest straps, headrest considerations and ease of access to allow caregiver to attend to client. Will the client be safe driving a power w/c.
Tone: **Reflex Activity:**	Comment on tone / reflex activity as indicated on the worksheet. During your handling and manipulation, feel the tone / reflex patterns to identify the triggers that cause abnormal movements and determine what positions assist in normalizing them.
Tremor / Ataxia:	Comment on any observed tremors or other types of movement disorders.

Section 4 – Current Mobility and Seating System

A. Current Mobility/ Seating System

Describe the specifics and components of the current wheelchair and seating system as indicated in the table

Fit and Function in Current Seating System: Comment on the strengths and weaknesses of the components of the current wheelchair and seating system. These strengths and weaknesses are important to note as they will affect decisions on components that are necessary or need to be changed in the system. Take photographs if possible for reference and outcome evidence.

Section 5 – Analysis and Recommendations

A. Seating/ Mobility Assessment Summary (Relevant Implications)

Client goals/ concerns:

Functional status and prognosis:

Environment status:

Perceptual/ cognitive status:

Physical status:

This form serves as a summary of the Seating/Mobility Assessment Worksheet. It provides a framework for analyzing the client's goals and findings from the assessment. This information will then be used for your equipment justification letters to acquire funding.

Describe the functional/ physical issues that led the client to be referred for seating. Identify the physical, cognitive, emotional, environmental, social components that are the probable causes of these physical/ functional issues.

When determining initial equipment recommendations/plan you must consider the '**Relevant Implications'**.

B. Targeted Outcomes

Identify desired outcomes in relation to functional/ physical status and client goals.

C. Plan for Equipment Trial

Wheelchair type, components and accessories:

This worksheet is to be used as a cue for you to consider all the various wheelchair/positioning components.

Ensure that you have considered all functional, environmental, perceptual/cognitive and physical factors that were identified during the seating assessment when deciding on the mobility base and w/c components for trial.

It is OK to ask the dealer for suggestions of equipment to trial but the therapist **MUST** direct the dealer in addressing the physical and functional issues and the goals you and the client are trying to achieve. I.e. "The client has a fixed pelvic obliquity and a posterior pelvic tilt, is unable to weight shift, and is at risk for skin breakdown - what types of cushions are appropriate for this?" **It is unacceptable for the dealer to independently make the equipment decisions. The therapist is legally and ethically responsible for assessment and equipment prescription. The dealer should NOT be doing the assessment.**

D. Summary of Equipment Trialed and Outcomes

The trials section is a running record of all equipment that has been trialed and the outcomes of the trials, both negative and positive. This will help avoid duplication of intervention, especially as the client moves through the health continuum with different therapists.

Take a photograph to document postural/positioning outcome in the client's trial seating/mobility system.

E. Final Equipment Recommendation

The Equipment Recommendation section documents final equipment prescription complete with detailed specification. It is recommended to use the manufacturer's order form.

Section 6 – Outcomes

A. Final Seating/ Mobility Outcomes

The Outcomes section is to be used as a follow up to describe how the prescribed equipment has met/ not met the client's goals and functional/ physical issues related to identified probable causes where possible. Note any changes/ modifications done to the original equipment prescription during fitting of the seating/ mobility system. This section should be completed within a month of final equipment provision.

Take a photograph to document postural/positioning outcome in the client's new seating/mobility system.

Has your intervention been successful or unsuccessful? What issues were you successful in resolving and what issues were not resolved? Do you need to get assistance with the prescription from a seating 'expert'? Do you need to do further intervention with this client?

References:

Pictures used with permission- (from Rob Marko, Director of Sales, Otto Bock Canada):

1) Zollars, J.A., Knezevich, J. (1996). *Special seating: An illustrated guide.* Otto Bock Rehab.

2) Bergen, A. *Assess long form* and *Assess short form* . Retrieved June 1999 from www.rehabcentral.com.

3) Jay Medical. *Seating Assessment Form.* Obtained from Jay Medical Representative, 1998.

Acknowledgements:

Many therapists and therapy resources provided information, consultation and support in the development of these guidelines and worksheet, including:

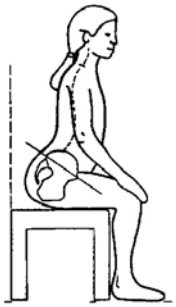
- Jean Minkel of Minkel Consulting, New York.
- Access Community Therapists, Vancouver, BC.
- Cathy Brighton, OT- North Shore Health Region Power Mobility Assessment in the Community Tool
- RESNA (Rehab Engineering Society of North America)
- Therapists throughout VIHA
- International Seating Symposium
- BC Rehab Society

Appendix A: Postural Terms

Postural terms:

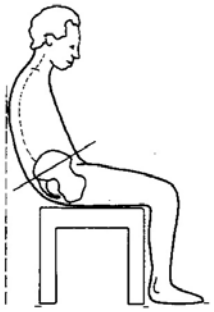
- ***Pelvic tilt***

pelvis is rolled forward (anterior tilt)



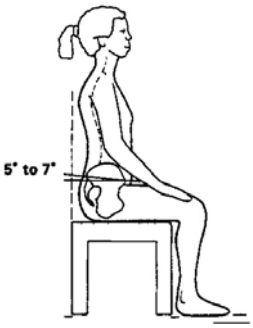
Rolled forward
(anterior pelvic tilt)

pelvis is rolled backward (posterior tilt)



Rolled backward
(posterior pelvic tilt)

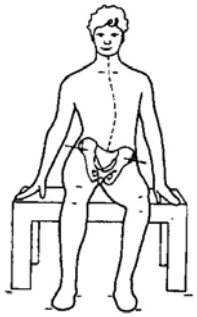
neutral pelvis



Pelvis - neutral in sitting
Angle = 5°-7°

- ***Pelvic obliquity***

pelvis is tilted to one side obliquely



Tilted to the side
(oblique - described by its lower side)

Pelvic rotation

pelvis is rotated forward on one side

Turned
(rotated - described by the side that is forward)

- ***Thoracic kyphosis***

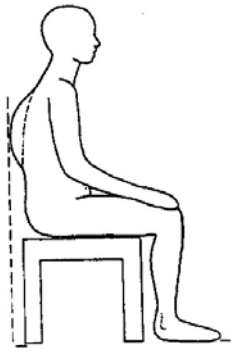
Trunk is curved forward; note level

Curved forward (kyphosis)

- ***Scoliosis*** – lateral curvature of the spine; named after the side that is convex; nonstructural scoliosis is a reversible lateral curvature of the spine without rotation; structural scoliosis is an irreversible lateral curvature with rotation of the vertebral bodies; major curve is structural and of great significance; minor curve is smaller and nonstructural, usually forms as a compensatory mechanism to help keep the client's head directly over the pelvis.

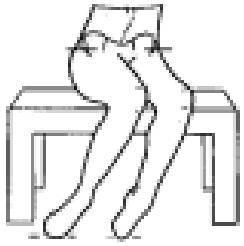
Curved to one side (scoliosis)

- ***Rib hump*** – rib cage deformity resulting from rotation of the vertebrae with scoliosis; note location and correctability.



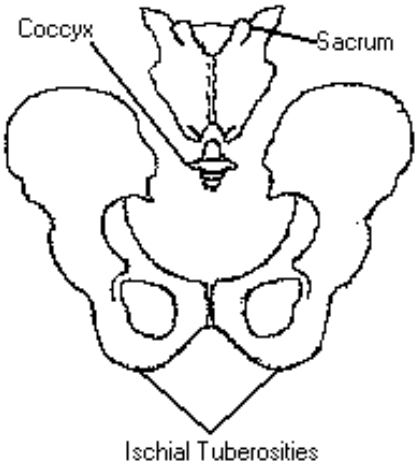
Rib hump

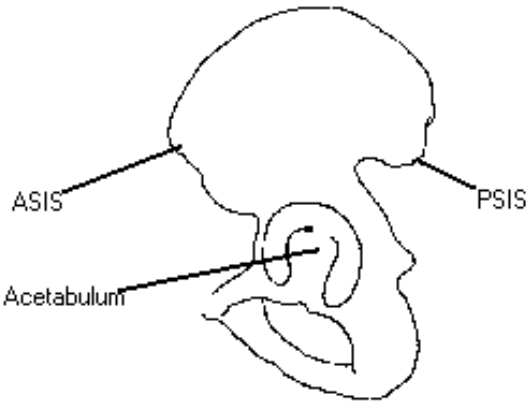
- ***Wind-swept deformity*** – described as the triad of :
  a) pelvic obliquity – with the hip on the high side dislocated or subluxed, or with pelvic rotation on sitting
  b) scoliosis convex to the opposite side; and
  c) flexion, adduction and internal rotation of one hip (the subluxed or dislocated side), with flexion, abduction, and external rotation of the contra-lateral hip.



Both turned to the same side (windswept)

Appendix B: Postural Landmarks





Upright Posture:

mild cervical lordosis
mild thoracic kyphosis
mild lumbar lordosis