

- San Francisco -  
Berkeley

## BEGINNERS

### 1st session

- explains the difficulty in sitting and encourages us to freely move out of it
- doing neuromuscular reeducation, changing postural patterns that need to be changed. Use imagined action because movement resides in the nervous system, thinking, not in the muscles. Everytime you go into movement the tendency is to go into the old pattern, so ideally working in stillness is best. Though we are using thought it is not trying to control movement through intellectualization. Can't talk to muscles directly and tell them to move. Clear concept of the goal of the movement and the nervous system will react automatically.
- Names the bones giving parts of shoulder particular attention.
- Joint is where 2 bones come together. Ligaments keep movement of the joint stable. Muscles also restrict movement at the joints and the structure of the joint itself limits action
- Muscles primarily act as the machinery to move the body. If the musculature is unduly tight, movement about the joint is restricted abnormally. In dance classes one stretches muscles which restricts movement because of the stretch reflex. It is like running an engine with the brakes on. In stretching the contracile fiber of the muscle is not changed. It is the tendon which is soft and torn easily. Yellow ligament is elastic, white inelastic. Stretching of the white results in no protection from injury to the joint.
- Hypertension comes from: 1) erroneus notion of how to maintain posture, fixative rather than balanced 2) Holding muscle patterns after the movement has been completed (weight lifter walking down the street is still lifting weights) 3) Emotion - a muscle response for every emotion and this can work the other way, as you change muscle pattern there can be an emotional reaction.
- Gives defintions of postural pattern..
- Good posture that which has weights balanced closest to center. Balance of body is difficult for tho it is symmetrical side to side, it is not back to front and thus unstable.
- \*Posture is dynamic, the more you go static the worse the posture is.
- Though not completely true it is useful to use as an image the statement by Todd that the skeleton maintains weights, and the muscles are responsible for movement. If you tie up muscles in the support of weight you are in trouble.
- Shows cartoon of a man standing on a slant looking at a chair on a slant saying 'It looks right to me' What feels "right" is what is to us habitual.
- In sitting imagine the weight through the spine into pelvis into the sitbones. Tuberosities of the ischia means nothing sensorially. Make a mould with your hands of the sit bones approximating their position. Introduces concept of tactile aid. Feel each sitbone on your own body, then place your fingertips there as you sit, then take fingers away and be aware of the sitbones resting on the bench. Think of the sitbones as little legs and walk them forward and back, let one of them hang, come back down to the support of both and balance equally between them.
- Stand - as you stand the sitting bones no longer support, they hang. You should not do anything there in standing that is supportive, the sitbones should hang.

- In teaching Andy says he has observed students getting rigid. No absolut right posture. All are slightly different. So he emphasizes postural relationships. Growth happens when you are ready for it- an organic process growing through your creativity.
- one important relationship is that of the head to the pelvis. The head should be centered between the two sitbones, right to left, and front to back. In sitting imagine that happening. Walk with this image, cautions us about fixing, trying too hard.
- explains the low stools. High stools pull legs away from center. Sitting in a low stool necessitates the release of muscles back of the thigh joint. Until you do this, sitting thus is painful. Position closest to the squat is the best as the deep abdominal complex is utilized to stablize it. The cultures which squat have the best posture.
- Let arms be taken over be the pull of gravity. More on arms later but this can help.
- Shows Barbara's first manual drawing of the pelvis with the mechanical axis. Standing - Though the feet are the last places to receive weight we will think of them as mobile ends of the legs and the major weight support at the thigh joint. [ this was a new concept for me - thought more of feet as principle weight bearers, did not get enough up thrust at the thigh socket] Discusses the mechanical axis of the thigh bone. Great trochanter cannot support you in any way... must re-educate concept. Can only support at the joint, most people don't know kinesthetically where the thigh joint is. Tells of Miss Todd's trick on doctors. Think of the thigh ball resting in the thigh sockets in sitting. Think of the pelvis resting on the thigh balls in standing. In standing this image can get static, do an imperceptibly small plie call it the femur bounce, keeps position dynamic.
- Worked walking up and down the stairs with the image of the weight balanced on top of the thigh bones.
- as you stand you should stabilize at the thigh joint not through any stabilizing effort at the sit bones. Alternate thoughts of balance at thigh joint with thought of sit bones hanging.
- gives CRP with knees balanced against each other. Says that this is an excellent position for feeling the thigh joints
- Partner work - suit image - coat full of sand, it collapses. Coat is wrinkled, smooth it down the back. Give tactile aid no more than 3 times then let partner imagine it. Coat is smoothed to center seam in front. zip up the front of the coat from pubis to the top of the sternum. Collar is under suit, bring up the back of the neck then around to center front
- Rolling - with body as a barrel
- Assignment: Trace two views of the pelvis.
  - Balance on the sitbones head in between
  - Walk on the sit bones
  - Sitbone lift and hang
  - Standing balance on top of the femurs
  - Femur bounce
  - Sitbones hang
  - In CRP suit coat with collar and zipper
  - roll 2L, 2R, 2L
  - Visualize the femurs in the acetabula

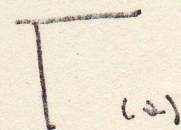
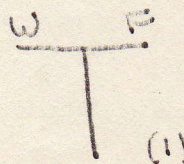
## Lesson 2

- Tracings help to give you a feel for the shape and mass of bone.
- Find the sit bones balance on them, head in between. Walk on them like little legs. Lift the left sit bone let it hang. Come back to rest on the two. Establish a balance on the two. Lift right and let it hang.
- Let the thigh bones rest in their sockets.
- Review of angle in sitting as a rationale for letting weight slide into thigh sockets. Review the idea of the mechanical axes of the thigh give yourself tactile aid with a very slight sliding action. Let hands rest and then imagine it.
- Tactile aid is not massage - only an aid, don't make it into a crutch. Its value is that it helps to establish better mental pictures.
- Stand balanced on the tops of the thigh bones, recalling where balance really is. Femur bounce, plie. Feel the sit bones shouldn't be hard. Support should be at the thigh bones.
- Lift one foot up and then the other.
- If weight is out in the great trochanters it is in correct. Imagine the great trochanters as soft wilting drooping. Balance on the thigh heads as you imagine release of the great trochanters, give yourself tactile aid. Support is narrow, not wide.
- Another concept of standing based on Newtonian laws of motion - action and reaction. Means that is a force is exerted, firing a gun, a counterthrust is exerted, Kick. Jet engines run on this principle. Your weight as x number of pounds is a measure of the force of gravity. The floor under you acts as a counterthrust. If it did not you would go through the floor. Direct the concept of the floor thrust back into the thigh sockets. This is the same as resting on the thigh heads but a more dynamic concept. Imagine the floor pushing up against the feet and direct the force up into the thigh sockets.
- Do a plie, when you do you are directing more force into the floor. Then as you come up you push up from the floor into the thigh sockets. Not a lifting up but a pushing up from the floor. Points to the slide of the mechanical thrusts up. Let the surface weaken and fall away.
- Climbing the stairs again, thinking of actively pushing into the step rather than just stepping. Will find it more dynamic.
- One more use of thrust and counter thrust changing from sit to stand. Imagine thigh bones as levers. Stand by prying. First get to the edge of the bench, Place one foot behind the other, push up. Then let the weight rest on both feet.
- To go from stand to sit, place one foot behind, Think the thigh thrust up as you go down. Rest on the sit bones equally, rest the thighs in their sockets. Then walk forward on the sit bones and repeat.
- If you utilize this you will build yourself. Should incorporate this into daily lives. Must be a part of you. Exercises shouldn't be set aside. Do every day in daily action
- Shows a slide of the spine. Spine a segmented structure of 24 vertebra, five fused in the sacrum, 3 of the coccyx are semi-fused. In between each pair except the atlas and axis there are discs. The greatest thickness of the discs is in the lumbar and cervical area.
- Spine as a whole is capable of flexion, extension, rotation, circumduction. The most possibility of flexion is in the lumbar area, most extension in cervical.
- Movement takes place with in the discs. Not any separation of the disc from the vertebrae

- Discs cushion shock and increase movement possibilities.
- Reviews idea that movement is restricted by the shape of a joint. Points to spinous processes saying that if one has long spinous processes the back bend is restricted.
- Curves of the spine are much misunderstood. Names and describes the direction of each. These curves are necessary. The direction to straighten the spine is a bad image if you really did this you would be in trouble. The curves serve an important function.
- Spine is a column that supports and moves weight. Movement done through the spine though you may think legs do it and spine only sits on top. The curves develop from the C curve at birth. Baby develops them thru movement even crying.
- The curves should not be exaggerated however, if they are there will have to be muscle compensation to hold the bones in alignment. Shows a string in a waved pattern on the floor, Asks what must be done to lessen the curves. Must lengthen the spine. Cautions that it is difficult to access what curvature is normal as even the primary curve at birth is individualistic. One needs to find own curvature. Also difficult to judge as the curves are masked by the dorsal processes which tend to fill in the look of the lumbar and thoracic curves
- We work with the spine through imagery. The coccyx is a vestigial tail. We will "devolve" and grow a tail to the full length. Touch the coccyx, it is sensitive there, and imagine it growing down between the legs to the floor.
- An image should always be happening, never reaching destination, must be in process.
- Can only concentrate on an image for a very few seconds, don't hold on to it.
- let spine lengthen at the lower end. Sit and stand and plie and up with tail. Doesn't expect a clear kinesthetic sense of it yet. walk with the image for the fun of it.
- If you let go of the bottom of the spine it should help all of it, if you could imagine the spinous processes of the rest of the vertebrae going down. To do this we will use tactile aid, touching the processes as the partner imagines spinous processes going down. Imagine all the spinous processes looking the way the spinous processes of the thoracic vertebrae do.
- Demonstration of tactile aid. First feel in general where the processes are. Body should face in the direction of the directed pressure down the back. Only give your partner a reference point, don't shift pressure or massage as this is kinesthetically confusing. Start at the sacrum go up to the first thoracic. The dropping of one vertebrae should have a domino effect into the tail. Ultimately the concept must be of all of the tails dropping down. There should be a constant flow. So at times stroke down the back to encourage your partner to do this.
- Use counterthrust image of the legs in rolling. Coming back to the CRP also use thrust so that you don't just plop over. Take tiny steps if you don't reach center in rolling back.
- Shows getting up from the floor with the counterthrust.
- Practice - Balance between the sit bones the head in between
  - Spinous processes merging with the tail
  - Image of the counterthrust as you change to standing
  - Standing balance on top of the femur heads and counterthrust
  - in CRP review suitcase

## Lesson 3

- The meaning of the spinal curves kinesthetically to us should be flow. We begin to see weight flow stopping at points in the spine, don't want to stop it.
- Balance on the sit bones, thighs rest in their sockets. Touch the coccyx and imagine a tail.
- Sacrum is not a part of the pelvis, but a part of the spine. Important as we need to see the sacrum-spine slipping down between the halves of the pelvis. Think of this as you lift a sit bone. Lift let spine lengthen then go down and balance. Just visualize. If you feel the wrong, that is good information then you would know that was wrong. But to correct you only visualize with lightness.
- Stand balance on the thigh heads then change image to using the counter thrust from the floor.
- Alternate plie with counter thrust with plie with tail. Walk with tail.
- About standing - fundamental standing position. Feet parallel, 2-3" apart, arms hanging loosely and weight equally distributed on the feet. The turned out position is structurally weak because of arch construction of the pelvis. A keystone is where thrust and counterthrust meet and it is then braced by these forces. The keystone for the pelvis is the sacrum. Shows the weight thrusts thru the spine, pelvis and legs and then the counterthrusts. Counterthrusting is efficient when the legs aren't turned out. In turnout the thrust is directed to the pubic symphysis instead of the the sacrum. When a person is well integrated this mechanical disadvantage can be compensated for by the action of the deep abdominal complex. So must standing walking should be done in parallel. Most dancers even tho feet are in parallel are turned out in the pelvis. Forcing parallel feet for people in this state can be painful so compromise.
- Sleep position firm surface is most important. Soft surfaces make one disoriented kinesthetically. On the back in CRP flexed knees because when you extend it increases the lumbar curve, can put pillows under knees. Arms crossed over rib cage as straightened arms at sides can increase tension in pectoralis and shoulderblade. Nothing wrong with a pillow under the head. Some structures need it. On side definitely need a pillow. Flexion of the legs is desirable, too much curl or a straightening legs causes tension. Start in a position of alignment in sleep and as you have better habits you will move from one centered position to another if you have tension it doesn't do good to add pressure to that tension so don't try to assume positions that are uncomfortable for you.
- Have had centering the had between the sit bones. Head rests on top of the spine, atlanto-occipital joint, condyles fit into atlas with little rockers, Not too many are aware that this joint is at ear level. Flexions and extension should take place here rather than elsewhere in cervical spine. Just as with the great trochanter, support is not at the mastoid process it is more centered. Mastoid processes like water drops just as they are beginning to fall. This helps the sternum to come up.
- The head is a lever of the first type, the seesaw type, almost centered at the fulcrum. We think of it being more like the second figure. And it causes tension to think of it this way in the back of the neck. We don't think of the



spine as being as deep as it really is. Place one hand back of the skull and the other at the base of the nose. Think the spine in the middle.

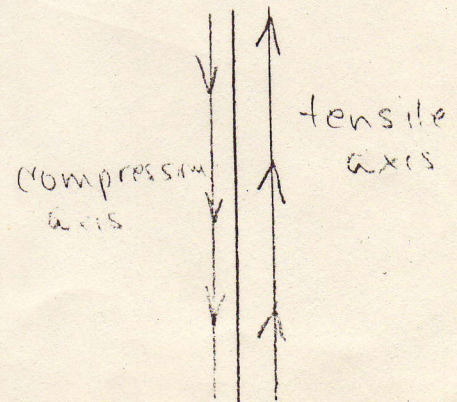
- Walk with the head in the body rhythm. Don't hold the head in such a way so as to keep it out of that rhythm.
- Walking is a 3 joint folding action. Plie and walk thinkg of one of the joints at a time.
- Sit pass a plane thru the thigh crease that comes out the buttock. Fold the body over so that the head is below the knees thinking of the depth of the crease and unfold still thinking depth. As you unfold it is important not to press at the knee.
- It is harder to do very minute actions than large ones.
- Minute trunk flexions with image of deep thigh creases. Rock with the knee and ankle folding points also in mind so that you don't lock anywhere.
- In CRP  
Fold means more than flex to kinesthesia. Fold at the crease then let it drop softly into the floor. Drop to release the muscle pattern that controlled muscles in the up action. "Even if you establish a good muscle pattern it can revert into rigidity."
- Shows climbing the ladder, one leg folding up at a time.
- Salom position with arms extended down beside legs. In Salom if it is difficult don't force. Imagine thigh and knee creases deep and the spinal lengthening images. As you come up effort should be initiated in the thigh crease
- In CRP you can nod gently in the head.
- Assignment - trace profile of the spine and head

- at end of class eye work - with eyes closed reviews highpoints of imagery for body then instructs to think of opening then as a flowering. Let the objects come into our range of vision.



## Lesson 4

- Anatomical Landmarks - Spine slides between halves of the pelvis. Mechanical axes of the thigh bones. Thigh creases folding with the creases, then small folds there. Nodding of the head after finding the joint at ear level
- Work with concept of the spine as a single lever, defined by the folding of the thigh crease at one end and the head nod at the other. The spine as a unit. Try action.
- Stand on tops of the thigh heads. Plie with image of the sacrum slipping through the pelvis. Come up through the counterthrust. Repeat alternate images. Then plie with all the folding joints soft and easy.
- Walk two steps then fold-unfold. 1-2 fold-unfold repeated rapidly and folding is taken fully into deepest flexion all the way into the ground. Then simply walk with whatever kinesthesia that gives.
- Explains the center of gravity in objects and in the human body. Tells how it varies slightly as in men and women. Approximately in front of the upper sacrum.
- Axis of gravity- the line which passes thru the center of gravity formed by the pull of gravity.
- Three planes of the body are
  1. Front to back - sagittal plane
  2. Side to side - lateral or coronal plane
  3. The horizontal or transverse plane
 Asks us the line at which numbers 1 and 2 meet it what?  
 Point at which all three planes meet is what?  
 Axis of gravity is the line thru which the weight is passed.
- Repeats routine to get up from sitting. Then walk with the image of the axis in the middle of the body - the body as cylindrical and the axis as centered inside it. Gives thought of the axis being like a pencil in dimension. Then says walk being the axis.
- Shows Barbara's drawing of circling the axis. Explains exercise with a definite starting point, front, to start and return to. Adds walking out of it once you have reached front. Says shouldn't circle with feet curling around each other and shouldn't have to stop or change gears when walking out of it. [This is hard for me on the left.]
- Weights can rest, hang or brace. When a weight sits it creates stress upon the structure upon which it is sitting. In sitting on the bench we press and the molecules of the bench resist. Hanging creates tensile stress - stretching the supporting structure. The molecules tend to pull apart and the molecular cohesive force resists that. In a bridge the compression members are the uprights and the tensile are the cables. The compression members of the body are the bones as they are the only rigid components. Muscles and fascia are the tensile support.
- Has said many times that weight goes down thru the spine. This is a compression force directed downward. It is behind the axis of gravity. Tensile forces of the body are the muscles of the front body wall. Body is front heavy because of the rib cage and the muscles must suspend it The lines of force are opposed and need to be equal this is the game you play of balance as a biped.



- You mustn't think of posture as rigid. Must be able to respond to the changing forces minute to minute. The nervous system takes care of this. No computer could make the fine motor adjustments as fast. One's conscious mind cannot think this fast - the unconscious must do this.
- Think of a cycle up the front of spine and down the back. Have had down the back by releasing the spinous processes. In the upright until you have had some of the strength giving up the front you can't do down the back. You can do up the front anywhere in the front of the body. On the surface of the rib cage you can do either up or down action after the basic up the front of the ribs is established.
- Touch low in the center front of the body, go up the front of the abdomen, continue up under the back of the bottom of the sternum top of the sternum back of Adams apple over the top of the atlas (a favorite holding place) down between the shoulders (another favorite holding place) and down to the sacrum.
- Partner work in standing. You go up the front with your hand touch as your partner goes down the back. Stand with thought of cycle, then walk with cycle.
- Reviews suit of clothes. The coat smoothing down the sides. Come into the center seam from the pelvis to the shoulders. Zip up coat. Smooth up the collar then go around the sides of it to the front. A soft collar is desirable not stiff. Trousers empty them one at a time into the thigh socket. The bottom half empties toward the foot. Bell shaped trousers open at the bottom. A two hand pressure, taken away then replaced lower in each of the above directions is used. Then smooth the wrinkles down from the sitbone to the heel. Then smooth the wrinkles from the front of the foot to the thigh socket.
- Roll with the image of the axis of gravity or the central axis of the body.
- Head nod and thigh flexion with out disturbing the line of the spine. No appreciable break should happen in the spine tho the spine is always active never static.
- Use arms in rolling - right arm brushed up front of body, extends over head then comes down by sweeping over the body. Roll to the left as this is happening.
- Roll completely from right to left sides. Climb ladder, think creases as you go into Salom. Come out of Salom thinking of cycle.
- Gave explanation of sidedness of body
- In CRP and Salom see the spine slipping thru the pelvis. Think of the surfaces as being fluid, slippery. Then think of thigh creases.
- Assignment
  - Draw in axis of gravity ?
  - Sitting
    - Minute trunk flexion
    - Head nod
    - Cycle imaged only
    - With the cycle image lift sit bones 2L,2R,2L
  - Stand
    - Femur bounce
    - Head nod to give spinal awareness
    - Cycle with arms
    - Walk with arms
    - Circle axis
- CRP
  - Review suitcoat, trousers and collar
  - Roll around axis
  - Cycle with rolling, arms give tactile aid
  - Cycle unfolding from the salom position

Cycle image

Thigh folds with head nod - spinal awareness



## Lesson 5

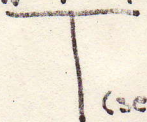
Reviews the planes that we discussed last week. Says that there are an infinite number of other planes that can also pass through the body

- let the sit bones rest on the bench and add another dimension of thought by thinking of the sit bones in the same lateral plane - not one forward or back of the other.

- The thigh sockets rest in the pelvis (do sliding hands) Let the spine rest in the pelvis, the head on the spine. Find atlanto occipital joint with touch at ear level imagine line and nod head. Touch coccyx, let that be the cue for the spine to lengthen. Feel the neck pit, let it soften and it may let the spine lengthen at the lower end. Nod head let spine lengthen as you nod.
- Lateral plane divides the body into 2 halves, front and back. Imagine the back half of the body sliding up. Will work on this on the floor as it is difficult. It sit nod, visualize above then lengthen spine below. Must have the lengthening of the spine to manage the head well. Many dancers have stiffly aligned heads.
- Visualize the creases the depth of them. Fold and unfold deeply then do small folds and head nods to make a long spine.
- Stand balance on the tops of the thigh bones. Femur bounce with the thigh knee and ankle creases. Visualize back of the head going up as the spine lengthens down. Walk with that.

-Levers W F P

1.



2. F W P



3. F P W



The third is inefficient but does offer advantage of speed and dexterity.

- Gives the origin and insertion of psoas on drawing and in skeleton. Classed by kinesiologists and physiologists as a thigh flexor. It interdigitates with the Iliacus. Andy says that it is involved in good thigh flexion but it is more like a bridge between the legs and the spine. Since one has the option to emphasize various muscles in an action, most people tend to use the psoas less.
- A third class lever as the fulcrum is the acetabulum, weight as a whole is the thigh bone and the force applied at the little trochanter.. We tend to use muscles lower down on the leg bone as we sense the inefficiency but in doing so we restrict the movement at the joint.
- "Psoas action" will refer to the action of the whole abdominal complex.
- [First step in getting abdominals is to get impetus at the little trochanter, the thigh crease image does this. Now we are after the other end of the muscle. First stand imaging the leg walking thru the little trochanter no action below it. Now will think of a line shortening between the 12th thoracic vertebra and the thigh crease. Locate with the finger touch the 12th T. level in front of body. then visualize the shortening of the line connecting the two as you flex the leg.
- Walk with the image of the line shortening. May be difficult at first so try first with only one side. Gives muscle action of biceps shortening as an example. Shortening line image is helpful in bringing more tone to the abdominal area in general. Work now with lines to each of the vertebra involved to get more of the bridge notion.
- Andy said "As far as I am concerned the psoas muscles are the legs" - they power leg action.
- Cross patterned touch combining each of the vertebra attached to psoas on

level of the illiac crests. Combine the touches with a rhythmical walk. "1,2,3, and" And is feet together. Do this forward and back with each touch. Then walk freely around room with whatever kinesthesia you have developed.]

- Shows rotation and circumduction in the CRP position. When thigh is flexed entire weight of the thigh is in socket. Rotation and circumduction should get progressively smaller.
- Shows the tactile aid to get back half of head sliding up. In CRP a person visualizes that as he lengthens spine. These are "watching" procedures.
- Shows the climbing of the ladder with bottom legs action first. Should think of psoas action as you do this. "Legs trail along"
- Go into foldup or salom. Last time in unfolding we thought of the cycle. This time imagine building blocks in unfolding, one upon the other. Tactile aid to touch partner at lower end and move up to simulate idea of one building upon the other. Once in a while ripple down as we must continue the idea of weight accumulation on sacrum.

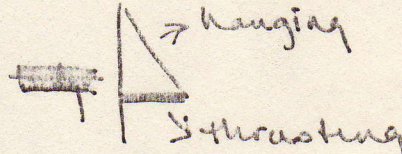
#### Assignment

- Visualizaion of lines without movement then think lines shortening.
- Image of head - urges not to make it into a positioning no fixing.
- Unfolding from folding up position. If you can't do fold up use crease image and spinal images and you can increase range.

## Lesson 6

- Imagery - need to know the direction, location and the image needs to be in a state of being. To combat the tendency to make it happen, watch it happen. Watch it on someone else or on a TV screen to disassociate yourself. If you gain only a small amount of kinesthesia or none at all be content. With that you are imprinting the nervous system. It also gives the chance to develop a memory of it. Large movement tends to diffuse the awareness and this is why we use only small movement.
- Good mechanical alignment doesn't guarantee good movement. If you fix yourself in the alignment the pattern of movement won't be good. Must be after balance. Todd says this but Sweigard doesn't make it clear.
- Can always rethink the same imagery and go higher - reaching for nirvana. [I find that if I can keep myself from forcing a response that I have done before for an image that the same image may effect an entirely different part of the body - completely unpredictable.]
- Reviews what we have done in sitting - thigh creases fold unfold into stand.
- Psoas lines imagine them shortening. This is helped by:
  1. Image of walking in water
  2. Image of walking up hill
  3. Image of pulling feet out of mud.
- Illiacus - contacts psoas tendon at the little trochanter. Originates inside the illiac crest. Need to get thinking inside pelvis. First do it any way that you can. Pelvis is a latin word meaning bowl. See water swirling inside it.
- Can also consider the psoas as a bridge from the pelvis to spine. Important postural muscle for the upright position.
- Now imagine circles for each side of the pelvis. Clockwise on the left side, counterclockwise on the right. Circle is approximately to the horizontal. Must visualize some part of the circle brushing the spine. Gives positions of 12,9,6,3 as positions of the clock to visualize.
- Circling at the pelvis and having contact with the spine at some point, can be done at many levels between the lumbar area and the coccyx. [This was done in sitting, some confusion voiced by the students, Andy showed directions by outlining them with his finger movement this helped.]
- Standing- Shows slide of circling the axis. Do this combined with circling within the pelvis. The circling inside is going the opposite direction than the circling of the axis.
- Also circling half of the pelvis while you take the weight off of the opposite foot. Image should be visualized before action is initiated at least. This makes enough of an impression. You don't have to keep thinking it as you are executing the action
- Lying on the stomach image of the psoas lines shortening. Shows by demonstrating himself contracting the psoas without contracting the buttocks Then partners touches the buttocks to be sure that they are soft. Says that this action is like deep breathing.
- \*The 12th thoracic vertebra is critical as the trapezius inserts there. Unless the psoas action is very strong there the trapezius takes over and pulls up the back.
- Rib cage - 12 pairs of ribs articulating with spine at 2 joints. Tubercle of the rib articulates with the lateral process of the vertebrae. Head of rib articulates with the side of the vertebral body. We will think of The socket as being very deep, well deep, even tho the rib to vertebral body socket is only really a depression.

- Ribs rest in the spine at the articulation with the vertebral body. But also hang from the spine by muscles which begin further up. Resting support is transferred from each rib to the vertebra at its own level. Ribs thrust into spine. This is hard to get. Simple and effective idea to simply think of the ribs resting in the spine. We tend to take them out of the spine.
- Tensile support- we want the ribs to hang in front from the spine. No mechanical advantage in muscularly holding the ribs up. This raises the center of gravity. Let lateral aspect of the ribs hang. Use the X-mas tree image. Don't pull up on the ends.



This solves contradiction of the ribs hanging and thrusting at the same time. It is the sides of the spine that hang not the front.

- Image- water falling down the sides of the body.
- You cannot imagine an image while your moving if the muscle is not ready to respond.
- Roll with pelvic circles and thigh flexion with pelvic circles.

-Assignment

Trace posterior view of the ribcase and the x-mas tree image

Sitting

Imagine pelvic circles

" " " in lifting sit bones

Standing

Circle axis with pelvic circle

Pelvic circle standing on one leg.

CRP


Spine lengthening and head back going up


Circle in pelvis image only, thigh flexion and rolling

Unfold from salom image resting ribs in spine, and lateral aspects hanging

## Lesson 7

- In landmarks added softening of the eye with a light touch one eye at a time
- In teaching thigh crease turn says nose should be over the navel
- For desirable high chest do the cycle touching up the front as you imagine it. Arms extends up over head as you imagine down the back thinking through the tension areas of the back of neck, between shoulders, balance sternum hanging from above with heavy tail in back. Another way of understanding tensile and compression forces without collapse of ribs or tensing.
- Review psoas lines vibrating upward in stand. Then shorten on left and left leg swing. Shorten on right and right leg swing. If one is tightening in the back then the psoas line can't shorten. They are 2 opposite sides of the same coin in terms of action.
- 3 and  $\frac{1}{2}$  steps forward visualize the pubic symphysis to 12th then again as you think pubis to mid way point then again as you see pubis to 5th lumbar. Walk with a chosen line shortening alternated with the spinal lines lengthening. [Felt psoas actively triggered by more attention on the line vibration upward]
- Ribs - letting them rest in spine is a good image. Thrust into vertebra is more difficult and takes demanding tactile aid to get a sense of it. Gutter on side of spine is right beside spinous process. Gutter is deep and angle acute. Want to visualize the angle created by the ribs as being acute if it is oblique the ribs are pulling away from spine. Shows illustration of paper folded from the top

this → 

not this → 

- If gutters aren't deep the ribs are pulling away from the spine. In tactile aid imagining gutter filled with debris hand is brush cleaning away the debris. First lightly touch spinous processes in partner work then find gutter and stroke down 2-3 times then let partner visualize it. [Gutter is more narrow than I had imagined before, right in the spine] Better to work on left side first as it is less trained and may then get sympathetic reaction on the right.
- In CRP visualize cycle as arm goes up, in the down the arm swings across body. Then combine with roll initiated at same time as arm. Then as you roll back to your back the arm swings across to lay at the side.
  - Also roll with the gutter image.
  - In thigh flexion the gutters need to narrow and deepen. [In the thigh flexion my gutters tighten and become shallow, Keeping them deep makes spaces in spine and lengthens spine.]
  - Andy interceded the thought of a balloon in the pelvis, breathing there most important the bottom part of the balloon [Really Relaxed me.]
  - Rolling with the up the front touch was great, need to heighten the roof of the mouth and keep it open.)
  - Then simply rolled as a barrel just roll don't need to pick up anything to do it.
  - Climbed ladder, salom thinking thigh crease knee crease folding deeper. Unfold out of salom think of gutters of the spine "Do it any way that seems natural in order to deepen those gutters."
  - Assignment - Think from pubis to 12th thoracic  
Gutters of spine  
Suspension from manubrium

## Lesson 8

- Adds pelvic balloon to beginning sitting work. Don't force it. To aid soften nostrils, go up nose and soften eyes.
- [In looking at andy one sees the upper jaw hanging around the peaked roof of mouth. The upper lip is loose, thinking this heightens my roof of mouth.]
- X-mas tree image must be used with the idea of the ribs resting in the spine. If it is used alone it gives the wrong kinesthesia.
- Let the lateral aspects of the ribs hang as you lift a sit bone. The tendency is to lift the ribs too. Let the ribs tumble down.
- Stand without pulling up on the ribs. Plie and straighten without pulling up on the ribs. Tendency in coming up especially is to pull up there.
- Walk with ribs hanging.
- Stand visualise line from pubis to 12th thoracic shortening, just watch it. Then see spinal line behind that lengthening.
- Diaphragmatic breathing  
Shows Todd's view of the lower diaphragm. It is dome shaped, occupies the last 6 ribs outside fibers converge onto central tendon. In back the lower part forms 2 tendons, the right one comes down to the 4th lumbar vertebra and the left to the ?  
Inhale and the diaphragm contracts downward because of the anchorage of the crura leaving a space in the upper chest. Nature abhors a vacuum so air rushes in to fill space. In exhalation the diaphragm relaxes and returns to position.
- The crura and psoas are roughly in the same area. Both attach to lumbar spine. Psoas stabilizes the spine for diaphragm. Muscles of locomotion and muscles of breathing have very close relationship.
- (Crura means pillars of the type that anchors something down. Crus - sing.)
- Muscle action of inhalation is roughly the same as that of flexion of the thigh.
- Muscles never act singly, breathing is the most complex of all actions
- Anything that improves structural alignment can aid breathing.
- In severe lordosis angle of pull on those muscles is disturbed, not entirely in the vertical so crura can't get full descent.
- Thus breathing must be thought of as a vertical action - piston in a cylinder.
- When the diaphragm descends and that is only a matter of about  $\frac{1}{2}$  inch, there is a distension of the organs. However attention must not be directed outward. Must not ever intend to push wall out your effort must be vertical, down. It must allow the spine to lengthen in breathing.
- Find action with hiss.
- Put hand on abdomen. Asks what happens on exhalation, inhalation. Do the same with the hiss, what do you feel?
- Hissing is not a normal exhalation, it is forced exhalation and inspiratory effort is present. You are preventing inspiration from taking place but since you can't forever the diaphragm returns to inhalation action.
- This is the basic effort of the cough, animals attack on prey, battle cry. It integrates the 2 functions of breathing and locomotion. Also present in the laugh, giving birth and the bowel movement.
- If you don't tap this energy, gain this strength you have nothing to support the release images. Must learn where this and use it or you will just go round in circles and never get to the heart of this teaching.

-In crp demonstrates

Watch the breathing vertically. Let it go to the bottom of the pelvis. Want to get rid of some of the chest effort, does this by actually pushing down on the chest.

Hiss with the dynamic of the cough. Then flex thighs, hiss again then flex. Then begin hiss and keep it going and flex thighs too. Can you sense the relationship between the two actions.

The ribs will move in this but avoid getting leverage from the ribs.

-When you hiss the piston is going down. When you release hiss it releases up. Important to image piston descending in inhalation deep into the pelvis. Then hiss just continues the action there. Then when thighs are flexed toward the torso as you're hissing there should be no effort in the flexion. This is the seat of the strength of out work. "One should be able to do more as a result of your work not less."

-InCRP

Soften nostrils, wetsponge and the eyes

Softly blow thru the lips and think of shortening pubis to 12th T line, as you alternately flex the thighs and then as you roll.

-Climb ladder, fold up and unfold with the lateral process aspect of the ribs hanging.

-Come up to standing with the lateral aspects hanging.

-Says not to practice hiss over and over - only a device could reinforce bad pattern.

-Pubis should come up slightly on each inhalation.

## Lesson 9

- In letting down in spine must be sure that the sternum is suspended.
- In breath diameter of the rib cage expands but if we emphasize the high and wide in breathing, lordosis may occur, and the downward excursion of the diaphragm will be impeded.
  - Ribs in front lift slightly and sternum comes up in increasing the anterior posterior dimension. This is more advantageous to the lungs. But again this movement should not be emphasized.
  - Still focus on the piston image going down and discourage lateral distension. Use idea of the 2nd rib narrowing laterally so that its anterior - posterior dimension will increase. Shows this with fingers. This is possible because the sternum can come up and out a bit.
  - Todd's bird cage perch - too advanced
- Imagine instead that the arm pits are soft and deep. Shouldn't be tight like a drum head. Another idea is that we shouldn't stabilize the balance there or hold the weight.
- Stand without pulling up into arm pits. Let ribs fall out of the armpits.
  - Plie and straighten with the same idea - hard on straightening. Instead of allowing yourself to hold on there; push up into the thigh sockets.
  - Stand with partner soften pits trace down ribs, trochanters and fibula [I add the little toe and suspension touch into the center of the pits this lets the ribs hang]
  - Breathing piston action. Second rib narrows. Can think of the sternum floating up and out. Pubis to 12th T shortening and spine lengthening on inhalation. Think of shortening anytime but particularly on inhale.
  - Hissing is inspiratory tension
  - Don't think about muscles, we work with lines of force [This helps me as I couldn't keep from thinking of up the front as psoas muscle action.]
  - Piston is further back than you might have considered before. Up the front is a reaction to the above and occurs further to the front just as oil would be pushed up by a real piston in a cylinder. Up the front is in front of the piston action going down.
  - Exhalation - image for this is let it reach your heels. Andy doesn't want to deal with it in this class, but you could imagine the above or of the lateral aspects of the ribs falling in exhalation.
  - All that happens in the ribs is a result of the piston action.
  - The Knee
- Cartilage in the knee joint is much like those in the spine. Takes shock and increases possibility of movement if weight isn't handled right in pelvis it falls into knee and stresses them.
- Establish your turnout only with an extended leg because flexed knees rotate some. As it straightens it should screw home but is prevented from doing so by the foot position. Find your real range of turnout in CRP - a safe way of doing it.
- Then gives the sphere image for each joint and the nucleus as in morning.
  - The Foot
- need to have strength coupled with suppleness throughout the body. Seem to vacillate between flaccidity and rigidity.
- Names the 26 bones of the foot.
- The keystone of the longitudinal arch is the talus which is buttressed by the navicular and the heel.
- The muscles of the feet string the bones into alignment balance the thrusts and the counterthrusts.



- Visualize the thrusts coming back to the center of the foot.
- Shows Barbar's drawing of the toe axes - says that the lines are vectors representing collective forces.
- Imagine the 1,2, and 3 toes thrusting back to center.
- With one hand take axes of the 1,2,3 fingers back to the heel of the hand and imagine them hanging from there. Then just let the 4th and 5th hang off. Then flex the hand back to the heel.
- Do the same as above with the toes.
- Flex the foot imagine axes of the toes going back to center.
- Do foot peel also ~~imagines~~ imagining the thrust into center as you put the foot back on the floor.
- Peel the foot on the floor completely before you put any weight on it as shifting weight prematurely puts too much weight in the front of the foot.
- CRP  
Blow as you think of soft armpits  
Roll " " " " " "  
Come to knees let the rib and stbones hang  
Come up to stand letting the ribs tumble down

[Softening the armpits is very good on my shoulders.]

## Lesson 10

- Sit bones resting on the bench, thigh bones rest in the sockets, spine rests in the pelvis, ribs in the spine. As the ribs rest the lateral aspects fall and hang. Skull rests on the atlas.
- Soften the armpits to let ribs hang, Don't let the whole body start to hang however. Must have suspension from the sternum.
- Heavy tail
- Lift sit bones alternately as ribs tumble down out of the armpits.
- Balance on sit bones visualize the thigh creases deep. Fold trunk into the depth of the creases. Unfold at the crease.
- Reassess alignment - head between sit bones.
- Fold left thigh into the trunk still using the crease. Unfold at the thigh and knee and then fold the ankle as the toes droop. Take tension out of the toes. Then visualize the fold in the right thigh crease then fold thigh to the body. Unfold thigh and knee thinking deep crease and fold there.
- Minute thigh flexions think the depth.
- Visualize the joints as being spherical. The thigh joints are as balls. Whatever your thoughts of its size is ok then think to its nucleus. Then do the same at the knees and ankle joints.
- In the knee joint if it is centered you don't need to go out into the patella for support.
- Can then visualize the knee caps as floating right into the thigh sockets.
- Walk forward on the sit bones one foot in front of the other fold and unfold to stand
- Visualize the center of the 3 joints balance them one on top of the other and do a little femur bounce. Then add the softening of the armpits so the ribs soften down. The action can go all the way down into the outside of the legs - letting go of the trochanter and the outside of the foot. Walk with that and the suspended sternum and heavy tail.
- Shoulder Girdle more erroneous ideas about this than any where else. Consists of the clavicles, scapuli articulated at the acromion process - shoulder joint. Are more interested now in where clavicles attach to the body. Sternal-clavicular joint is the only attachment to the trunk. Most of us focus out on where the arm articulates to the girdle. Function of the shoulder girdle to protect upper ribcage from arm movement. In animals that fly and climb collar bones are well developed. We need to become aware of the sternal articulation. Imagine the shoulder girdle as a cape clasped at the sternum. All the rest, shoulder blades hang loosely.
- Tactile aid, touch the top of the sternum as you lightly brush down the shoulder blades and upper arms. Think of the arms as continuing the shoulder girdle, or rather that the arms are a continuation of the collar bones - hanging.
- But if you only think of hanging quality you only do part of it. Must also think of the thrusting of the collar bones to the sternum and the hanging of the sternum from above. Need all 3.
- The shoulder blades also hang but can't do too well until the spine is lengthened. Tendency is to fix the shoulder blades - Don't.
- Stand - Think of the arm beginning at the sternum. Roll the shoulder in and out thinking of massaging at the sternal socket.
- Side flexion of the spine to the left, bounce tiny on the left thigh head and then straighten spine by pressing into left thigh rather than holding

- tension in the shoulder to do it. Balance on both feet recall thrusting into the sternum and do the right side.
- Shoulder blades as rafts on water running over the ribs. Let the rafts float down to the sit bones.
  - Arm bones are in front of the lateral plane, shoulder blades are in back.
  - Foot and toe axis review. Three large toes trace back to center in foot flexion and foot peel. (Demonstrated with a sock.)
  - Center of the foot needs to be visualized as higher than the heel or the front of the foot.
  - Touch ~~the~~ center of the foot and imagine toes and heel hanging from center.
  - Toe axis should be lengthened but not by pulling them out of center, Image that toe lines are longer but from the center of the foot. The depth of the foot - "The taller the tree the deeper the roots."
  - Now center toes just the 3 large ones from the toe tip to center of foot along the sole of the foot. Then visualize the center as deep.
  - Peel foot off and on with the imagery of depth on center (Which i guess is the the height of it - he showed a side view of the toe axis)
  - Heel foot and ankle foot explanation. Heel foot rests on ankle foot.
  - Connect the cycle of the body with the cycle of the foot.
  - \*Imagine the big toe to heel line shortening.
  - Review the cycle up the front of spine with the hand touch on yourself
  - Now think of a cycle starting up the front of the ankle up front of the mechanical axis of the leg then into cycle. Go over top down back then down the back of the leg to heel and into heel foot. He names landmarks as we do one side at a time.
  - Think of feet as a mound with hollow in center formed by the arches. The inside is higher than toes outside of foot and heels. Thinking of outside of foot as slightly circular will help the lengthening.
- heel ↗ ankle ↘ heel
- Many different heights of arches and that's ok but must not be a pronating of the arch.
  - Calcaneo-navicular ligament like a sling. Sometimes called the sling ligament. Helps to balance thrust and counter thrust. If weights aren't managed correctly by muscles this can be strained. So think of sustentaculum tali as at least parallel to the floor not tipped down. Must differentiate low profile arch from pronation.