

Creative Body Alignment Workshop

Monday June 6, 1977

Workshop conducted by Andy Bernard, who has been teaching IDEOKINESIS at N.Y.U. since 1964. Theory initially put forth by Swighardt and M. Todd (The Thinking Body).

Purpose #1 of workshop: to familiarize students with learning to change movement patterns using imagery-- i.e. neuro-muscular re-education through ideokinesis.

Theory of Ideokinesis:

movement = posture

which is a

neuro	-	muscular	-	skeletal	process
(activator)		(motor)		(what is moved)	

The desire to move activates the neuro-activator.

Everyone has movement patterns. When learning new patterns, a logical way to proceed would be to go to the activator rather than the motor. By using images rather than directions to specific muscles, old muscle patterns can be changed and new movement habits can be acquired.

Voluntary control of movement

start, direction, speed, force and end

Involuntary control of movement

sub-cortical level of brain and nervous system controls the patterns of muscles used to achieve movement. Muscles always work in groups.

Ex. of voluntary and involuntary controls: You can will your arm to move up and down, but you don't address specific muscles to move your arm.

Limits to movements:

1. Ligaments are the primary limiter in a well aligned body. they also serve to protect the joint, binding the ends of the bones and preventing them from moving too far.

2. Muscles move bones and aid ligaments in mainitaining the integrity of the joints.

a. Quite often less than desireable muscle patterns inhibit range of movement.

b. Usually stretching of muscles is done to allow increased flexibility. This method uses imagrey to change movement patterns so that muscles will release and actor muscles will do their share of the work. Forceful stretching is not done because blood vessels, nerve tissues and muscle tissues might be damaged. Stretching thusly may lengthen contracting muscles but makes the stretched muscles want to contract more, causing them to be overdeveloped, binding and bulgy, inhibiting free movement.

Law of reciprocal innervation

Agonist muscle moves bone by contracting

Antagonist muscle is the opposite muscle which stretches when agonist muscle contracts. (When a muscle is stretched forcibly, the opposite muscle does not contract.)

Purpose #2 of workshop: Get students to activate agonist muscles so that antagonist muscles can release. Usually muscles tighten because agonist muscles are not working hard enough. Example: Release back by getting into front muscles (psoas)

Skeletal Structural Stability

Parts need to be as close to center as possible within the limitations of the function and the nature of the structure. A current theory is that the postural pattern is constant and consistent regardless of the movement, with regard to the relationship of the parts of the structure and with relation to the axis of the structure. Imagine a line running through the body lengthwise through the center of the head in front of the spine, down through the center of the pelvis, between the legs, through the center of the knees and ankles. Skeletal parts are held out of alignment by poor muscle patterns which often come from socio-economic background (wrong ideas about posture - holding the stomach in, butt tight, chest out, holding the weight with the muscles rather than letting the bones carry the weight,) and from emotional problems (not dealt with in this workshop)(for every emotional experience there is a concomitant muscle response. Wilhelm Reich worked on this aspect.)

Use of images in changing muscle patterns.

A. Images must be specific in

1. Location
2. Direction of movement
3. State of doing (i.e. never a static image; as long as you think about the image it should be in motion.)

B. Proper procedure for using image technique

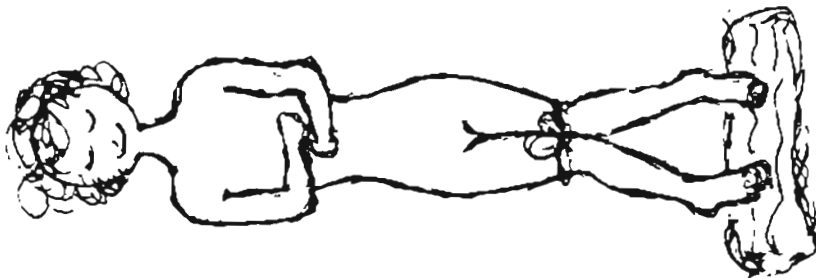
1. Don't try to force attention span. Come back to the image later if you can't hold it.
2. Do not use willful movement to aid image. This will interfere

- with the procedure by bringing old muscle patterns into action.
3. Be an observer, be detached if necessary.
 4. Evaluation procedure: don't evaluate while you are working. Focusing on a result will only get in the way. Evaluate after you are done.
 5. Function so as to use the image as clearly and strongly as possible.

It is not good practice to try to feel images. Watch the image and if you feel a response, that's fine, but don't focus on the result of the image -- just watch it and let the result happen to whatever extent it will.

Constructive Rest

Lie on your back on a hard or firm, but not harsh surface,
 Head aligned down center of axis,
 Legs at a 90° angle at knees with knees together, (tied across
 thigh side of knee joint)
 Feet apart and parallel or slightly toed in, never out
 with the balls of the feet on a pillow to keep the
 ankle at a 90° angle with the floor
 Arms folded, but not locked over the ribcage



constructive rest position

Tactile Aid in Suit Image

Give clear firm aids, but do not do the work, these are to be signals.

Lift tie around the knees for aprox. 30 seconds.

Smooth wrinkles in suit by giving lengthwise strokes along length of body to ankles, including going down arms and across shoulders. ^{2 or three times} Press top and bottom sides of thighs and calf with two hands at once.

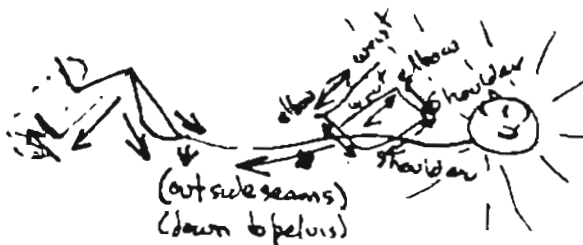
Smooth neck starting at shoulder and extending to base of skull. Think of a turtle neck shirt. Pull slightly on neck at mastoid glands, parallel to floor, do not pull head out of alignment.

Press down on belly button, for belt buckle.

Tuesday, June 7

Add sand to suit image

Imagine sand pouring out of the suit of clothes, at shoulders, elbows, wrists, ends of digits, sides of "seams", away from knees, out sides of pelvis.



direction of sand pouring

aid in sand-filled suit image

1. Light pull of head along horizon 30 sec. or so
2. Touch each finger and toe for release of sand through ends after lengthening each
3. Press pants front to back
4. Smooth horizontal wrinkles of suit head to toe

5a.

Image of suit of clothes (done in constructive rest position)

Pants folded over hanger collapsing front to back,
hung from above.

Coat is emptying onto floor

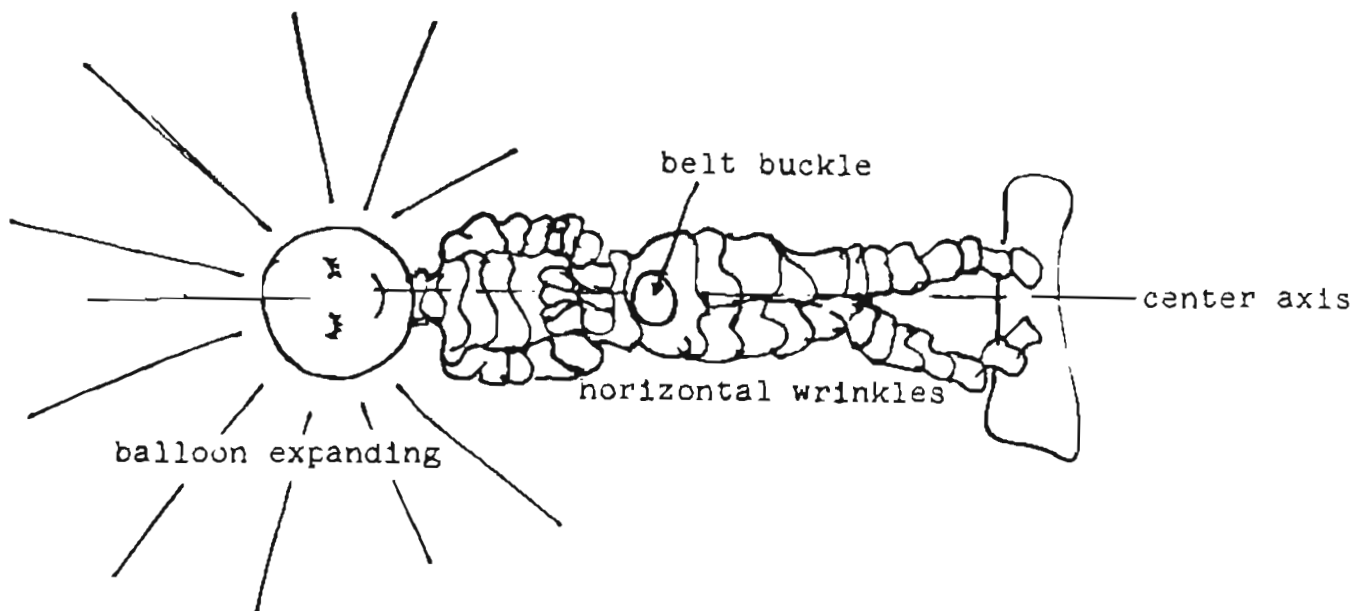
Head is a balloon and expands

Pay particular attention to waist and seat of pants
collapsing

Imagine a belt buckle on bellybutton which sinks to the floor.

Coat has horizontal wrinkles

In pairs give tactile aid to each other.



suit of clothes

6.

5. Press on belt buckle, imagine it sink through to the floor.
6. Touch head with whole hand over either ear, imagine the head expanding between the ears, like a balloon.
7. Lengthen each toe (glove image) then touch ends to open seams and let sand pour out.

Spend minimum $\frac{1}{2}$ hour per day in constructive rest for benefits.

(Mary and I worked in pairs during the demonstration period using the constructive rest position, the suit of clothes and the sand images. We took turns giving each other tactile aid while Andy told us what to do. I had a hard time focusing on sand pouring out, but I did feel very strongly like a lump of tiger butter slowly melting onto the floor. I was so tired, it was easy to get into the image and give in to the floor. At times I was so focused I was barely aware of anyone around me. Since I have done constructive rest many times before, I can make comparisons. I noticed that during dance class I could feel more comfortable and focus on the imagery more clearly because of my familiarity with the surroundings and the whole set. In this workshop, I am too conscious of my role as a learner to give in completely to the experience. I feel that that's okay, since I am not relying solely on the class experience for long range improvement. Another difference I have noticed is that in Jamie's class, I was not conscious of the misalignment of my head. Since we are working in pairs, in this class, I am assured of being properly aligned, even though it does not always feel "right". Tactile aid is hard to get used to. I am glad I am working with Mary, it is easier to feel her touch and to relax. Sometimes,

I found that I would tense the part of the body that Mary was touching, but I could feel another part of my body relax or I could feel a connection with another part of my body. For example, I felt a very strong connection with my entire spine when she touched my shoulders or neck. I could feel a connection with my lumbar region when I concentrated on my legs releasing.)

Sitting and Standing

It is very difficult to change neuro-muscular patterns in up-right positions. Constructive Rest is a very important tool. In working with the sitting position pay attention to the following ideas:

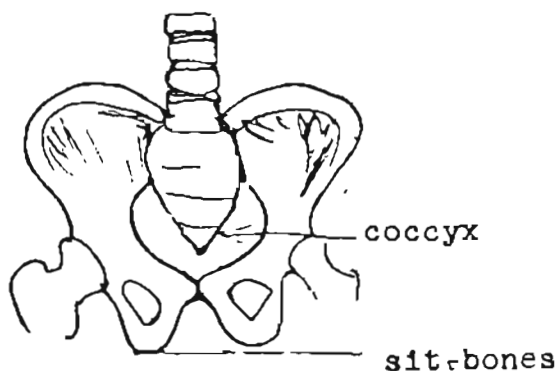
Flow of weight

Todd - bones support weight, not muscles

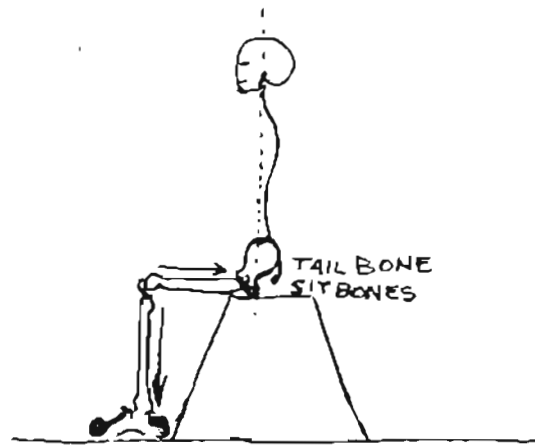
Feel the weight go down the spine, through the pelvis and into the bench. Let the bench support you.

Ultimately the earth supports you.

The main point of balance is the "sit-bones" Notice that the coccyx is above them.



7a.



Sitting


In our culture, probably the best way to sit is on a low bench or chair with the knees slightly elevated or parallel to the thigh sockets. Fold in half and feel the femoral-pelvic crease. Find the thigh sockets and trace a line from the center of the knees back to the center of the thigh. (It feels strange for me to sit this way, I keep wanting to compensate for the lack of support in my back, by crossing my legs or sitting rolled up. It is easy to feel my sit-bones and to tell when I am rolling off them.)

Feeling the sit-bones

Sit with both feet in front of you on the floor and wiggle around until you can feel the two hard bones in your seat. Balance on those two bones. Shift your weight onto one sit-bone and find the other with your fingers. Transfer your weight to the other sit-bone and find the hanging one with your fingers. Notice that you can't find it if you're holding your muscles tightly. Place your fingers under your sit-bones and sit on them. Notice the weight on those two places.

(It was easy for me to feel my sit-bones, since I have been working with that for a long time, but I had never felt how much weight they actually supported. I would much rather have my bones hold that than try to hold it "myself" (muscles))

Practice walking forward and backward on the bench on your sit-bones. (I have done that on the floor with my legs stretched out in front of me, this feels the same.)

Principles of standing


In standing, let the sit-bones hang long. (When I did this I could feel my spine lengthen and my pelvis shift.)

There is no ideal posture into which everyone should fit. It can vary with individuals.



Relationship of head to pelvis: head along center line;
head and pelvis are constantly seeking to be in
balance with each other; head is centered between
sit-bones.

What does it feel like (your head) when you walk? Visualize
your head between your sit-bones.

(It was hard for me to feel the balancing effect between
my head and my pelvis. I could get in touch with imagining
and feeling my ear aligned with my shoulder and pelvis and
with walking with my weight on my thigh sockets.)

Assignment: do $\frac{1}{2}$ hour constructive rest at home. Using tracing
paper, trace the three views of the pelvis in the anatomy
book (Foster) (see page 9b).

Wednesday June 8th

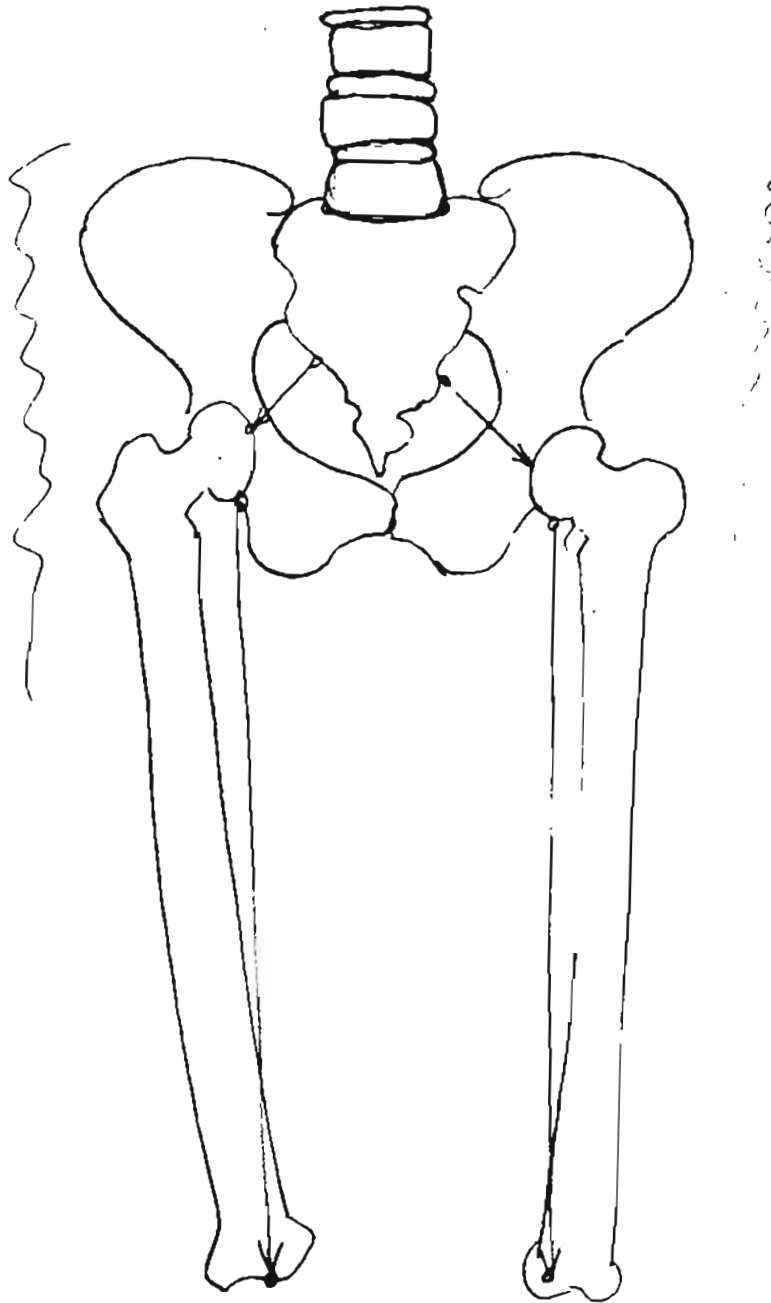
Have fun with images, let them work for you.



Imagine self as a tenpin to get in touch with the balancing
between the head and pelvis and in addition to let go
of arms and shoulders.

It is not good kinesthesia to think of weight going to feet.
Think of weight resting on the head of the femora. Stand
on heads of femora, not on the outside.

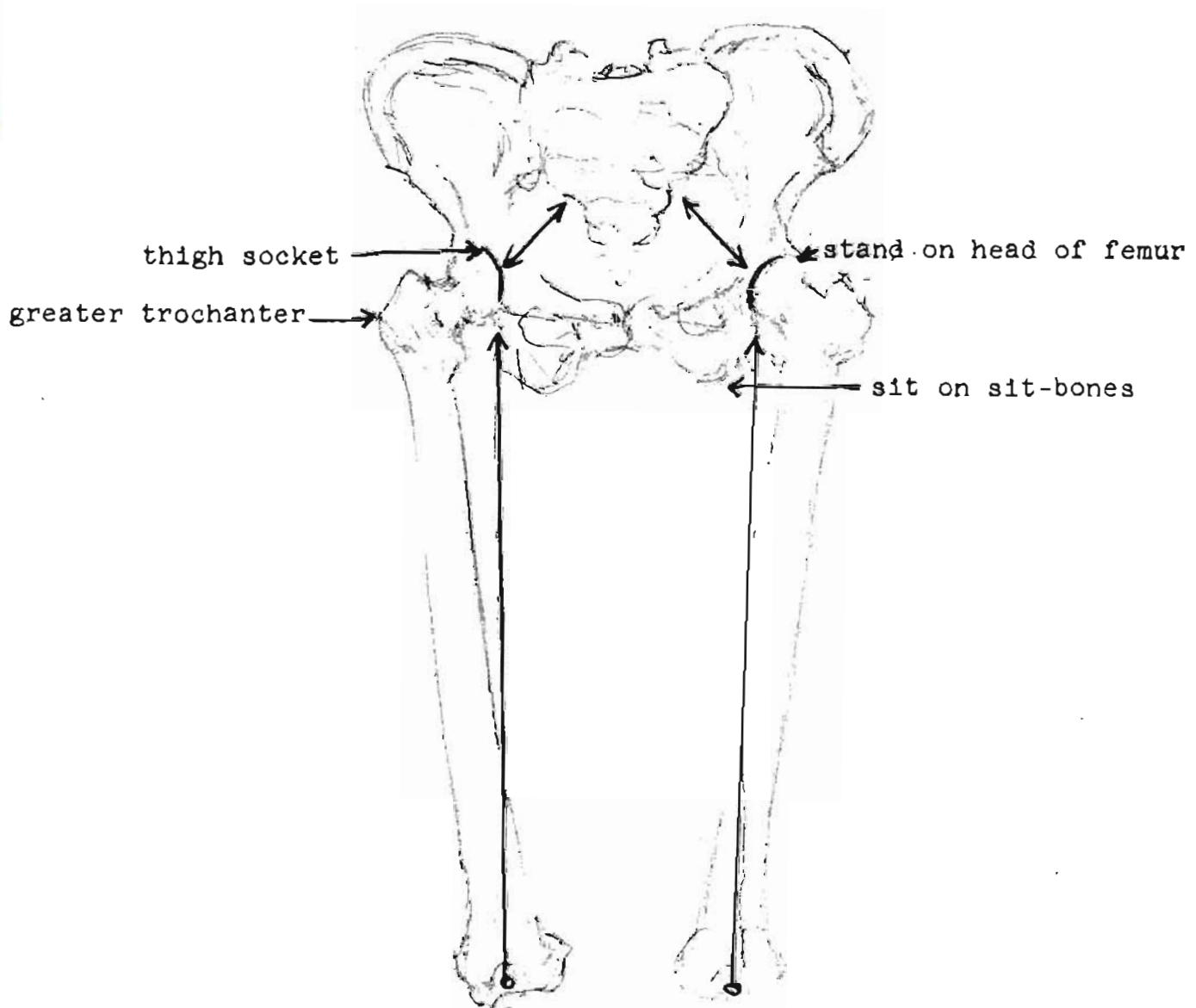
9a₁.



Line of Action

through pelvis into thigh sockets, down through legs

Lines of Action
Female pelvis and femora



9b.



thigh socket

sit-bone

Front



Side



Back

Female Pelvis

Imagine the lines of force going down the spine and then out into the thigh sockets. Watch the lines of force going from the thigh sockets straight down to the knee. Let the outside of the thighs hang loose. Let the greater trochanters hang.

Walk up and down stairs by keeping feet parallel and not turned out. Shift weight to the front foot and then push from the earth into the thigh socket. Bend into the femoral-pelvic crease. (When I tried walking like that it immediately felt better.)

Assignment: Draw a front view of the pelvis and femora showing the lines of action from the center of the knee to the center of the thigh sockets. (See page 9a₁ and 9a₂)

(Doing Constructive Rest in class

I was late for class and did not actually know I would get to go at all until the last minute. Everyone was in constructive rest when I arrived. Mary and Charles were paired up so I did the exercise with Carol Loud. I was looking forward to doing it with her because I knew she knew what she was doing (being a body alignment teacher). I was so hassled getting to class that I couldn't relax and center before Carol starting giving me tactile aids. Every place she touched me I would be trying so hard to relax that I ended up being tighter. I thought about my breathing. As I collapsed more and more into the floor I felt it become more shallow. I was not sure if that was right. Would it be possible to take deep breaths and still be in touch with the collapsing image? I don't remember thinking about my breath the other times I did the exercise.)

Breathing and images The breath in exhalation is when the collapsing image is relevant to it. Ignore the feeling of expansion on inhalation.

(It doesn't make sense for my patterns of tension to do the legs first. I think I would benefit more from shoulders and neck releasing first, then working down the the legs, maybe doing the pelvis twice. Several times I felt tension increase with the anticipation of tactile aid to a given spot and accompanying releasing in a different, connected area -- neck and lower spine, chest and legs. Perhaps pairs of touches could activate more connections. Carol did a nice one touching finger and elbow of one arm simultaneously. I will pay attention to other series next time.

Carol gave clear, firm tactile aids. I was gratified to find out from her that she liked what I was doing for her when I was giving them. My holding feels very deep in my thigh muscles and seat muscles. I could feel the connection between the tightness in my shoulders, the shortening in my back and the tension in my thighs and pelvis. I don't understand why I have a hard time imagining the suit of clothes here in this class when I have no trouble with it in Jamie's class. Mary told me after class that she experienced the same tension of getting tactile aids from someone else other than me.)

Standing on thigh sockets:

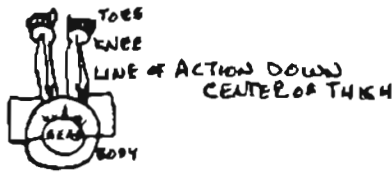
Feel the socket in the center of the thigh crease and let the outside muscles go. (When I was doing it, my feet would collapse inward. I couldn't figure out how to be centered on all my toes and along the outside and ball of my feet without holding with the wrong muscles. Andy showed me that I was collapsing

everything. I should be feeling energy coming back up along the inside of my legs from the earth. I tried it and immediately felt sturdy, but it was very difficult to stay energized along the inside and let the outsides of my thighs and my sit-bones go at the same time. It will probably take a long time to activate the insides of my legs.)

Thursday, June 9th

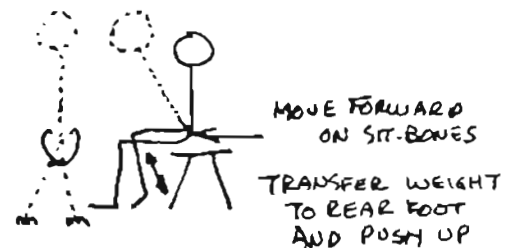
Sitting and standing (refinements)

Fold on the iliofemoral joint while sitting on sit-bones. While sitting upright, draw your finger back from the knee to the center of the thigh socket in that crease. Be very clear about the lines of force down the spine, into the thigh sockets and into the legs.



LINE OF ACTION WHEN SITTING

Walking up stairs



SITTING TO STANDING

Let the sit-bones and outer thighs release. Think of the earth pushing back up through the knees into the thigh sockets rather than using the sit-bones or the outer thighs to pull you up. Move onto the thigh bone then straighten. (I felt unbalanced when I was transferring weight while straightening. I could feel myself compensate with my calf and front thigh muscles.)

Going from sitting to standing

Sit on edge of seat with one foot slightly behind the other. Transfer weight to the rear foot and let the floor push you up.

(I have been very conscious while I have been typing to sit properly. I am finding it very difficult. My lower back feels very insecure and I find myself rocking forward and crossing my legs to compensate. In class when changing from sitting to standing, everything felt new, but fine. In going from standing to sitting, I felt insecure, that I was going to miss the bench or fall.) In this case it is okay to use my hands to find the bench as I bend into the iliofemoral crease. Don't tuck the feet under when sitting, it will throw the back out of alignment. Sitting crosslegged on the floor is okay, but not good. The best floor position is with both knees flexed and a back support. (Think^{ing}/of the blocks stacking up helps me to relax and experience less discomfort when sitting.)

Spine

Vertebrae: 24 moveable (cervical, thoracic, lumbar)

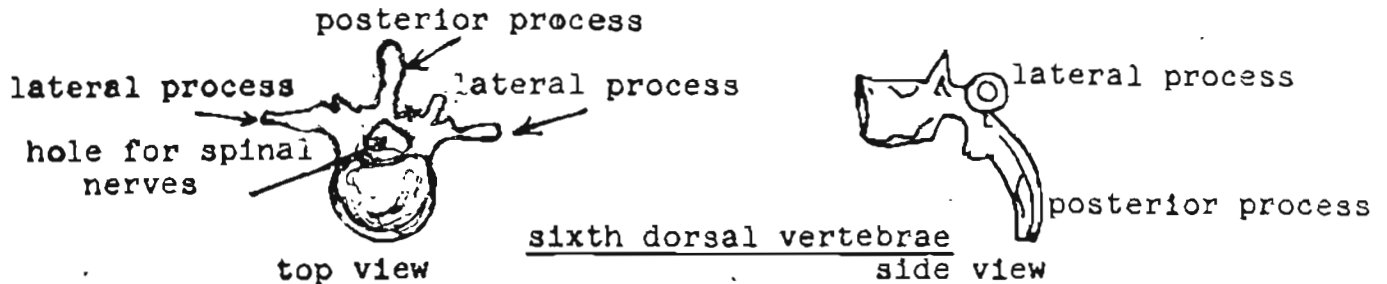
5 fused (sacrum)

3 semi-fused (coccyx)

Disks: though fibro-cartilage which cushions the shocks of thrust and counter thrust and also allows mobility in the spine. When movement takes place in the spine it is within the disks. They are thickest where there is the most movement. One quarter of the length of the spine is the width of the disks.

Processes: are the protrusions on the ends and sides of the vertebrae. The posterior spinal process sticks out the back and the lateral spinal processes stick out the

sides. The posterior spinal processes limit movement between vertebrae in extension.



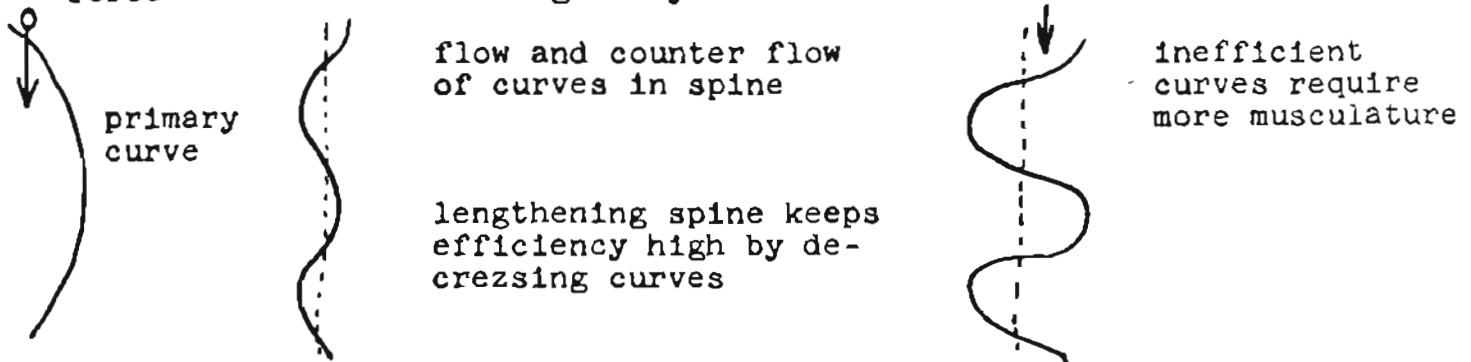
Flexion is a decrease in the angle between the two bones at a joint

Extension is the reverse; each joint flexes and extends differently

Curves of Spine (page 9 Foster)

Good movement comes from a supple spine. The best kind of structure for movement is curved.

Law of mechanics: opposing curves balance each other as a result of flexion caused by weight on the primary curve. Shallow curves are mechanically the best. If the curves are too pronounced, the mechanical advantage of the force would require compensatory muscle forces to maintain the structure. Refer to primary law of efficiency of structure (page 3 line 2-3) force



Think of lengthening, not straightening the spine to increase efficiency and align back.

Tail image

Feel for your coccyx. Think of it as a prehensile tail. Remove your hand and imagine your tail growing and lengthening. Let it go through the chair you are sitting on and on to the floor. Stand up and walk around. Feel your tail behind you. It can be bushy or skinny, imagine it trailing behind you and undulating while you walk. (As I was doing this, I could feel my pelvis rock forward as I relaxed and let my sit-bones hang longer and longer. I imagined a very long bushy tail like the one on the fox I had seen Monday at Point Reyes. I could feel it ripple up and down and side to side as I walked. Usually I imagine a cat-like tail, but this feels stronger, I can feel the weight of it pulling down, lengthening my spine as I walk.)

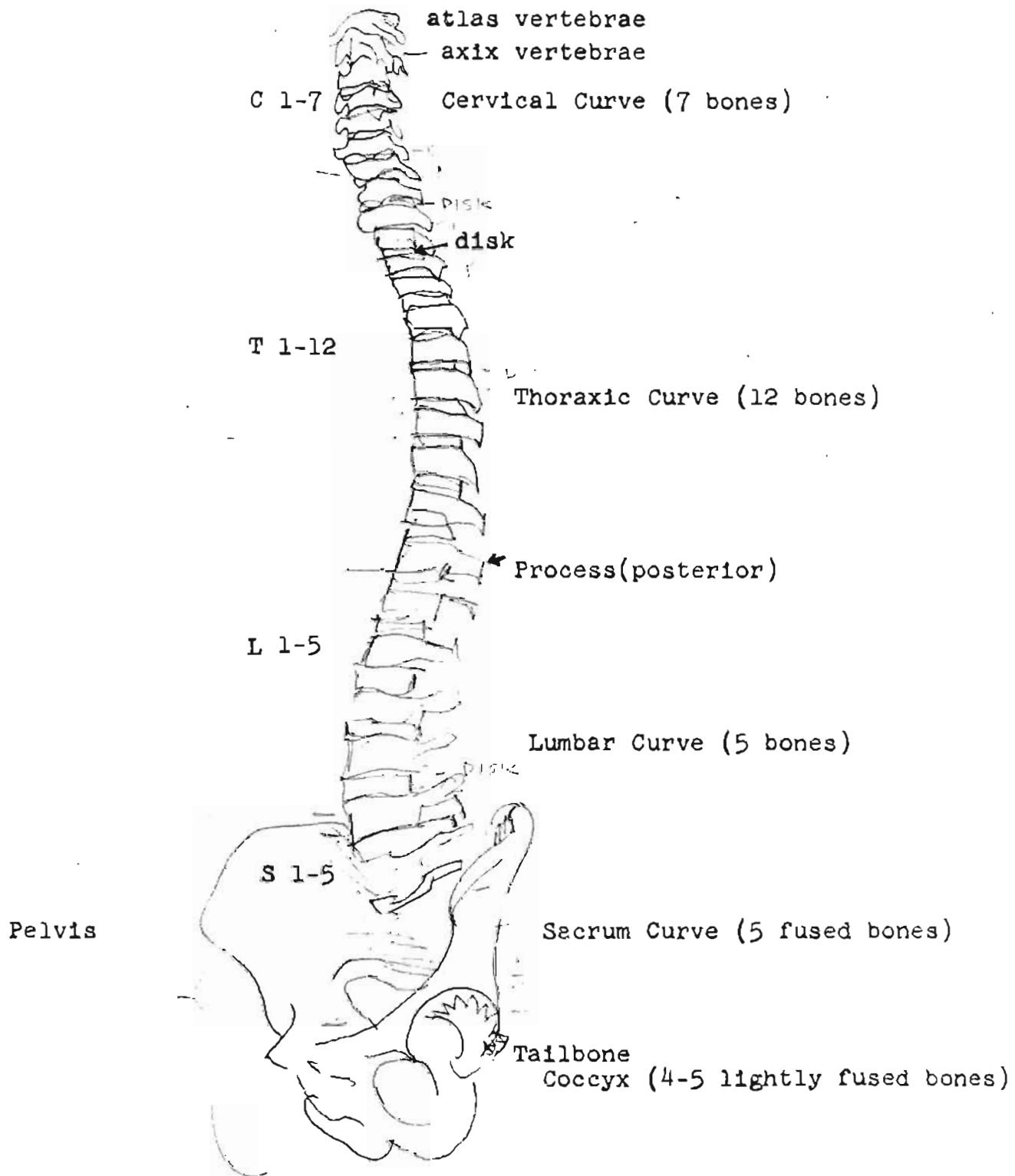
Lengthening the spine with tactile aid and images

Lie down on side with head aligned and lying on a pillow. Flex knees and put a pad between the knees and ankles. Have your arms relaxed in front of you or one arm over your side (upper arm and side). Partner starts at base of lumber and works up, pushing down on each process as h/she moves slowly up the spine. Periodically stop, partner keeping h/her finger on the last process, trace down the spine with the other hand. Concentrate on letting the processes slide down the back. Work in the tail image. Imagine the tail lengthening as you release the processes. (I found the imagery very helpful and the tactile aids very relaxing. Even though both Mary and I had difficulty finding each other's processes, we both were very happy with what we had received tactilely.

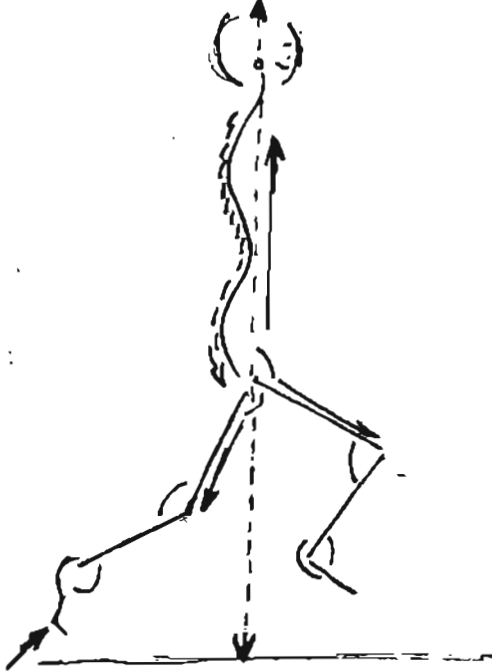
Assignment: Draw a lateral (side) view of the spine (see pg. 15 a).

15 a.

Spinal Curves



Folds and flows when walking Be very conscious of the folds at the iliofemoral crease, the knee, and the ankle. Feel the earth pushing back up equally to your force downward.



walk with consciousness of folds and flows

Look for flowing in spine, notice where flow stops when watching others move. Relate the image of processes dropping to the flow of movement.

Friday June 10th

Curves in spine allow flow. Flexibility of spine allows human beings to move with smoothness.

Each person has h/her own curves. Infants are born with a primary curve (degree is hereditary). If primary curve is sharp, compensatory curves will be sharp; if shallow, compensatory curves will also be shallow.

Don't think in terms of straightening spine, only lengthening and smoothing and flowing.

Axis of Gravity is the line of action that is formed by pull of gravity through the center of gravity (that point around which force of gravity is equal). Watch the axis of gravity while you stand. Turn in place around your axis. (I found it helpful to pull up from the top of my head to feel the axis and to align myself with regard to it. I felt very centered and could easily imagine a thin wire down the center that I rotated on. I tried to feel if I was evenly balanced on the tops of my femora as I turned.)

axis imagery the axis of gravity is a functioning of the muscles with relations to the spine. Let the image of the axis change the muscle pattern.

Assignment: draw a lateral view of the skeleton with the axis of gravity. See page 17a.

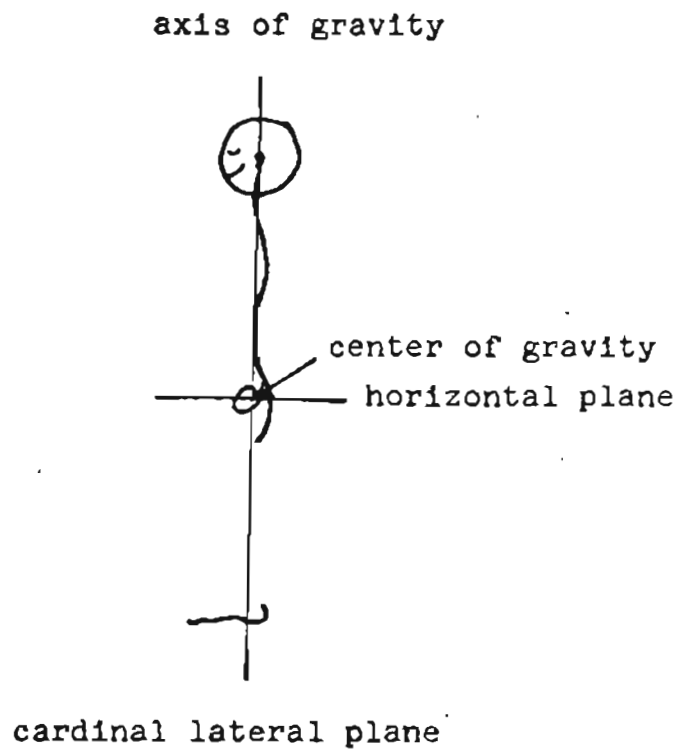
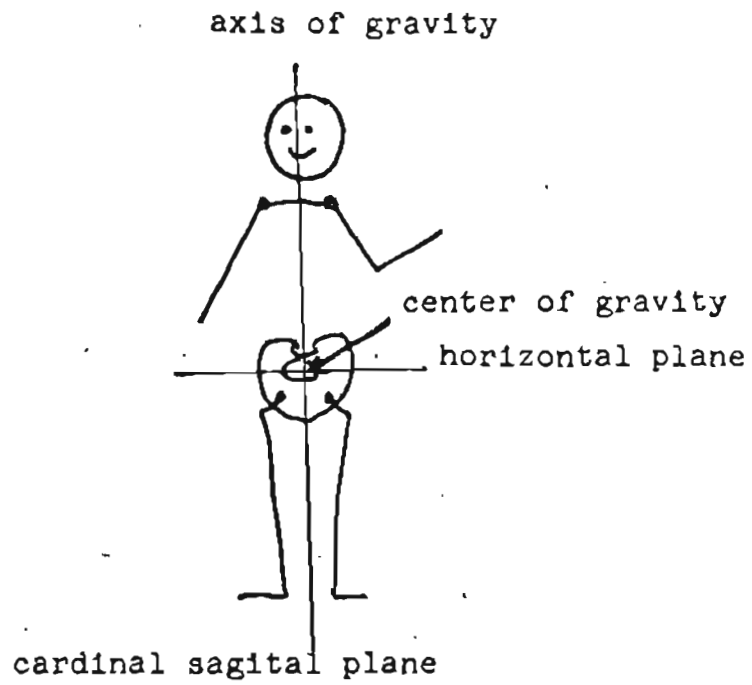
Planes of the body There are many planes in the body, but we are only concerned with the ones that intersect the axis of gravity and divide the body "evenly", meeting at the center of gravity as follows:

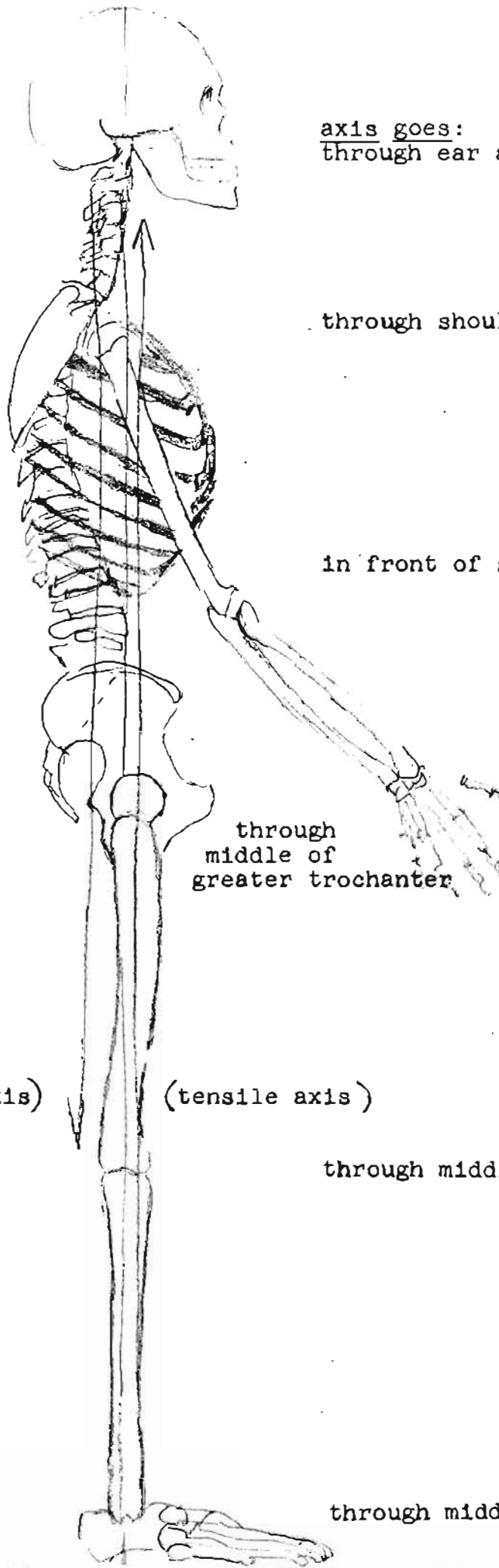
median or cardinal sagittal plane goes front to back, the anterior to posterior median that divides the body into a left and right half.

median or cardinal lateral plane goes side to side, dividing the body into a front half and a back half at the axis of gravity.

median or cardinal horizontal or transverse plane divides the body into upper and lower halves at the center of gravity across the axis of gravity.

17a.





axis goes:
through ear at top of spine

through shoulder tip

in front of spine

through
middle of
greater trochanter

(compression axis)

(tensile axis)

through middle of knee

through middle of arch, ankle

Bel

Planes of body image for alignment on the floor

If you are not lying evenly on the floor, visualize the cardinal sagittal and lateral planes. The c. sagittal plane should be perpendicular to the floor. The c. lateral plane should be parallel. If there is a twist, visualize the planes as being even. (When I tried visualizing the planes, I could feel the c. sagittal plane more than the lateral plane, but I could not tell if I were aligned. I still feel like there is something in my throat, blocking my breathing when my head is in line. I am starting to be very conscious of tension and physical problems affecting my alignment. If my right eye is much stronger than my left, that would tend to make me hold my head a certain way. How much do I hold in my left side, from the car accident? How can I let blows (Physical or mental) not touch me if I am not rigid on the outside?) Andy's note--imagine their forces going to center.

Constructive Rest with Suit of Clothes and Sand integrated and refined

Chest (hands press on folded arms and chest)

Under Knees (lift or push into crease under knees to augment hanging image)

Press Legs (thighs and calves, one leg at a time to augment image of pants flattening.

Watch sand pouring down legs in both directions away from knees, into pelvis and out at ankles.

Side Seams (open side seams with horizontal line up sides of pelvis)

Belt Buckle (press down on navel, watch line of energy through to floor or belt buckle pressing pelvic area flat)

Foot Gloves (imagine seams in toes, touch ends of toes after drawing hands over foot and each toe to augment image of sand pouring out ends. Touch heels also.)

Wrinkled Coat (imagine horizontal wrinkles, pull down length of body
suit two or three times to straighten wrinkles)

Sand in Coat Sleeves (open the seams in the following places and

watch the sand ~~par~~ out: elbows - spot

shoulders - lateral line

wrists - stroke area down over hands,
away from elbows

fingers - gloves, stroke down fingers,
open ends)

Collar (watch a turtle neck shirt with a very wrinkled collar, smooth
the collar upward to the mastoid processes two or three times, end
with a firm, horizontal pull that does not pull the head out
of alignment.)

Balloon Head (place the hands over the ears, watch the head expand
between the ears, watch the emptiness of the head from the inside)

To stand: Counter throust with right foot into right thigh socket
to roll to left.

To roll back, put leg back and use it as support as you roll
back into place.

To roll half turn, shift weight to other thigh socket as you
go through center.

Go to hands and knees.

Sit up on heels.

Fold into femeral crease.

Unfold from femeral crease, watching vertebrae of spine stacking
up like building blocks from base to head.

Stand on knees.

Place left foot on floor, bend into femeral crease, push into
thigh socket and stand.

(At the end of this first week I feel a sense of completion and closing and anticipation of new directions. I can use the constructive rest position alone and make-up my own imagery or use the images presented this week. I am not usually able to focus on the sand and suit image for more than a little at a time on one part of the body, so I have developed a way of going to another part of the body if I am tensing up because of concentration. I feel more relaxed if I think of thick warm butter melting rather than sand pouring when I am thinking about my coat and pants. The sand is more effective in my legs and pelvis. I like to think of air or energy streaming out of my wrists and fingers. It is hard for me to imagine sand pouring uphill. I like the collar image, but I like tactile aid even more. My shoulders and neck feel awful this week. I tried everything on Will this week and he seemed to enjoy it and always asked me what happened in class when I came home. When I had trouble feeling myself as some particular image, it still helped to just see the image in space and feel myself separately at the same time. I am in a place of taking everything apart and it feels good. Sometimes I walk around with x-ray vision.)

Monday, June 13th

Sitting (review and integration of images)

When sitting feel the knees very light and let air out at the ends.

Trunk Flexion - while sitting do a forward rock, watching flexion in the iliofemoral crease, knees and ankles. Start with the movements large and end with them barely perceptible. (When I was doing them I could feel the deep pelvic muscles activated, They felt tingly.) Flex completely at the iliofemoral crease and let your body relax on your thighs. Watch the depth of the crease. When you come up come up from the pelvis, letting the spinal processes drop. If you can't pull up from the pelvis to start the upward motion, it is okay to push from the floor into the thigh sockets. (At first every time I did this exercise, I automatically pushed up from the floor. It wasn't until I asked Andy that it even occurred to me that I should be activating my pelvis. I am having a lot of trouble with "feeling right" activating muscles. I'm sure I have some internal messenger saying "Good is soft, Bad is hard." Perhaps if I think "energize" and "activate" I can by-pass the injunctions.)
BETTER STILL, don't FOCUS ON THE RESULT - JUST let it
Spine (review and integration) *happen.*

The overall goal is bilateral symmetry.

Blocks Image Think of the spine as a supporting column of blocks, stacking up. Use this image when you are unfolding. (Since I have been using this image properly for a long time, I can finally really feel the blocks stack up one on the other. An additional image that helps me is feeling them strung on a string as I fold over and feeling them slide back down the string into place when I unfold. I can also feel sand pouring down the centers of the blocks when I unfold.)

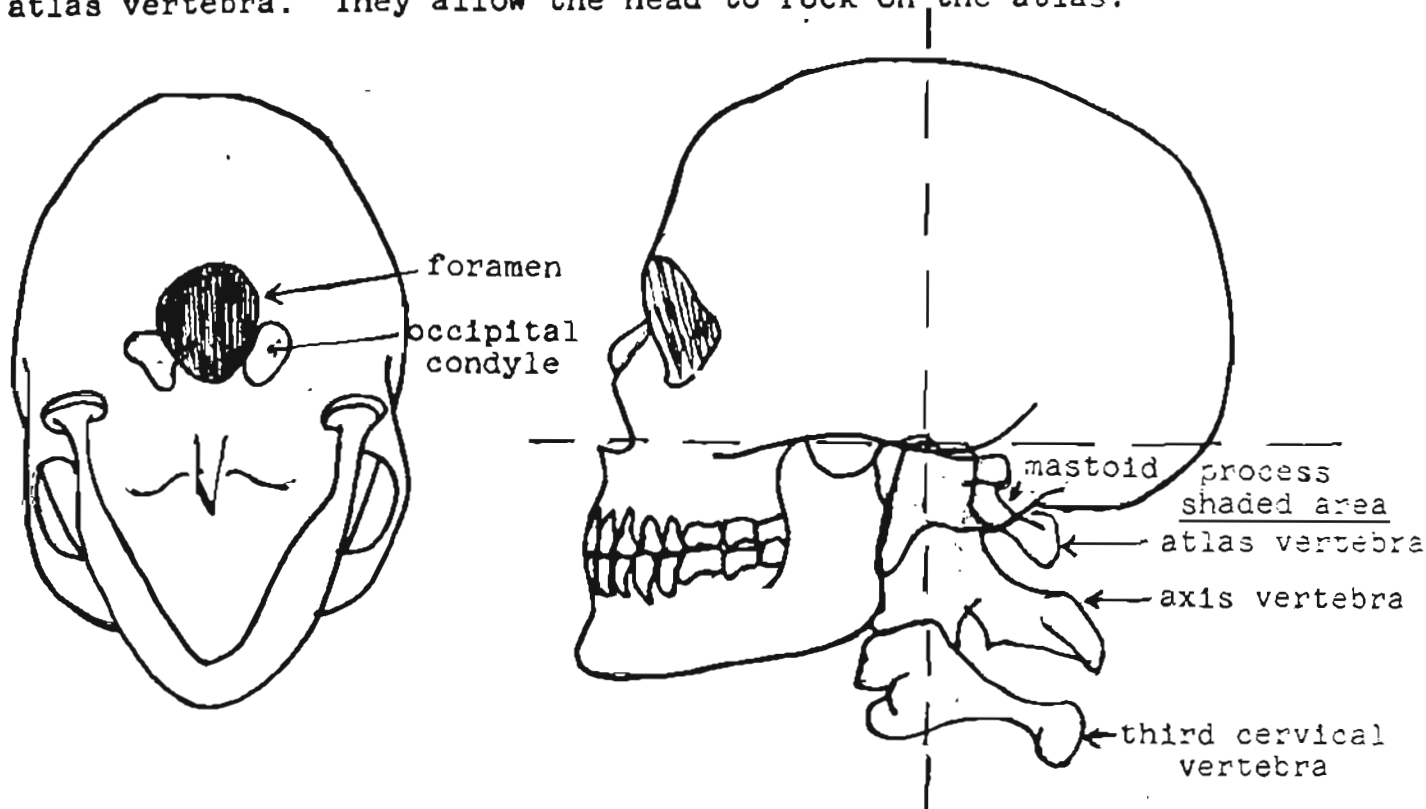
Constructive Rest (review and integration)

In breathing, concentrate on the deflation, not the inhalation. Feel yourself getting always flatter on the floor, always flat and always getting flat.

The Head

The head articulates with the atlas vertebra of the spine. The odontoid process (dens or vertical process) on the axis vertebra is the pivot.

The occipital condyles are protrusions on either side of the foramen (hole in the center of the skull) that articulates with the atlas vertebra. They allow the head to rock on the atlas.

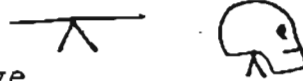


Visualize the top of the spine in the center of the head. The top is about even with a plane from the base of the occipital region and the nostrils and another plane even with the mastoid processes at the base of the ears. Let the mastoid processes soften and imagine the support in between them, not on the surface. Imagine them drop, drip down and away.

Sagittal Plane of head imagery

Foundation for imagery lever is the simplest mechanical device.

In the first class lever the fulcrum point is where two ends of the "board" balance as in a see-saw. The head is a first class lever with the spine as the fulcrum. Don't think of the spine as a hinge joint.

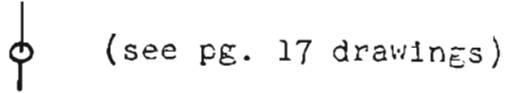


Head balancing on top of the spine image

Think of a teeterboard. If you can let the head balance easily on top of the spine, the extra muscles being used may be released. With your fingers draw a line through the top of the spine by placing one hand on the base of your skull and the other at the nostrils. Then place your fingers at the mastoid processes. Feel the center point where the two imaginary lines intersect. Imagine a tent pole (spine) with guide (not support) wires (neck muscles) aligning the pole (head and spine head in place on axis of gravity.) Let the balance be precarious. Don't think of fixing the head or other parts of the body. The joints should be flexible, you should be able to fall in any direction. Watch the head balancing while walking. (When I concentrate on this imagery, I like to think of a small puddle of oil at the top of the spine that the head is floating on. This image goes along with the image I use of feeling the pelvis full of thick sloshy oil that slops freely through the bowl of my pelvis as I walk. I found this image especially helpful to me when I was trying (still trying) to do the camel walk. I dreamed about it and felt I was a soft gourd with legs. I could feel liquid sloshing as I walked and undulated. The surfaces of the gourd were stretchy, contracting in front and expanding in back as I moved.)

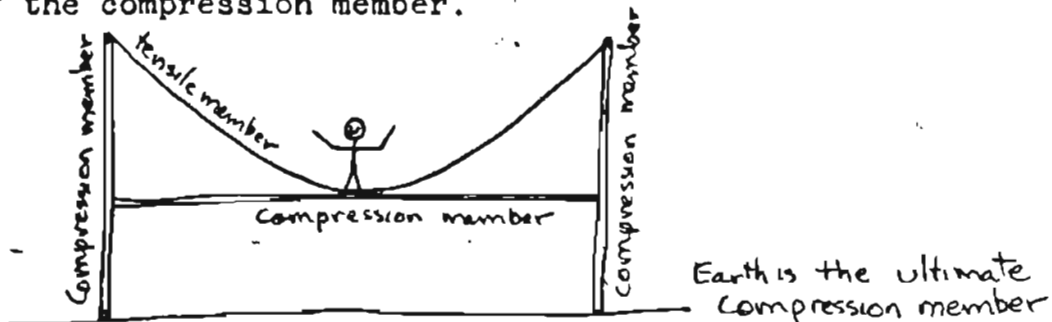
Compression and tensile forces

Start by thinking about the axis of gravity and the center of gravity and the spine.



(see pg. 17 drawings)

Compression force is when something rests on something else, compression members of a structure support weight. This is achieved by the member's ability to resist compression. Rigidity is a vital quality of the compression member.



Tensile members support weight that hangs from them. Resisting the molecules being pulled apart is a vital quality. Stretchiness is not necessary but common. Ultimately tensile members get their support from compression members.

Imagine yourself being held up by a hook attached to the ceiling and the sternum..



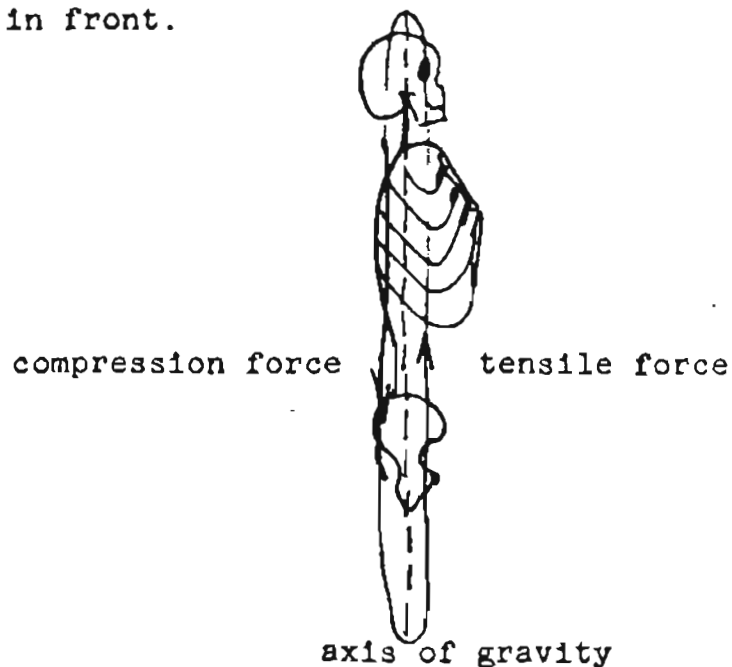
(integrate tail, up the front and down the back)

Sternal support (refinement)

Feel support up front -not from back of neck. Feel the sternum being pulled up and that you are suspended from the top of the sternum. Feel down the back. Incorporate the tail image for this.

Cycle Image is the central idea of Todd's work.

Groundwork for the cycle image The spine is the ultimate compression member of the body in the upright position. Support is transferred at the pelvis (see pg. 9a) Think of the compression axis as behind the axis of gravity. The abdominal musculature and muscles in front of the body give tensile support in front of the axis of gravity. Think of the compression forces as going down and equal to the tensile support in front that is going up. This keeps the ribs from toppling. Therefore, let the back muscles, seat, etc., release. Let the spine give compression support and deep abdominal (psoas) muscles and other muscles in front of body provide tensile support in front.



Imagery Think up the front and down the back. Give yourself tactile aid with your own arm go slowly up the front as high as possible without crunching back. Partner trace lightly down the back.

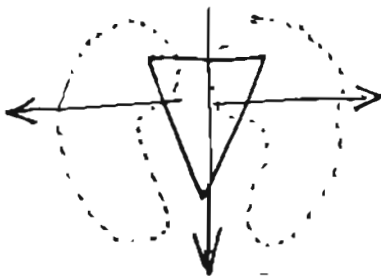
Rolling from the constructive rest position (added imagery)

Trace a line up your center with your left hand and let your arm rest on the floor above your head as high as is comfortable (as close to the axis of gravity as possible). As you roll to the right, let your left arm trace a center line up your front. As you roll back to constructive rest, let your arm sweep back up in a diagonal arch. The arm movement starts the roll from constructive rest, let the arm trail as you return to constructive rest. Remember to push with the left leg into the thigh socket as you roll. Do constructive rest using the sand image, suit of clothes, rolling with arm movements and smooth the wrinkles with no tactile aids.

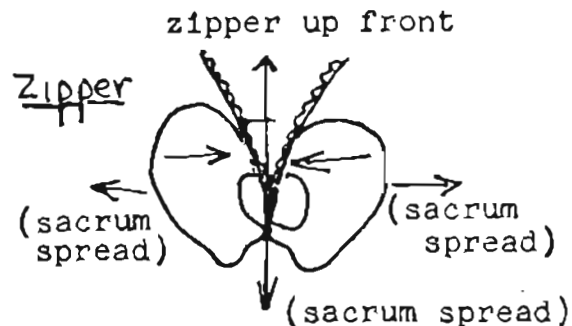
Tues. June 14

Sacrum as a triangle

Let the sacrum spread. Think of it as a triangle resting on the pelvic bones.



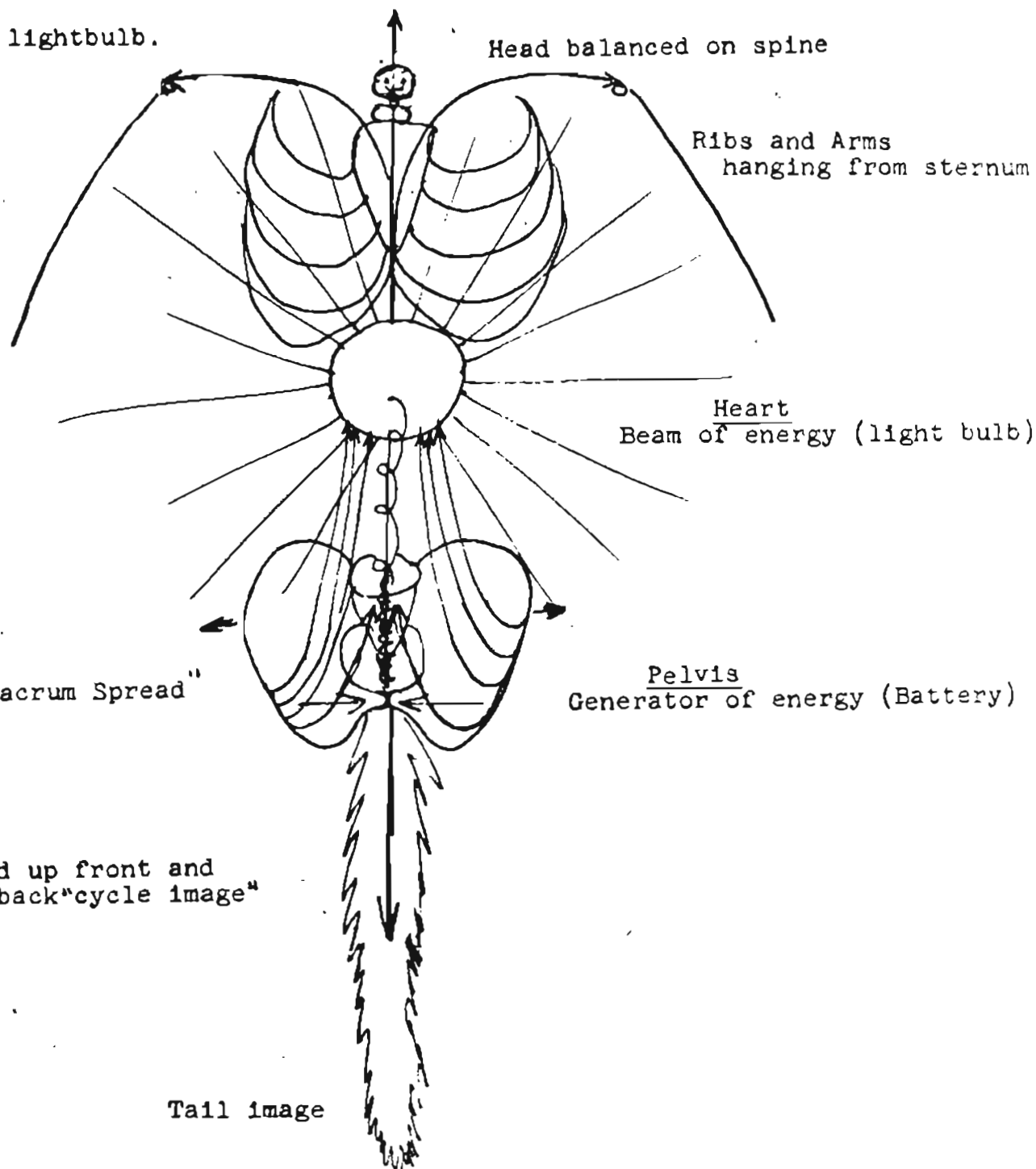
direction of spread of
sacrum

Pelvic area Back ViewPelvic area Front View

As the sacrum spreads across the back, think of zipping up the front. Smooth the wrinkles (lengthwise) down the back. Let the two edges of the pubic symphysis constantly come together, this will allow the sacrum to spread. The zipper starts at the pubic symphysis and stops at the navel.

Integrated Imagery my own imagery combined with Andy's.

Feel an expansion and upward movement in the ribcage with a lengthening down the back. You could imagine the head as the size of a vertebra balancing on the tip of the spine. The center of balance, deep in the pelvis can also be thought of as an energy source or battery. The heart region can be visualized to be the place where the energy emanates from, or as a lightbulb.



Synthesis of Body Alignment, Jamie's class in Bellydance and John's class in Jazz Dance. (Written Saturday night.)

Thursday in Jamie's class my pelvis felt very blocked. I was out of touch with bellydance because I had focused so much on what I was learning in the new jazz class I had just started with my friend John. I kept thinking of bones instead of soft deep energy because of what I was doing in Andy's workshop. I played around with feeling my thigh sockets and letting my weight rest on the tops of my femora and trying to let go of my greater trochanters and sit-bones. I did an arabesque and had an "a-ha" experience. I concentrated on balancing on the top of my femur, instead of holding my pelvis in place with my stomach and butt muscles as John had been saying to do in Jazz class. I was able to do it and felt my center blurr up into the center of my chest (where John said it should be) as I pulled up the front. I was wobbly on my ankle, but I think that will be better as I activate the muscles up the inside of my leg.

I didn't feel badly about being disjointed. I was in a place where I was taking apart everything I knew and was adding in new things I had learned from John and Andy. I did feel a little remorse for the secure feelings and grounding I had before I started taking things apart. But I know I am on my way to a higher place. At one point I thought, "Why am I having such a tough time standing on the top of my femora and letting loose everything else? I never have a hard time when I am dancing that way (bellydancing)." When I danced around shimmying, doing various bellydance steps, after I thought about this I was automatically able to move "correctly", even

though I couldn't take apart what I was doing right.

Today I was able to integrate the last three weeks of exploration. I understood ^{Thursday} a night (in bellydance class) on an intellectual level, how to really stand. What I had not understood before and what I know now, but I need to work on, is this proper alignment. I had always thought that to stand properly one must stand with slightly bent knees. Now I see that Jamie has been concentrating on that aspect because it is so difficult to stand ~~with~~ without tightening the butt and trochanters, while keeping the legs straight and the back long. Bellydance is also done with bent knees. John has been saying in his class to stand with straight legs, butt tucked in, weight forward almost completely on the balls of the feet, back long and pelvis tipped forward. Now I see that I can stand the way he wants me to (back long, body aligned, projecting from the heart) while standing properly according to what I have been learning from Andy. I was so glad when John agreed that Andy's ways were best. He said he was saying all the other stuff (that I disagreed with about holding in the butt, etc.) for people who come to his classes who are not interested in deep integration and good body alignment. Now I know how to filter what he says in class and be completely integrated.

This morning in John's class I played around with doing pliés and all the other exercises he gave us without holding on with my butt and with feeling my "long tail". I couldn't let go of the front of my thighs, but I could feel my greater trochanters letting go a little. I discovered that I was much sturdier in all positions and movements, when I pulled up from the front. I am very conscious of the places I have to release and energize. Namely, release the fronts of my thighs, the lower half of the sides of my thighs, the outsides of my ankles. I have to energize the inside of my thighs.

next time I ride. Right now I feel the inside of my calf muscles and my thigh sockets very clearly, but in order to hold myself on the triangulation of my feet I grip with the wrong muscles.

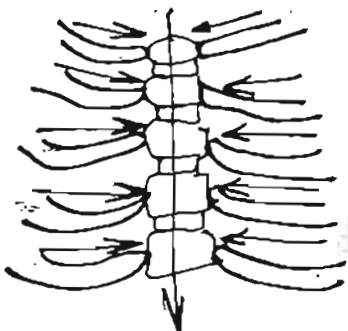
Sometimes when I pulled up very hard up the front from my pelvis and came forward with my diaphragm- center I could energize better. Tonight Andy suggested that I work on the problem in constructive rest and not while standing. He said to concentrate on the bagginess and looseness of the thigh portions of the pants image. I am encouraged by my conversation with John about this, because he says I do it correctly when I dance as long as I stay focused. He said I did it in my Bellydance performance.

Ribs

Ribs have indirect articulation with the sternum via cartilage. The ribs each articulate directly at the spine in two points: the knuckle on the lateral process and the head of the rib on the vertebra. Concentrate on the head articulation and ignore the lateral process for these images. Think of the ribs as deriving compression support at these points from the spine. The tensile support is at the sternum.

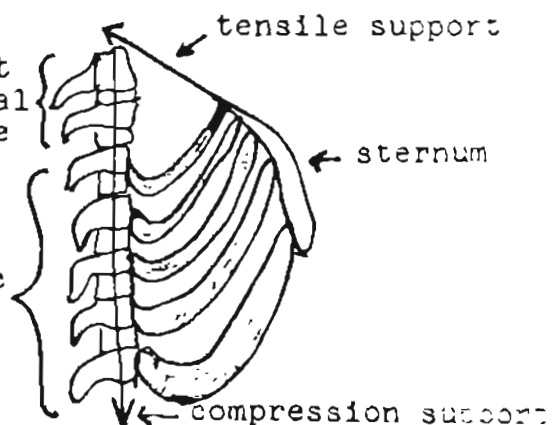
Compression Image Let the ribs rest on the spine and transfer the weight through the ribs into the spine. The tensile support through the sternum goes to the top of the spine for compression support.

ribs spine ribs



represent
7 cervical
vertebrae

represent
12 thoracic
vertebrae
& ribs



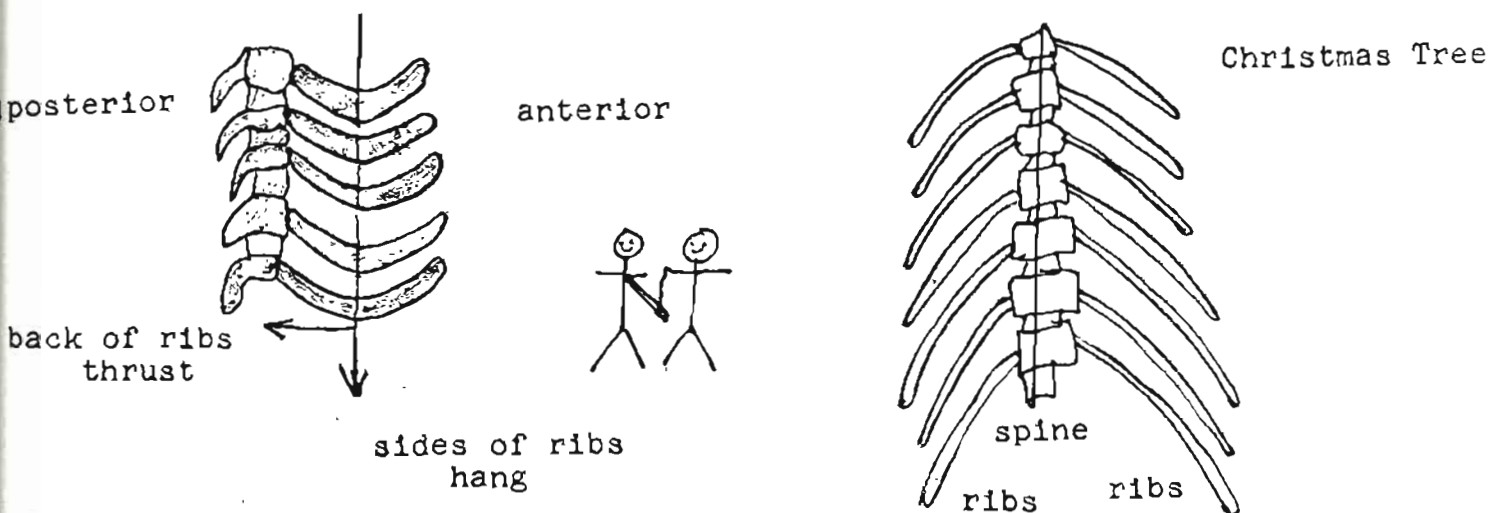
tensile image

use the sternum hanging from the ceiling (see diagram pg. 24)

Rib images

First feel the sternum hanging. Let the ribs fall away from the arm pits downward. Tactile aid partners touch the sternum then brush the side of the ribs starting at the armpits and going down the side.

See the ribs hanging, falling away from the armpits and thrusting into the spine, even as the ribs hang down from the spine.

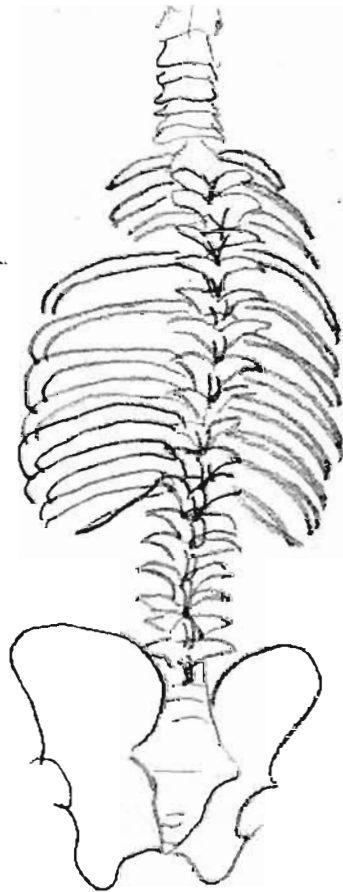


To aid the integration of these two images, hold a stick up at one end with a rope and put the other end into your partner's armpit. Notice that the "rib" is thrusting into the "spine" even when it is at a downward angle away from the spine. The tensile strength goes back to the spine via the mastoid muscles.

assignment: 1. draw side view of skeleton with compression and tensile axes (see page 17a and 25) 2. draw a lateral view of head articulation with spine (see page 22) 3. Draw a rear view of the ribcage with no shoulder girdle and with a pelvic girdle (see page 31a)

31a.

Backview of Spine, Ribs and Pelvis



Tactile Aid for ribs being supported by spine

Lie down on left side with head on a small pillow and body aligned (ear, shoulder tip, greater trochanter) with pad between knees and ankles. Let the top arm rest easily on the side. Partner find the first thoracic vertebra (first down from highest long process) give a thrust down to floor at angle so that you are also pressing forward. Touch only a specific point in the soft muscle in the depression between the processes and into the vertebra. Do about twelve places down the spine about $\frac{1}{2}$ inch apart. Feel for muscle to be more supple. Receiver visualize diagonal line through body. Stop slightly above waist and turn over and do the other side. (I was very surprised to feel how much to one side the line of pressure points felt on my back. I felt very tight and the exercise was immediately helpful. When I did Mary's back, I couldn't always figure out if I was in the right place, but she was happy with what I did.



Wednesday June 15,

Resting Point is the place where there is a transfer of weight

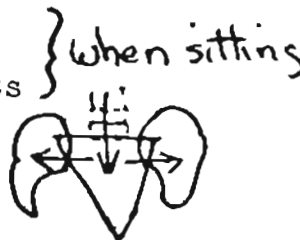
sit-bones on bench

femora to thigh sockets

sacrum to pelvis

ribs to spine

head to top of spine



also feel the "sit-bones" between the ears and let the head rest on them.

Dowel Image

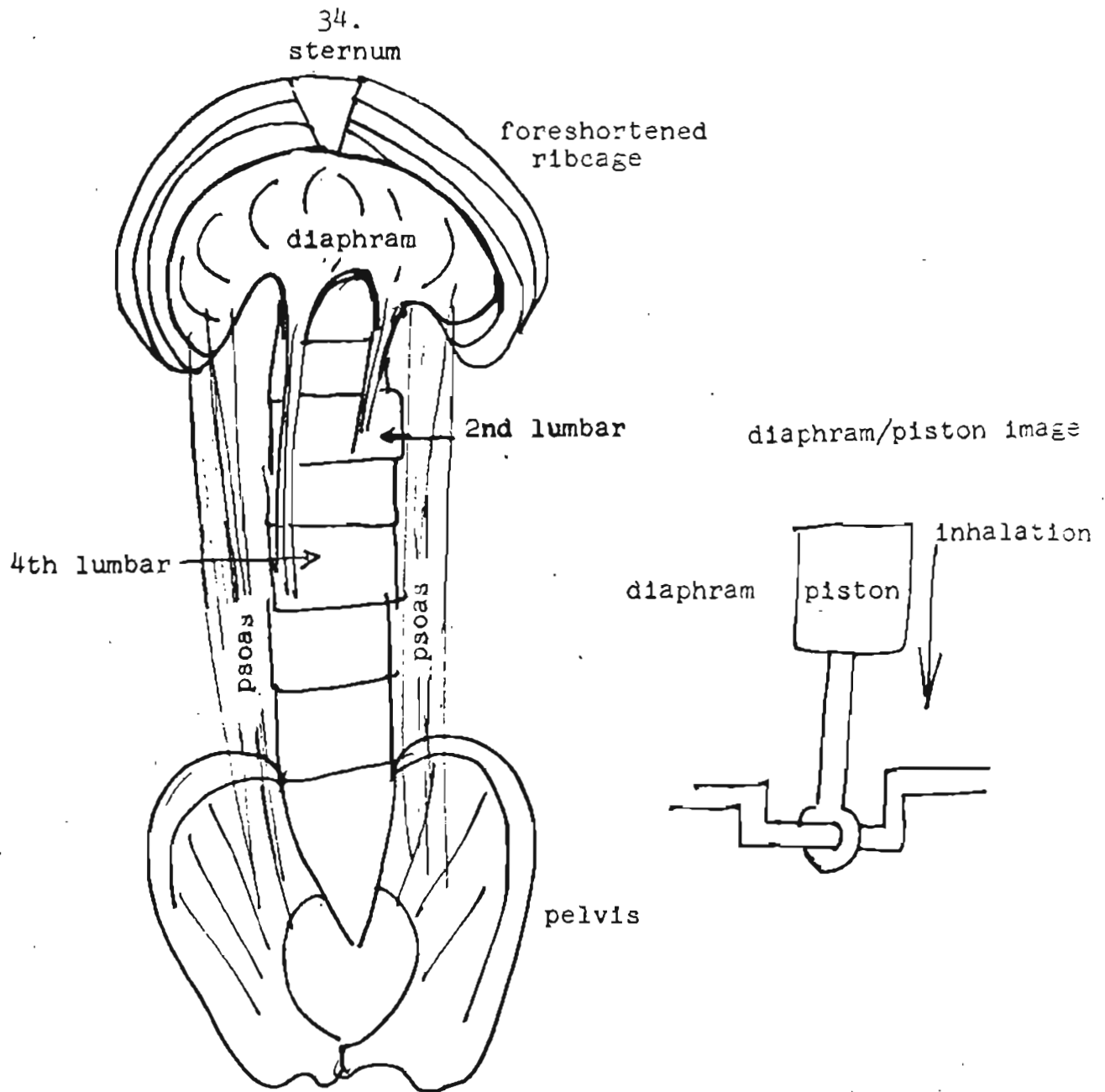
When sitting feel the femoral crease all the way through the pelvis. Let the femur be pulled all the way through. Touch the crease and in back where the crease comes out. Imagine the femur as a dowel that is constantly being pulled through by friendly fingers, rotating medially (inward) Use also with the suitcoat while you are feeling flat and flattening.

Breathing

Breathing is a highly complicated and controversial subject. the main function is to bring in oxygen and to expell carbon dioxide. The diaphragm lowers to allow room for air and ribs to expand. the diaphragm is the major muscle for breathing and it also aids blood and lymph circulation. The diaphragm is a fibro-muscular structure that is between the throacic and abdominal cavities. It is lopsided and irregular in shape.

General Muscle structure: the ends of muscles develop into tendons which enter the bones to connect the muscles to them. The diaphragm is somewhat different. The outer periphery is contrative fiber and the tendon is in the center. The diaphragm has two tendons connected to the spine, the crura, which draw the diaphragm downward in inspiration. The right crur goes to the fourth lumbar and left crur goes to the second lumbar. Psoas muscles are also connected to the diaphragm. Their relationship is not understood, Todd feels that they (the psoas muscles) are very important in breathing.

Think of breathing as essentiall a verticla effort that needs a long spinal axis.



diaphragm with relation to rest of body

Rib expansion in breathing

Rib expansion happens most in lower ribs. Sternum lifts on inhalation to allow more room for air. Imagine an umbrella opening and closing with the central axis as the stem.

Centering

Exhalation brings the body back to center. Let yourself completely exhale and therefore aid in centering. Centeredness is dynamic, not static. Centering is a constant process of being off center and coming back to center. Think about walking and breathing in this regard. Take a space before going off center after having reached center.

Hissing

Give a big sigh. Breathe normally. Now do another one with a hiss. Do a good strong hiss and let all the air out.

Tactile aid for hissing.

Give tactile aid to anterior aspects of thoracic region to partner who is lying in constructive rest position. Pull slightly down and out while the partner is hissing. Use this in conjunction with the coat collapsing on the floor and with the image of a column of mercury that rises as you hiss. Try to see the mercury reach to between your shoulderblades. When hissing, don't push with the back muscles. Let the hiss end of its own accord.

Constructive Rest (integrated with new imagery)

Person on the floor go up the front with both hands, one at a time, ending with both hands over the head. Aim for hands to be as close to axis as possible. Leave arms up and imagine the suit of clothes. It is more difficult to do with the arms up. Use the mercury image with your exhalations instead of the piston image because of the flattening. Do the above tactile aids with hissing and mercury image. Now hiss with arms over chest. Give tactile aid to arms and upper chest.

Collapse pelvis with two hands. Use the pocket image: slide the hands (pockets) away from the back to around the front. Tactile aid: hands move out across the back of the pelvis and in to the front of the pelvis. Next do the zipper image with tactile aid. Now the belt buckle. Next the dowel, rotating inward (greased). Partner touch the femoral crease and underneath the pelvis. Balloon head image, then thrust slightly outward at end behind the shoulders at points even with the ears. Do the turtle neck and then pull on the mastoid processes. End with the skull cap as part of the turtle neck coming up the back and down over the forehead. Partner brush hands lightly over the top of the head and down toward the nose. Roll onto hands and knees. Fold, don't collapse into ilio-femoral crease. Stand on knees. Stand up with left foot forward, bending into the iliofemoral crease. Hiss with arms over head. Shrug shoulders.

Thursday June 16th.

Shoulder Girdle

The scapulae and clavicles form the shoulder girdle, only articulating to the rest of the body bone to bone at the sternum. At the shoulder tip, the shoulder girdle attaches to itself. The scapulae attaches to the ribs with small, fine muscles that are not meant to be as strongly developed as they often are.

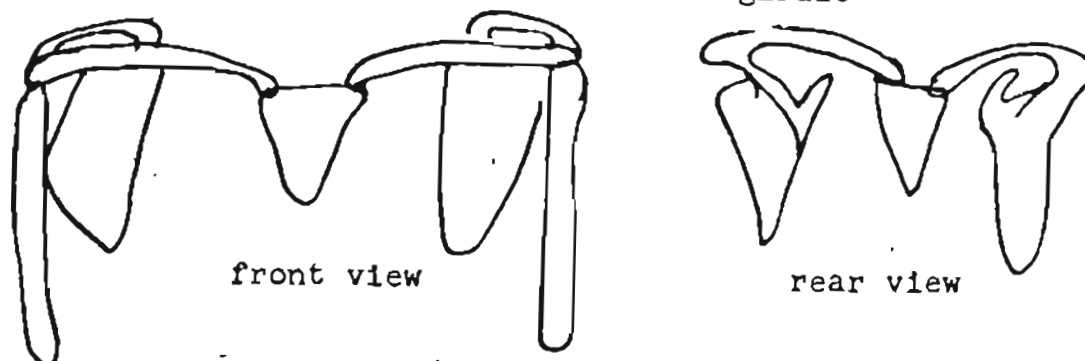
Kinesthetic connection: separate shoulder blades from the ribcage and spine and think of the arms as part of the shoulder girdle.

shoulder girdle imagery

Think of the shoulder girdle as a cape loosely thrown over the ribcage and clasped at the sternum.

tactile aid: touch the sternum and partner brush the back and shoulders and the same time.

shoulder girdle



Think of the clavicles as yardarms that keep the arms at bay, away from the ribcage, which would be damaged in strong arm movements if there were no clavicles. The shoulder blades are to protect the ribs in back. Feel the sternum being pulled up, then the clavicles resting on the sternum with the arms hanging from the sternal sockets and ultimately from the sternum. Imagine the shoulderblades slipping to the sitbones which are also slipping down and they are both constantly slipping. Then imagine the shoulder blades slipping to the back of the knees then to the heels which sink into the floor and are constantly sinking.

Shoulderblade tactile aid in constructive rest.

Imagine the suit of clothes and let your partner pick up your body on one side and trace the edges of the shoulderblades. Then the partner hooks the fingers under the median edge of the shoulderblade while you imagine a sponge slipping inbetween the shoulderblade and the ribcage. Imagine the sponge filling with water and sinking with the shoulderblade into the floor. Do the other side.

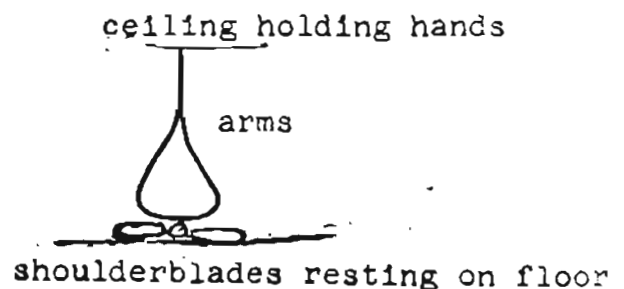
Beginning constructive rest with hissing

Hiss at same time beginning constructive rest with the following arm movements: Cross arms and move them to perpendicular to the floor and at the same time slide the elbows together. When they are together and the arms are perpendicular, open the arms ending with the hands together pointing toward the ceiling. Then collapse the arms across the chest, keeping the shoulders down on the floor because of the coat collapsing image. Imagine the hands being very light and suspended by the ceiling. Let the movement flow with the hiss. Do not do it as a studied movement, but let it flower open. Imagine the shoulderblades spreading and relaxing.

Do the down image, letting the sacrum spread, imagine the zipper up the pelvis.

Cycle the arms, left then right above the head and hiss at the same time when standing after constructive rest.

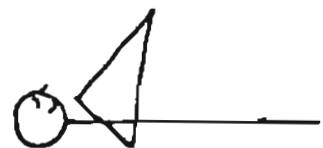
Slide the scapula up and down over the ribs in a shrug.

Arm movements for hiss in constructive rest

topview 1st position



topview 2nd position



sideview 3rd position

Friday June 17th.

Head Balance

Center with your eyes closed. Imagine the central axis. Add the image of the head balancing on top of the spine. Soften the nostril and side of your left eye socket with the finger tip of your right hand. Now do the other nostril and edge of the eye socket. Gently stroke over each eyelid. Then, soften the temples with your finger tips. Think of your eyes as deep in cone-shaped sockets. Let your eyes flower open.

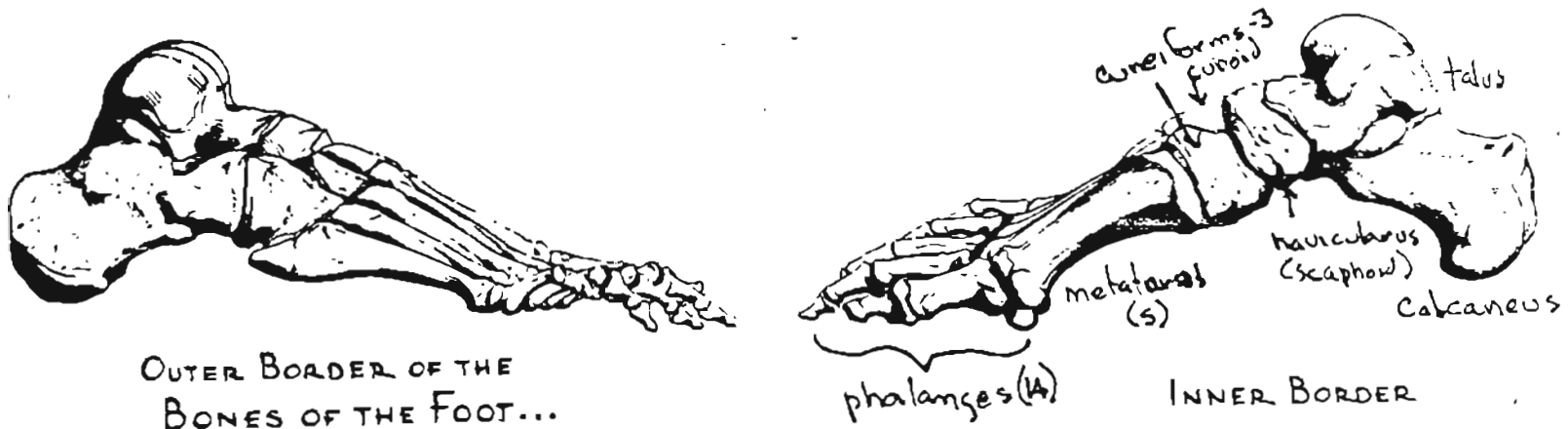
Clamshell Image in the iliofemoral crease.

As you fold into your iliofemoral creases, think of matching clamshells, back to back in each hip joint. As you fold into the iliofemoral crease, picture the front shell closing and the back shell open.

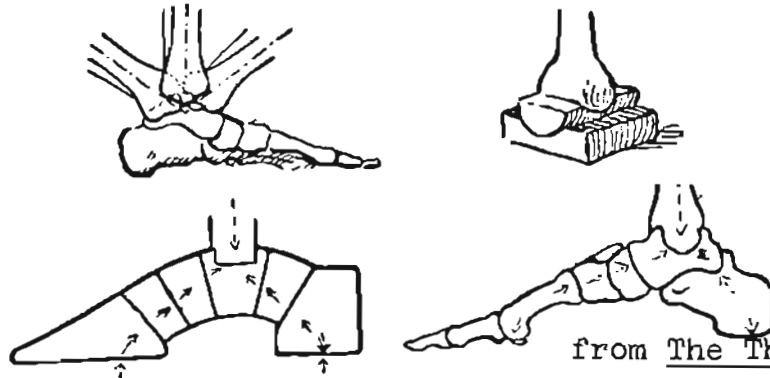


The Foot

The bones in the anterior region of the foot are the metatarsals (5) and the phalanges (14). Those in the posterior region, or the tarsus, are the calcaneus, talus, navicularis, cuboid, and cuneiforms (3).



The bones make up a series of transverse and longitudinal arches which provide strength and flexibility.



from The Thinking Body
by Mabel Todd

The foot can also be imagined as being composed of the "heel foot" which provides compression support and the "ankle foot" which provides tensile force and helps to maintain the longitudinal arch. Rather than supporting weight, the ankle arch guides the foot into alignment for weight to be supported by the compression support of the heel foot.



Heel Foot

Ankle Foot

UNDER SURFACES OF THE
BONES OF THE FOOT...



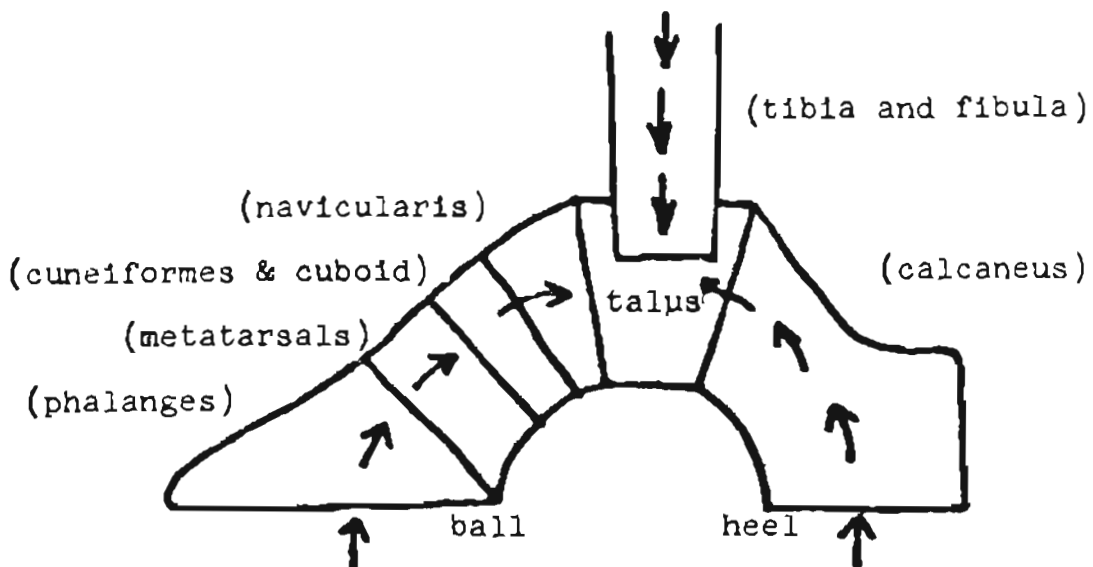
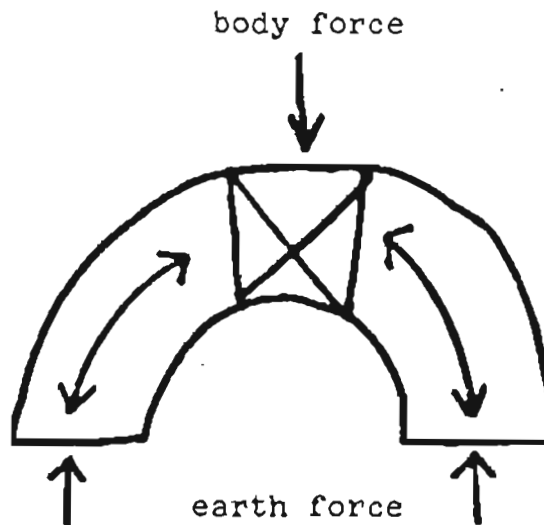
Heel Foot

UPPER SURFACES OF THE
BONES OF THE FOOT...

From Anatomy by Walter Foster

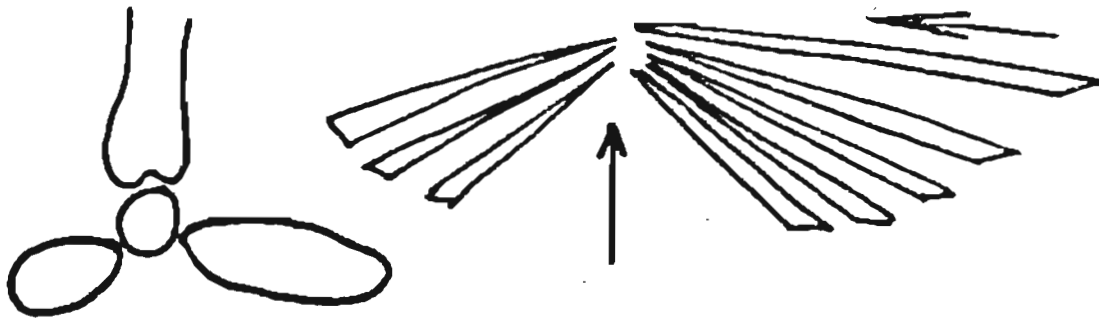
The talus

The talus is the keystone of the foot. It is the center of the main arch of the foot and is kept in place by the pressure of the bones abutting on it.



Tactile aid for finding the center of the foot.

With your finger on the under side of your foot, trace a line along each of the metatarsals of the first three toes to the center of the foot under the ankle. Let the toes hang from the center of the foot.



While walking, peel the foot off the floor. Let the foot hang where it will, don't make a point with your toes. Now peel the foot back onto the floor. Goal: to feel weight over the tarsus which is in line with the thigh socket.



Centering the foot

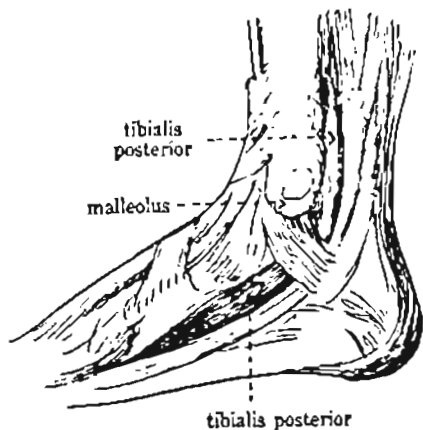
Walking: Unpeel and peel the foot before transferring weight. Feel or imagine the weight in the thigh sockets, line up the talus with the thigh socket.

Muscles in the foot

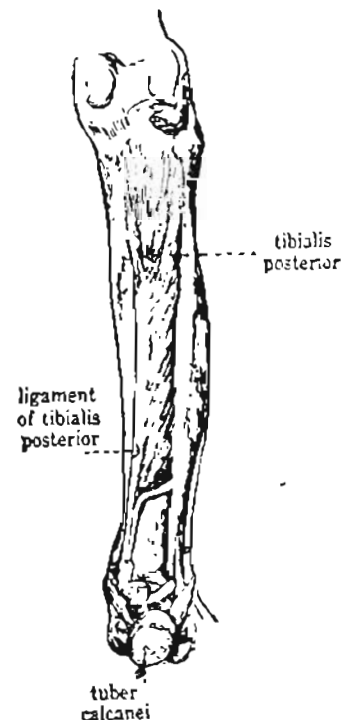
The tibialis posterior is a double fan-shaped muscle that is especially important in keeping the axis of weight centered in all the foot bones. It is the most central of all the leg muscles, arising along both bones of the lower leg, and from the interosseous membrane. Its fibers converge into a long, strong tendon that passes down and around the ankle, inserting into the navicularis with fan like projections to all the other tarsal bones, except the talus, and to the bases of the four outer metatarsals. These projections give the tibialis posterior radial control. (Paraphrased from The Thinking Body, pg. 143)

Ligaments in the foot

Ligaments are either white ligaments, which are not stretchy, or yellow ligaments, which are stretchy. The ligaments that connect under the tarsus between the bones on the posterior and anterior side of the talus are yellow ligaments. Extra stress is not good (i.e. stretched ligaments let the ankle turn in.)



Tibialis posterior muscle. Note its tendon as it bends under inner malleolus. (Redrawn after Spalteholz.)



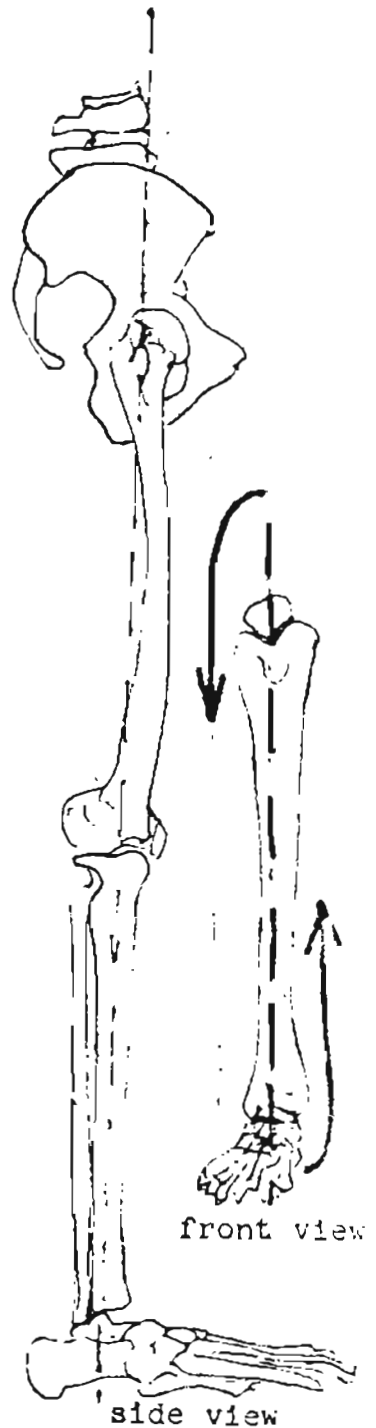
Imagery to activate the tibialis posterior

Touch the center of the underside of the foot. Go for what feels like the center, not where you think the center is. Watch a thrust ~~from~~ the center of the foot into the center of the thigh socket. Do the same with the other foot.

Imagine the front of the legs. Imagine a line going down through the center of the tibia and through the talus (the keystone). Start a cycle image up the inside of the foot, releasing the heel and the outside of the foot on the downward side of the cycle.

Tactile aid for the foot with a partner

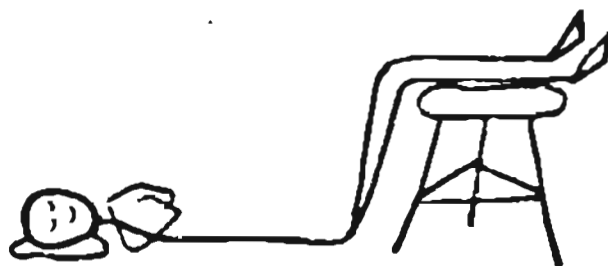
Lie down on the floor with your lower legs resting parallel to the ground on a low bench with a pillow on it. Tie your legs together if they tend to roll out and off the bench. Partner find the foot center (according to where the person receiving the tactile aid feels the center) and trace lines from the three first three toes back to the center of the foot. Let your toes hang from the center. While imagining a "Pin the Tail on the Donkey game," let the three



"toe-tails" and the "heel-tail" hang from the center of the foot. Imagine the heel and toes being lower than the center. Let them fall towards each other. Partner touch under the ends of the leg bones where they protrude at the ankle while you imagine the foot center rising to that level inside the foot. Imagine grasping with your foot the finger of your partner that is touching the center of your foot.

Additional imagery

Imagine a sea anemone. Flex the foot and push the toes down at the same time. Partner touch the center of the foot and the ilio-femoral crease at the same time with two hands. Imagine a thrust from the foot center into the thigh socket. Your partner could also trace a line up the inside of the leg.



Position for receiving tactile aid for the feet

To get legs of the bench after tactile aid, draw your left, then your right legs back to where the feet are on the edge of the bench. Put your hands on your thighs and lower your feet to the floor, brushing your hands back to your thigh sockets.