Beginning Experiments

by Catherine Kettrick, Ph.D.

It is most helpful to do these experiments with a friend. If you don't have a friend handy, you may find using a mirror helpful. Even more helpful would be an arrangement of mirrors so that you can see yourself from the front and sides at the same time.

Where is your head?

Do you know where the top of your spine is? The bottom of your head rests on the top of your spine. Think about that for a moment, and then put a finger on your neck at the level you think is the top of your spine. Where is your finger? Some people think the top of their spine is at the level of their collar. Some people think it is at the level of the bottom of their ear lobe.

How To Locate the Top of Your Spine

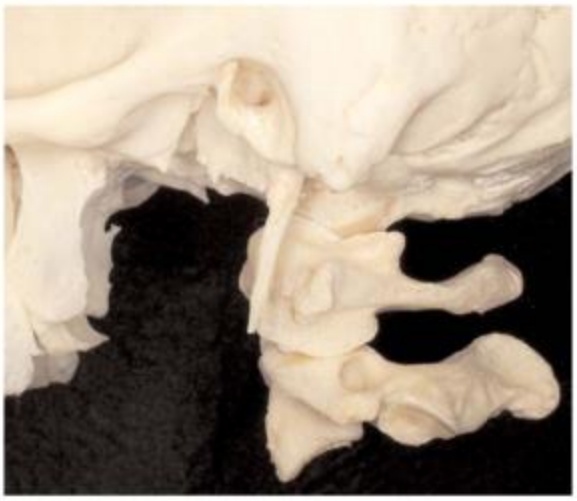
Gently put a finger in each ear. Very delicately tilt your head forward and back a tiny, wee bit, maybe a few millimeters or less. Notice where that moving is happening. The top of your spine is at the middle of the bottom of your skull, between your ears and behind your nose. Is that where you thought it was?

Look at this picture:

Look at the joint between the bottom of the skull and the first vertebra: the atlanto-occipital (A/O) joint. What do you notice about the shape of the bottom of the skull and the shape of the first vertebra (the atlas)?

The bottom of your skull where it rests on your atlas is convex shaped. The top of your atlas is concave shaped.

Here is another view from the side:



The structure of that joint, with the convex shaped bone resting on a concave shaped “nest” is what allows our head to tilt forward and back on the top of our spine. This is the only movement this joint can make, and its range of motion is very small: it can only move a tiny bit—but that tiny bit is crucial, as we will see shortly. (If you want to move your head more, to look at the ceiling or down to the floor, you have to use more of your cervical (neck) vertebrae to do that).

So now, as you sit there and read this, with your fingers back in your ears, gently tighten the muscles in the back of your neck and see what happens to your head. Stop tightening them, and see what happens. Play around with that for a while. Notice that as you tighten the muscles in the back of your neck, your head tends to drop back and down from the top of your spine. As you stop tightening the muscles in your neck, your head tends to move forward and up from the top of your spine. Why does your head move back and down? Because you tightened muscles in the back of your neck. Why does your head move forward and up? Because you've stopped tightening those muscles in your neck. (You can take your fingers out of your ears now).

Why Should I Care Where My Head Is?

Because of a simple fact which is true for all animals with a head and a spine (that's us!): the poise of your head at the top of your spine affects the quality of how you move. Your head balances easily on the top of your spine—unless you do something to interfere with that balance.

So, How Do We Interfere With That Balance?

We start by unnecessarily tightening the muscles in our neck. Try this experiment. Stand, or sit in a chair without arms. Move your arms around and notice how they feel. Now, while continuing to move your arms, tighten the muscles in the back of your neck very gently and let your head drop back and down from the top of your spine. How do your arms feel now as you move them?

Now stop tightening the muscles in your neck. Did your head move? Did your arms feel different when you tightened your neck and then stopped tightening it? If you aren't sure, try the experiment again. This time let your head gently drop even farther back and down from the top of your spine as you move

your arms.

What do you notice?

Now stop tightening the muscles in your neck. What do you notice?

(You can stop moving your arms now).

If this experiment went for you as it does for most people, your arms probably began to feel uncomfortable when you tightened your neck, perhaps heavier and harder to move. You may also have felt discomfort in your neck. Hopefully, when you stopped tightening your neck, your arms felt better, and somewhat easier to move. So, why did your arms feel uncomfortable? What caused it? You did, by tightening your neck. What caused them to feel better? You did, by stopping the tightening of your neck.

We have been talking so far about the muscles in the back of your neck. You have muscles in the front of your neck also. Many, perhaps most people when they disturb the balance of their head on the top of their spine, tend to over tighten the muscles in the back of their neck. Some people tend to over tighten muscles in the front of their neck, and some people do both! If you would like to make the experiment, try tightening the muscles in the front of your neck, and see what happens. Can you do that without also tightening the muscles in the back of your neck?

What About From the Neck Down?

Let's try another experiment. Sit in your chair, and gently tighten the muscles in the back of your neck so your head starts to drop back and down. (If you need to remember where the top of your spine is, put your fingers in your ears as you drop your head back and down). Continue doing this, continue some more, and notice both what happens to your body and the quality with which you are moving.

What did you notice? Most people notice that they go into a "slump." How did you get there?

You know how you started to get there, because you know that you tightened muscles in the back of your neck to begin pulling your head back and down from the top of your spine. What happened next? Were you aware that you also had to tighten muscles in your body to continue "slumping?"

For many people, when they "slump," it doesn't feel as if they are tightening muscles to do it. It usually feels like something they would call "relaxing," especially if they slump after "standing up straight" for a long time, or working hard.

Does your slump feel "relaxed" to you? Do you like sitting there slumped? Or is it beginning to feel uncomfortable? (Remember, you should still be sitting there slumped). Most people don't like sitting slumped for very long.

So How Do I Stop Slumping?

Many people would tell you to "Sit up straight." They would tell you to *do* something to stop slumping. So let's try that. As you sit there, slumped, "sit up straight," and notice what you do to "sit up straight." Notice two things: what direction you are moving yourself *in*, and what quality you are moving *with*.

"Direction" means pathway: what path did you take to get from point A ("slumping") to point B ("sitting up straight")? "Quality" means how you might describe how you move: is it easy, comfortable, tense, unfamiliar, light, heavy, etc.

How comfortable is your "sitting up straight?" Could you "sit up straight" for a long period of time and be comfortable? Could you "sit up straight" on a bench without a back for several minutes to an hour, and feel comfortable and free from pain?

Most people are uncomfortable "sitting up straight" for very long. If you are uncomfortable, let yourself go down again into a slump, and as you do it, notice how you are moving—in what direction you move to slump, and with what quality you are moving. Notice especially what you do with your whole head in relation to the rest of you.

Remember that we are talking about your WHOLE head. Many of us think of our heads as everything from the ears forward. This makes some sense, because we seem to do so much with that part of our head—see, smell, taste, hear—and we look in mirrors a lot, and see the front but not the back of our head. But our whole head (which encloses the brain we need to see, smell, taste and hear with) is much bigger. If you are not sure, put one hand on the back of your head (where you might put both hands if you are lying on your back and wanted to put your hands under your head) and the index finger of your other hand in an ear. Now tighten the muscles in the back of your neck, and pull your head back and down. Do you notice how your whole head is moving?

So, there you are, slumping. Did you notice how you got there? If not, let's experiment some more. Start where you are (you should be still slumping) and "sit up straight." Do it slowly enough that you can notice what direction you are moving in, and what quality you are moving with.

What did you notice?

Did you start moving with a nice, easy quality? Did you continue with that quality, or at some point did you start over contracting muscles? Did you notice if your head moved first, or if another part of you moved first? If you are not sure what you did, here's an easy way to find out. First go into a slump. Now, think about your idea of "sitting up straight" then go ahead and follow that idea to "sit up straight." And now, after you feel you are "up straight," consciously "do more" of "sitting up straight." What direction did you move in? What quality did you move with? Were you aware of what muscles you tightened to do more of "sitting up straight?" Most people tighten muscles in their back to "sit up straight." Did you? If you aren't sure, repeat the experiment, observing until you have an idea of what you do to "sit up straight." If you are not sure what you are doing with your head when you try to "sit up straight," put your fingers in your ears again as you move.

A Different Way to Stop Slumping

So, now you've learned something about how you slump, and what you do to "sit up straight." But you still have a problem: You don't want to slump, but "sitting up straight" in your usual way isn't comfortable either. What can you do?

First, do you remember how you got into your slump in the first place? You got into your slump by over contracting muscles in your neck and body. You *did* something to slump. So what makes more sense: to

stop slumping by doing something else to "sit up straight" or to stop doing what you did in the first place to slump?

Let's do another experiment, to clarify this concept.[i] Hold up one index finger. Place your other hand, palm down, on top of your index finger. Move your finger around. How does that feel? Is it easy to move? Hard to move?

Now push down on your finger.

What happened?

You probably observed that your index finger bent, felt pushed down, or in some way distorted. Now take your hand off.

What happened?

Your finger (I hope) returned to its original condition.

Why did you finger "bend?" Because you pushed on it. Why did it stop bending? Because you stopped pushing on it.

Why did you slump? Because you pushed on yourself, by tightening muscles in your neck and body. How can you stop slumping? By stopping pushing on yourself.

By now we hope you will agree that it makes more sense to stop slumping by stopping doing what you did to slump in the first place. So, how do you stop? Remember what you did to slump? You began by over contracting muscles in your neck, and continued into your slump by over contracting muscles in your body. So to get out of your slump, you want to stop this over contracting.

Begin with the relationship of your whole head to your whole body. While you are sitting there, slumped, think about letting your whole head move delicately forward and up from the top of your spine. Notice what happens. (Remember the pictures of the skull and the first vertebra, and their shape).

At first, you may not notice much movement. That is fine, because it will be a very little bit forward and up. Just notice the delicate ease with which you are thinking and moving, and allow that delicate ease to continue. Continue that thinking and allow your whole body to follow. What happens?

You will probably find that as your head moves just a little bit easily forward and up from the top of your spine, your whole body will begin to follow easily in that upward direction. Again, it may be only a little bit at first. Again, this is fine. Pay attention to the quality of your thinking, and the quality of your moving, not “how far” you move. Let your thinking and moving be as easy and delicate as they can be.

Delicately thinking of letting your whole head move forward and up and your whole body follow is an indirect way of stopping tightening your muscles. You are not *doing* something to stop tightening them; you are simply thinking of letting yourself move easily and delicately.

Doing this kind of thinking may feel like you are doing "nothing." In fact, you may not notice any change at first (which is why it is helpful to experiment with a friend, who can report what they see). At this point, many people will be tempted to "do" something so that they can feel something, so that they "know" they let their head move. RESIST THIS TEMPTATION! If you try to do something, you will only over tighten your muscles, which is the opposite of what you want. So, go back to your thinking, and very delicately, with the smallest thought you can make, think about allowing your whole head to move forward and up from the top of your spine, and allowing your whole body to follow.

When to Stop

How "far" can you go with this new thinking? Eventually very "far" indeed. For now, however, it is most important to make a small, beginning change, and be happy with that. If you try to do too much, you will, in fact, be "doing" too much, when what you want is to "undo" what you don't need to do in the first place. So when to stop is after you have done a little bit of this new thinking, especially if you have noticed a nice change, and especially if you want "more" of that change. Although most people do not want to believe it, it is true: you will succeed far more quickly, and with far fewer frustrations and disappointments, if you do a little bit of clear experimenting and thinking, observing, experimenting, and thinking, and then STOP, than if you try to do "more." So:

TAKE LOTS OF BREAKS!!!

Especially if you do feel yourself becoming uncomfortable or stiff, then REALLY take a break. Go read a book, get into another world, call your mom or brother or a friend, go for a walk, and only notice the scenery, feed the cat, whatever. Take a break!

Continuing to Begin

You now have some information that will make it easier for you to change how you move. You have also done some experimenting with one particular activity, sitting. You can now make this same experiment with any activity you choose.

So, pick some activity to do. Scratch your nose, pick up a pencil, take a step. Wait a moment, and organize yourself. Notice what you are doing with your whole head in relation to your whole body. As you did with the "slumping/sitting up straight" experiment, think about letting your whole head move ever so delicately forward and up from the top of your spine and allowing your whole body to follow. Remember, you are only *thinking*, you are not *doing* something to make changes. Notice what is happening with your body. Continue all this thinking as you go into the activity.

What did you notice? Were you able to continue your new thinking as you picked up the pencil, or scratched your nose? Did you remember where the top of your spine was? If you got part way through, and realized you had stopped thinking in this new way, that's fine. It is a new way of thinking, a new skill, and like any new skill requires practice.

For now, from time to time, take a moment to pause before you begin an activity, and organize yourself. Be aware that you can easily let your whole head move just t tiny bit forward and up from the top of your spine, and that your whole self can be easy and free as you begin the activity. Notice what you notice, have fun, and see what you learn.

For more information on our structure see Being Articulate.

[i] This experiment courtesy of Bill Conable