**[06. Stretching the Spine](http://www.paulgrilley.com/index.php?option=com_content&view=article&id=16:stretching-the-spine&catid=9:pauls-writings&Itemid=11)**

When working a joint the first thing a yogi or yogini must decide is whether she intends to work muscle or bone. She must decide if she wishes to strengthen the muscles that stabilize the joint or stretch the ligaments to increase range of motion. In this article we explore the second option: stretching the joints of the spine.

**Two layers of the joints**

A fundamental insight of Taoist analysis is to see the body as at least two layers. For different needs the body could be analyzed into many more layers than two but for a discussion of joint movement two is enough.

The two layers of a joint are Muscle and Bone. Muscle is the yang layer and includes muscle and tendon. Bone is the yin layer and includes the ligaments. Yogis should train themselves to feel the differences between the muscle and ligament sensations.

**The Neck**

The following neck stretches are an effective way to start this process. Once a yogi has learned to discriminate the sensations of muscle and ligament in the neck then it will be easier to feel these differences in the rest of the spine.

Drop your chin to your chest and relax. This is a passive or yin stretch for the muscles and ligaments of the back of the neck. The muscles of the neck are on the left and ride sides of the center line. The ligaments we are concerned with are on the centerline. A yogi can learn to feel the difference by comparing the sensations on each side of the spine with the sensations in the center.

Move the head to the right while it is still dropped forward. This movement stretches the muscles on the left side of the neck making it easier to discriminate them. Moving the head to the left stretches the muscles on the right side of the neck. Bringing the head back to the center the yogi should be able distinguish sensations that are neither left nor right but in the midline. These are the ligaments.

Muscular stretches feel sharper and are easily locatable. Ligament sensations are deeper, duller and more attached to the bones. This is why Taoists use the expression “Stretch you Bones” to describe ligament stretches.

This simple exercise should be repeated many times. The distinctions may not be noticeable the first few times but with time and experience they become clear. Remember that is possible to feel ligament stretches when the head is moved to the left and right. But by exaggerating the stretch on the muscles it is easier to feel the difference between the two tissues.

**Yin Stresses**

Once a yogi has learned to feel the difference between muscle and bone the next step is to determine how much leverage to use when stretching them. Passively dropping the chin to the chest is a gentle yin approach. The next most aggressive effort would be to contract the muscles of the neck to depress the chin deeper toward the chest. But the most aggressive stretch would be to use the hands to gently pull on the back of the head. This is the deepest possible stretch for the neck while seated.

**Yang Stresses**

All three of the above stretches are yin. The muscles of the front of the neck were used in second variation and the muscles of the arms were used in the third variation. But in each variation the muscles of the back of the neck were relaxed. This allowed the neck to round forward and stretch the joints. If while doing any of these exercises a yogi contracts the muscles of the back of the neck he is resisting the forward bend and preventing the stretch. This principle can be demonstrated as follows.

Gently drop the chin and place the hands on the back of the head as before. Now engage the muscles of the back of the neck and try to lift the head up. At the same time gently pull down on the head with the arms. The yogi is now in a tug-of-war with himself. His arms are trying to pull the head down but the neck muscles are trying to lift the head up.

The yogi in this experiment controls both sides of this tug-of-war. He can allow the neck muscles to overpower the arm muscles and slowly raise the head. Or he can allow the arm muscles to overpower the neck muscles and slowly pull the head down.

If a yogi tries this experiment he will discover that as long as the neck muscles are engaged he will not be able to stretch the back of his neck completely. A yogi should also feel that if he keeps his head in a vertical position his neck is stalemated between the efforts to lift up and the efforts to pull down. This muscular tension can become very vigorous but there is no stretch on the joints of the neck.

This is the most important point of these demonstrations. If the head is lifted and the neck is straight then there is no stretch on the joints.

**The Lower Spine**

We will now extend the principles of analysis we learned from the neck and apply them to the lower spine. It is harder to isolate the movements in this area but the anatomical principles are the same. The lumbar curve of the lower spine is in the same direction as the cervical curve of the neck.

Sitting in a chair with hands on knees passively drop forward to stretch the lower spine. As in the neck the muscles are on the left and right sides of the spine and the ligaments are in the centerline. While bent forward move the torso to the right to increase the stretch on the muscles on the left side. Moving the torso to the left one can better stretch the muscles on the right side. Dropping straight forward one can better isolate the ligaments.

A yogini can increase the stretch of the lower spine by using her stomach muscles to round her spine. She can also do the opposite by using her back muscles to straighten her spine and lift her chest. By alternately rounding and straightening her spine she can feel how rounding stretches the joints of the back and straightening the spine prevents the joints from stretching.

As with the neck a yogini can even engage in a tug-of-war between her stomach muscles and her back muscles. One is trying to round the spine and the other is trying to straighten it.

**Rounded Spine vs. Straight Spine**

The moral of the story is that in order to stretch the joints of the spine it must be rounded. Lifting and extending the chest forward in poses like baddha konasana or paschimottanasana might increase the stretch on the legs but it eliminates the stretch on the spine.

All forward bends can be done with spine rounded or straight. Both are beneficial. Keeping the spine straight in forward bends develops strength in the spinal muscles and increases the stretch of the legs. But if the intention is to stretch the joints of the spine then the spine should be rounded.