

Understanding Body Tension

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Isometric contraction is tension. Tension is a vital part of any gymnasts conditioning program.

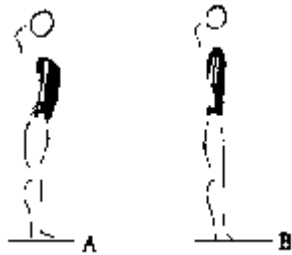
The British National Coaching Foundation book, *Physiology and Performance*, describes isometric contraction as:

iso = same

metric = length

When a muscle contracts isometrically, it develops tension, but there is no resulting movement, because the tension in the muscle exactly balances the opposing force.

This statement can be illustrated as follows:

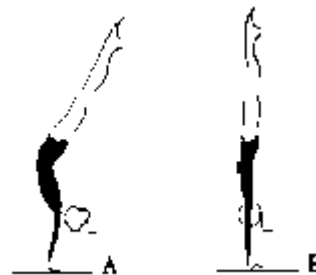


Gymnast A stands with a slouching body and muscles looking soft.

Gymnast B stands erect with abdominal and gluteal muscles contracted but no significant change in body shape is made. This posture is desirable for a gymnast.

Gymnast A will probably do a handstand like this: if she can't hold herself straight in the upright position, she has little chance of doing so in the inverted position.

Gymnast B has more chance of doing a handstand like this.



How do you teach a gymnast to have a good body tension?

Pre-requisite

The abdominals must be strong, so first teach the sit-up. Make sure you isolate the abdominal muscles.

If the legs are bent as shown the work of the hip flexors (*ilio psoas*) should be cut-out. If the



hands are kept on the back of the head, then a swinging action will be avoided. This exercise must be done by lifting the upper half of the body. Arms can also be crossed on the chest.

If the hips are kept firmly on the ground and not swung upwards as the



gymnast lies down in order to act as a counter balance to the upper body and make lifting easier, then only the abdominals will work. This exercise is one that the gymnast should repeat often. This is not a tension exercise, but abdominal strength is vital for mid body tension.

1. This is one of the first exercises that should be given to gymnasts. Whatever discipline, whatever age, the gymnast must be able to maintain this shape.



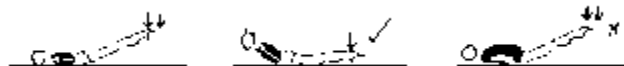
2. Holding this position requires tension in the buttocks (gluteals).



3. Here pressure is applied to the gluteals by the coach or partner. This pressure must be constant and not sudden jerking. Note the weight must be applied to the rounded part of the bottom and not the waist or middle of the back.



4. With the feet just slightly off the floor, the coach presses down at the ankles. Often the gymnast only survives two or three presses.



5. Again the hand is placed on the soft part of the gluteals. Press gently yet firmly. As soon as the back gives, the coach should lower the gymnast to the floor.



6. This similar exercise tests and improves tension in the shoulder joint. This is very important for handspring actions. The shoulder must not move forwards.



7. First the ankles are just held for about 10 seconds. When the gymnast is familiar and okay with these positions, then the ankles can



be released alternately. Again, the coach should watch the body shape, particularly the waist area when the gymnast is on the hands. Watch for creases in the leotard at this point—a smooth leotard is correct.

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