

Hamstring Corrective Actions:

Underthigh compression can be avoided by selecting chairs that match the leg length of the sitter, or by propping the feet up on an angled footrest placed a short distance in front of the chair (Fig. 16.6C). A thick handbag or other object can serve as a footrest. Cloth cones filled with sand, which provide a footrest with a range of heights, can be placed under the table in front of dining room chairs.



Figure 16.6. Hamstring muscle compression and shortening of soleus muscle due to incorrect seated posture. Red X emphasizes this hazardous posture. A, severe underthigh compression of hamstrings at arrow due to the high chair seat and extension of the knee. This posture also places the soleus muscles in the shortened position due to plantar flexion at the ankle. B, excessive plantar flexion at the ankle is eliminated, but underthigh compression is not fully corrected because of wrong positioning of heels at the footstool. C, full correction of both problems by a sloped footstool. Elevating the knee provides clearance for the hand to slip easily between the thigh and the front edge of the chair seat (an indication that compression is no longer a problem and restores the foot to a neutral position at the ankle).

When selecting a chair for the home, one should ensure that the front edge of its seat is rounded and well padded. The seat bottoms of patio chairs should be made of firm plastic or wood, not of canvas or webbing that sags and places the weight of the thigh on a sharp-edged bar at the front of the seat. The importance of this was emphasized by a group of apparently normal individuals who developed thrombophlebitis as the result of impaired venous return during prolonged sitting. When driving on long automobile trips, prolonged immobilization of, and under thigh pressure on, the hamstring muscles can be alleviated by using automatic cruise control, which permits changing leg position, and by taking frequent "stretch" breaks.

A basic stretch exercise that patients with hamstring TrPs should perform at home is the Long-seated Reach Exercise (Fig. 16.13). When the ankles are plantar flexed, this is primarily a hamstring and long paraspinal stretch (Fig. 16.13A). The sitting patient reaches as far down the shins as possible while exhaling and consciously relaxing the back muscles, allowing gravity to pull the head and shoulders down and forward. Then the patient gently presses the ankles toward the floor while slowly inhaling. The patient relaxes again, exhales fully, and slowly reaches further. This cycle is repeated until no further gains in range of motion occur. When the ankles are simultaneously dorsiflexed by pulling the feet up with the fingers (Fig. 16.13B), stretch of the gastrocnemius is included. This self-stretch exercise is best performed with the patient seated in a tub of warm water.

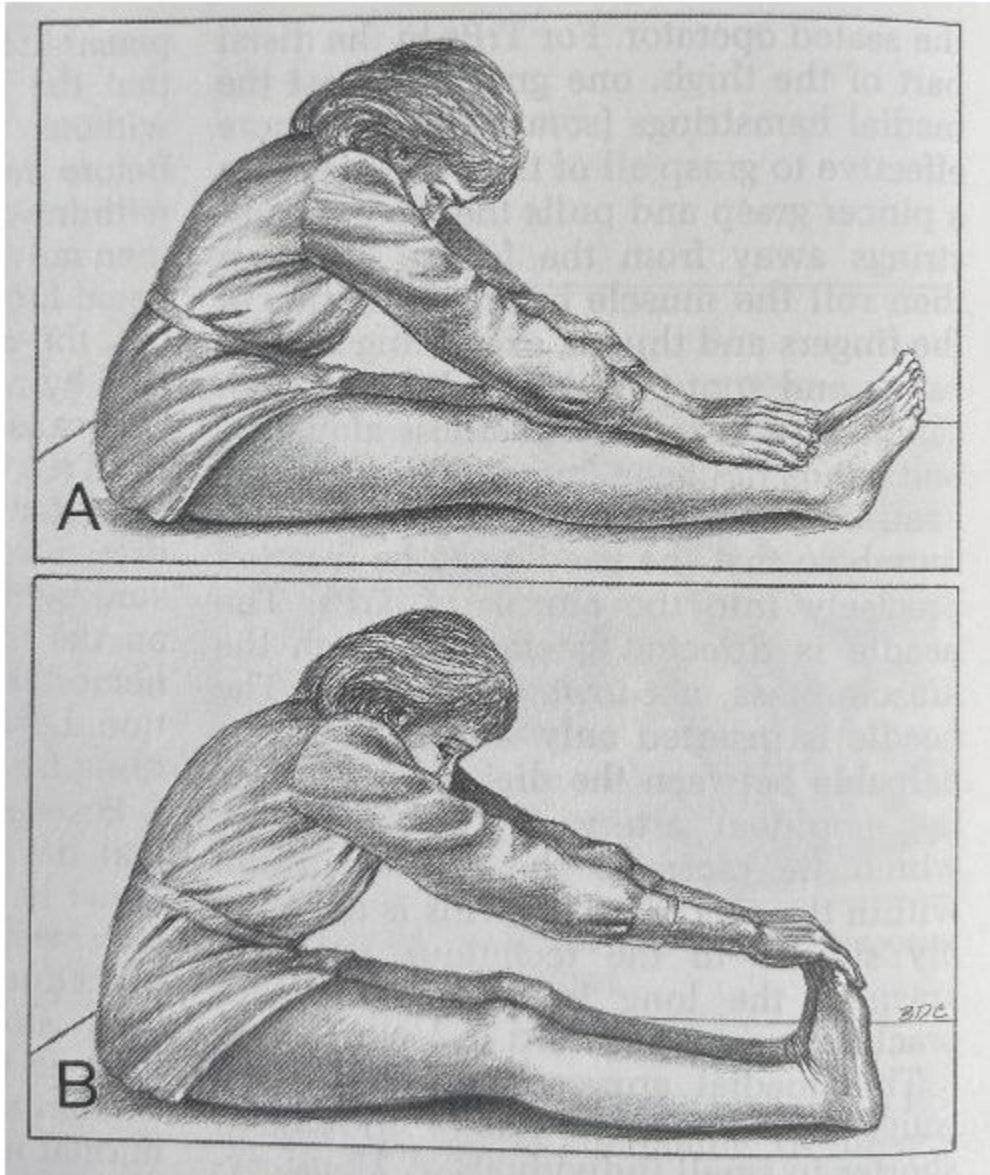


Figure 16.13. The Long-seated Reach Exercise for hamstring self-stretch. A, initial stretch by slowly and gently sliding the fingers down the shins, keeping the knees straight. B, final stretch. Postiso-metric relaxation coordinated with deep breathing can enhance relaxation in the hamstrings. By grasping and dorsiflexing the feet, the gastrocnemius muscles are also passively stretched. The patient should learn to do this exercise without contracting the abdominal muscles, while exhaling slowly and allowing gravity to pull the torso forward. (Contraction of the abdominal muscles in this shortened position may activate latent trigger points, if present.)