

# Rehabilitation Modalities in LBP

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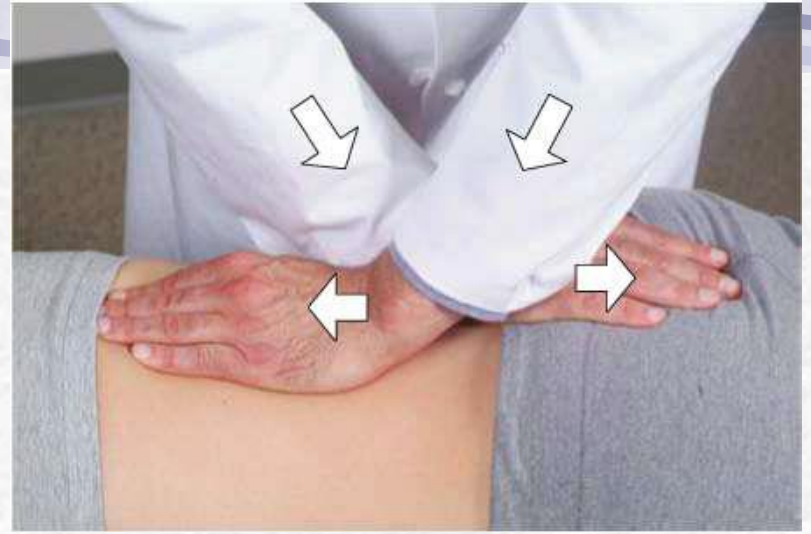
Physical medicine and Rehabilitation

Research Center

Tabriz Medical Sciences University

# Manual Therapy

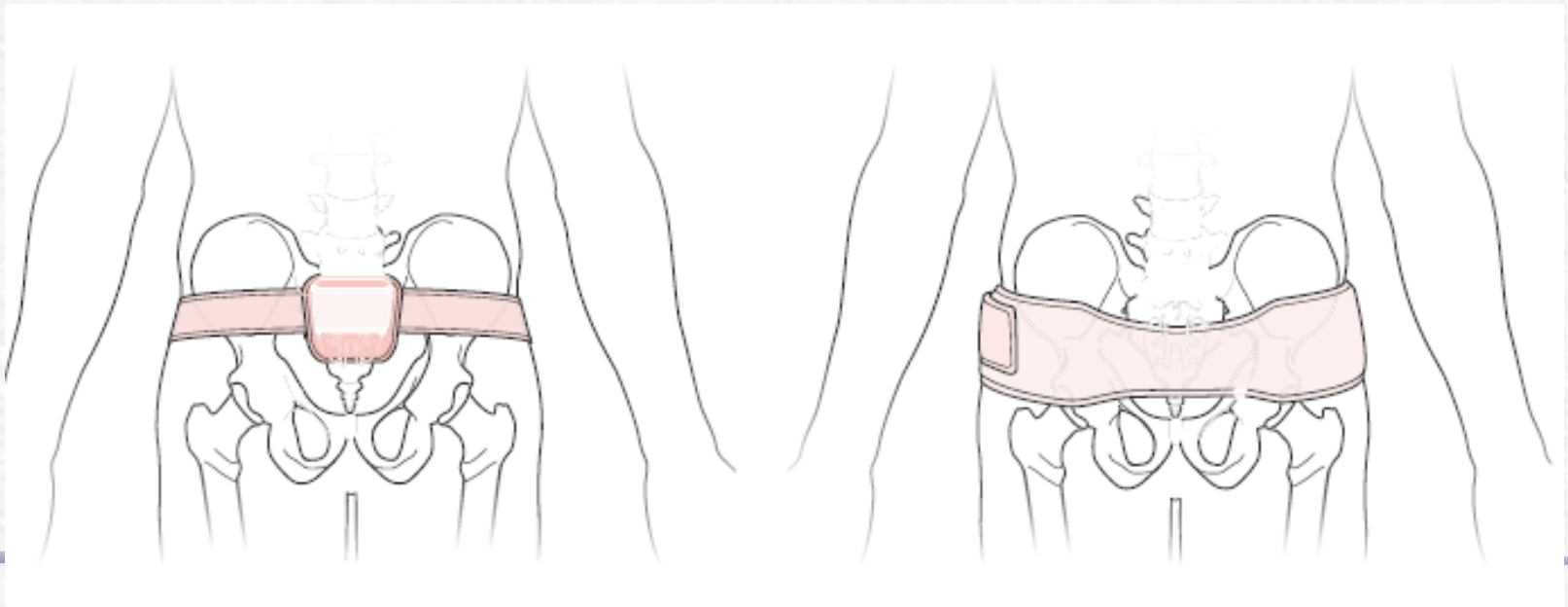
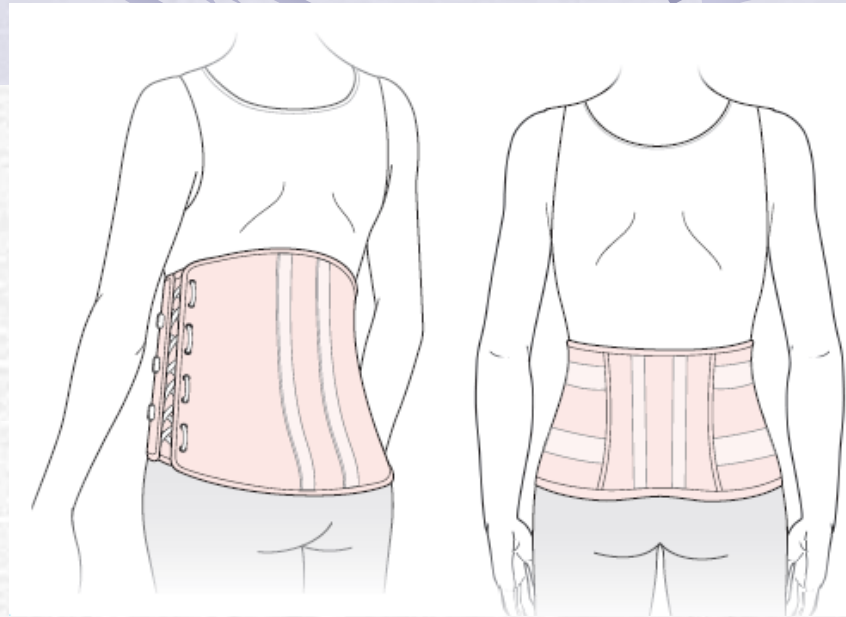
- Myofascial Techniques
- Articulatory Techniques



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# Orthotics





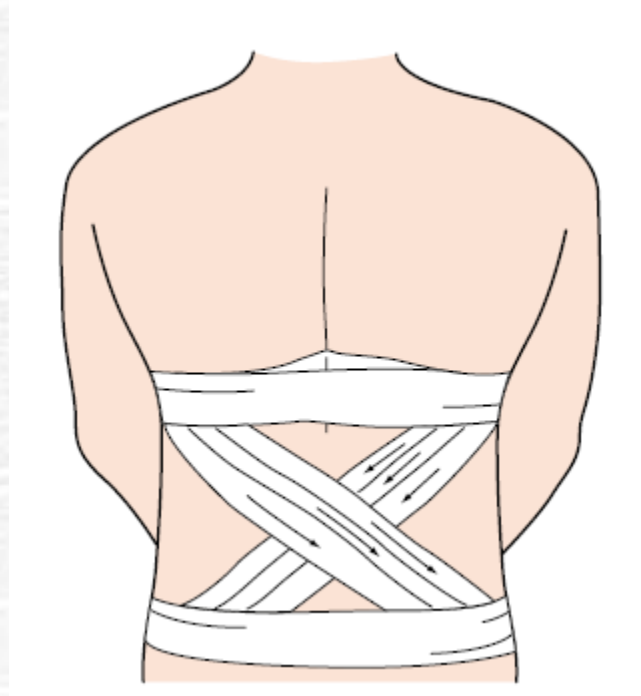
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# Taping

# Kinesio Tape



# Lumbar Spine Taping





# Electroacupuncture for Chronic Lower Back Pain

- Acupuncture points:
- Du 10, Du 15, Liv 3, Liv 9, Sp 2, Sp 5, UB 51.
- use of superficial acupuncture
- Patients are first examined to localize areas of "trigger points".
- Painful regions are typically found in the erector spinae, multifidus, iliocostalis and quadratus lumborum, iliopsoas, obliquus externus and internus abdominus, and rectus abdominus muscles.
- Sterile 30 gauge acupuncture needles are inserted to a depth of 4 mm into the skin and subcutaneous layers immediately overlying the trigger points.
- Care is taken to avoid penetrating the muscles or their fascia.
- The needles are left in place from 5 to 20 minutes.
- Electroacupuncture stimulus of 2 hz. at the threshold can be added to the treatment for increased effectiveness.

# Classic Back Exercises

- Williams' Flexion Exercises
- McKenzie, Extension exercises

# Williams' Flexion Exercises

- Paul Williams was an orthopedic surgeon who believed that lordosis was the cause of low back pain.
- Williams' flexion exercises are a series of six exercises that emphasize flexion

**Exercise 1: Sit-up in a flexed-knee position to strengthen the abdominals.**





## Exercise 2: Pelvic tilt to strengthen the gluteal muscles.



Exercise 3: Single knee-to-chest and double knee-to-chest to stretch the erector spinae muscles.



Exercise 4: Seated reach to the toes with knees extended to stretch the erector spinae and hamstring muscles.



Exercise 5: In a quadruped position with one knee forward under the chest and the other hip and knee in extension to stretch the tensor fascia lata and iliofemoral ligament.





Exercise 6: Starting in standing and moving to a full squat to strengthen the quadriceps muscles.



# McKenzie, Extension exercises

- advanced by Robin McKenzie a New Zealand physiotherapist
- emphasize trunk extension aimed at relieving posterior pressure on discs

Exercise 1: Prone lying for 5 minutes.

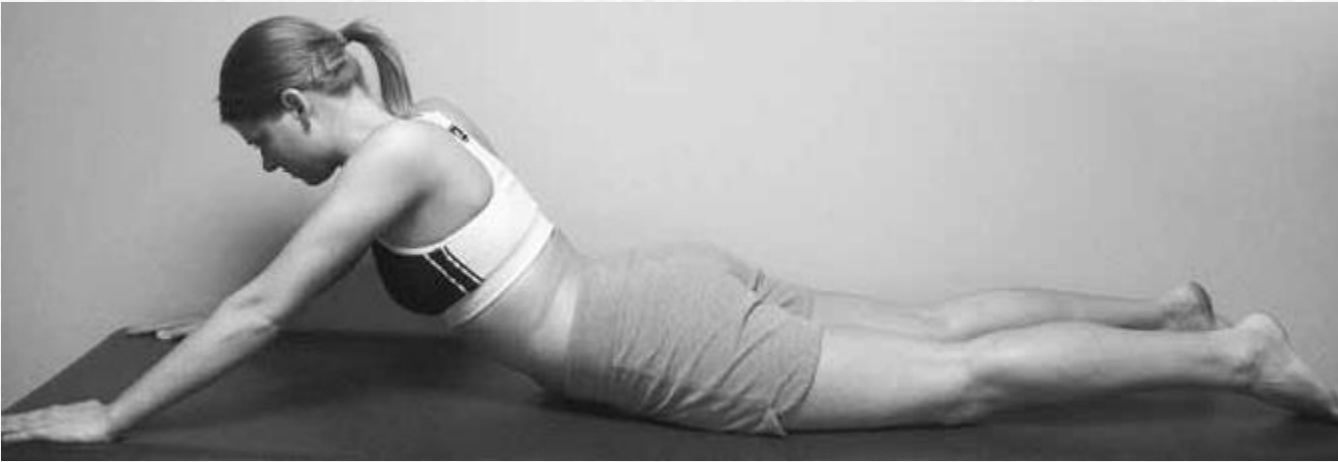


## Exercise 2: lying prone on the elbows





## Exercise 3: prone press-ups.



Exercise 4: The next exercise is trunk extension in standing.



## Exercise 5: Seated "cat-cow" exercise.

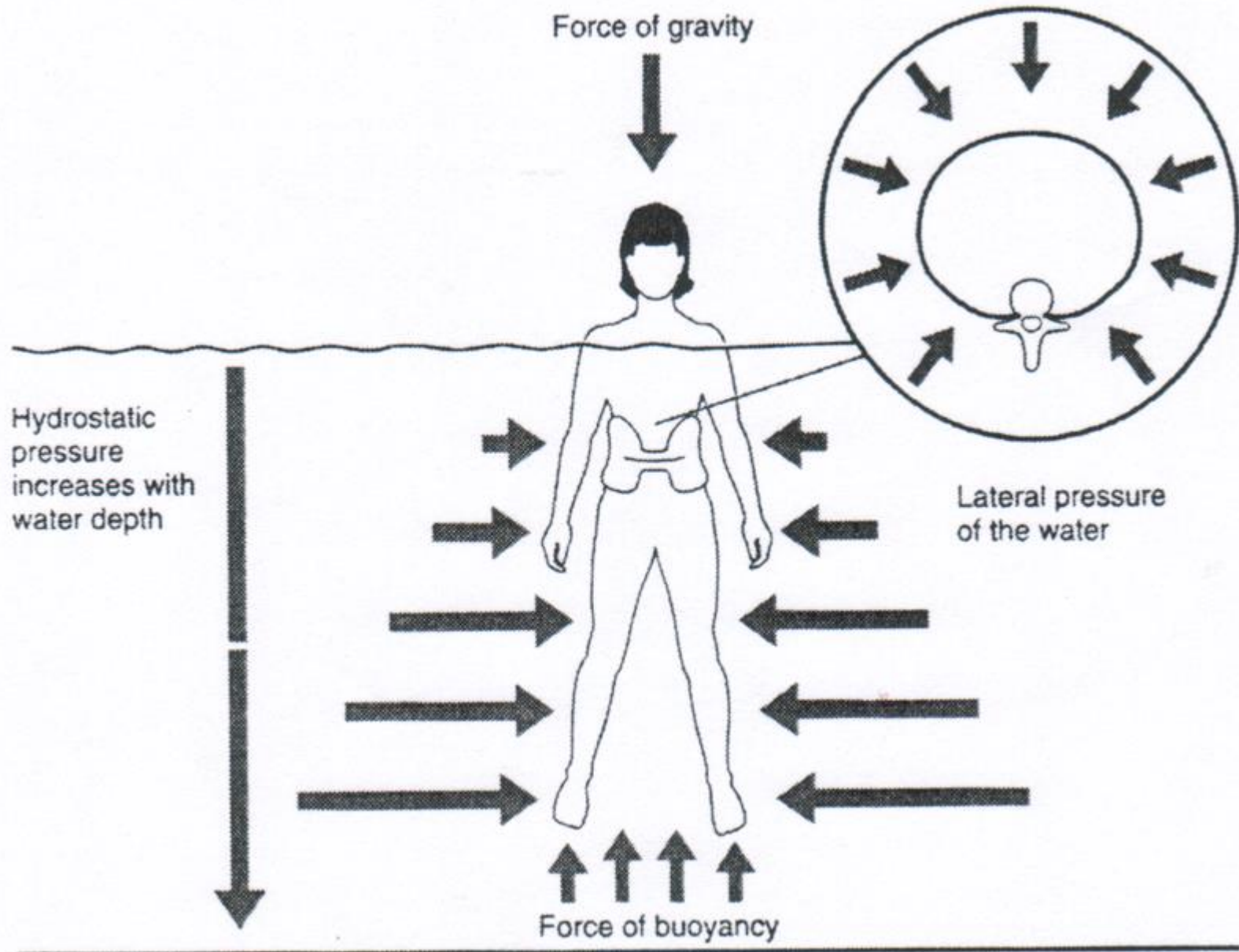


Exercise 6: both knees to the chest.

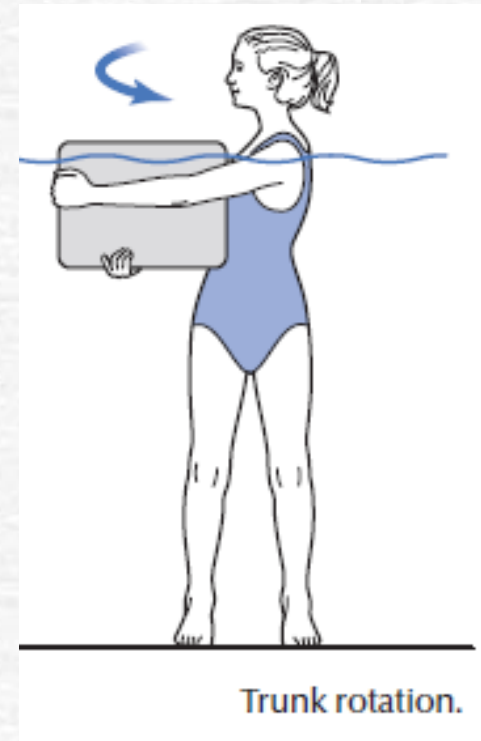


# Aquatic Therapeutic Exercise for Spine

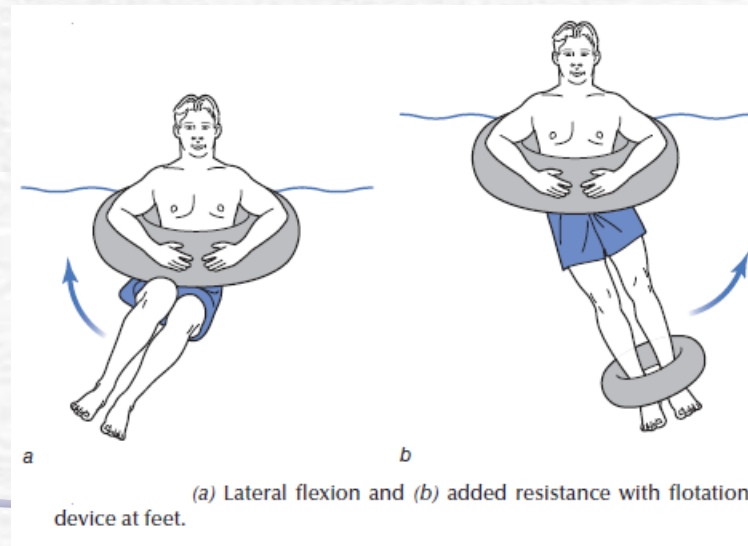
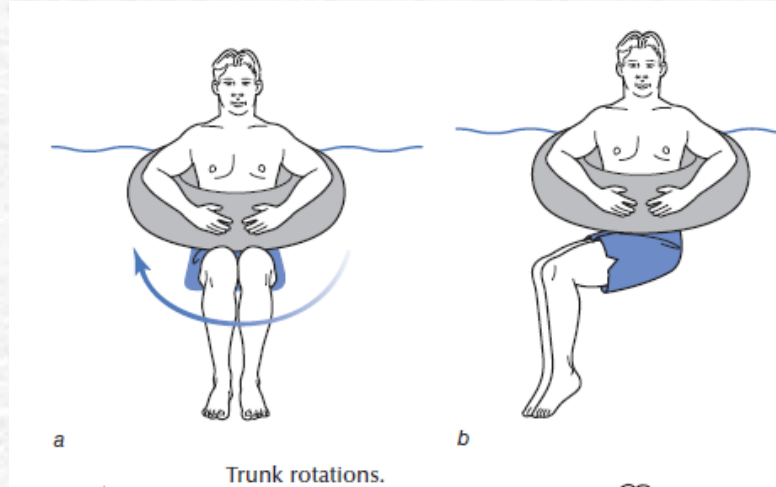
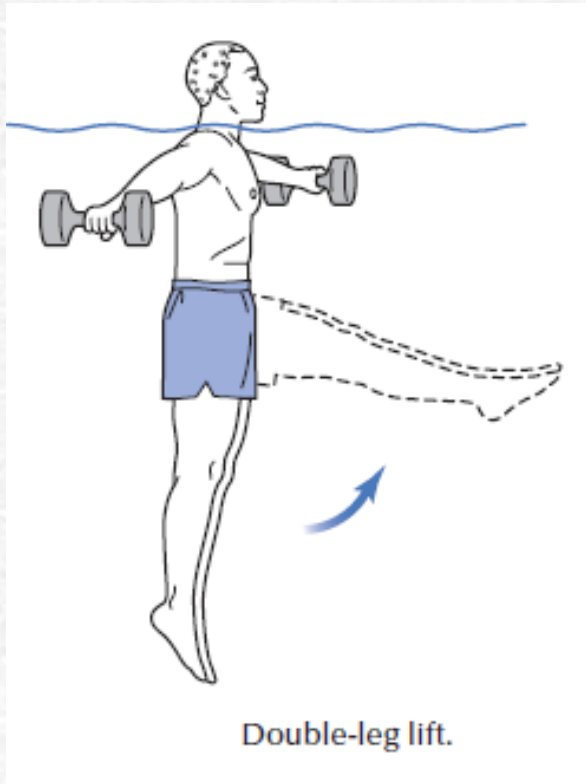




# Shallow Water Exercise



# Deep Water Exercise

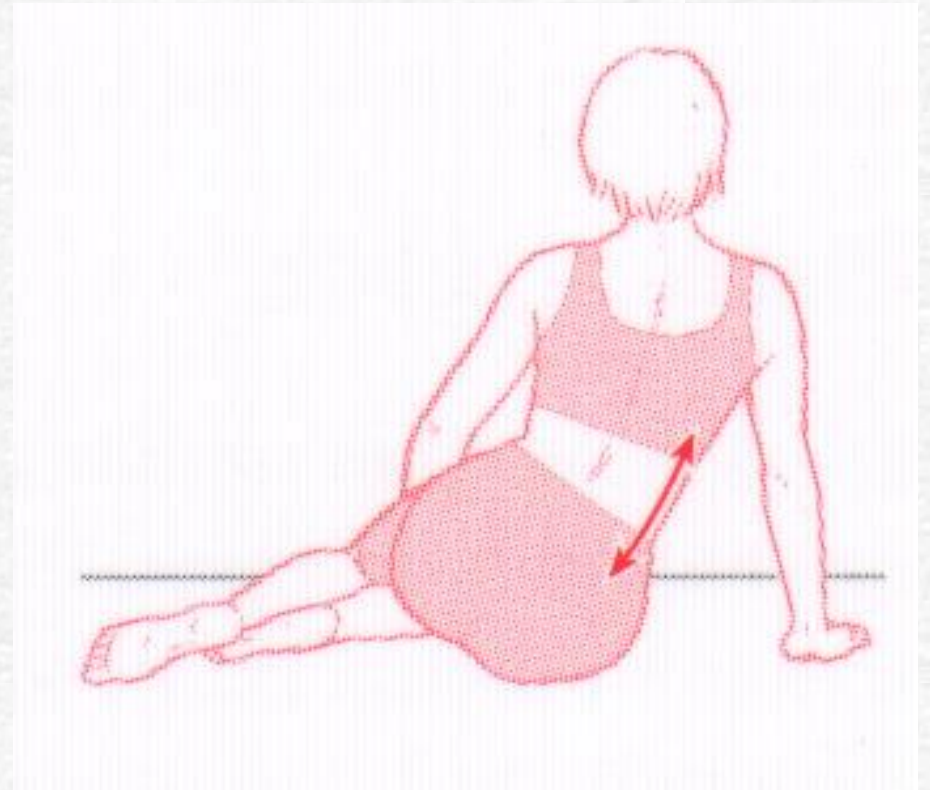
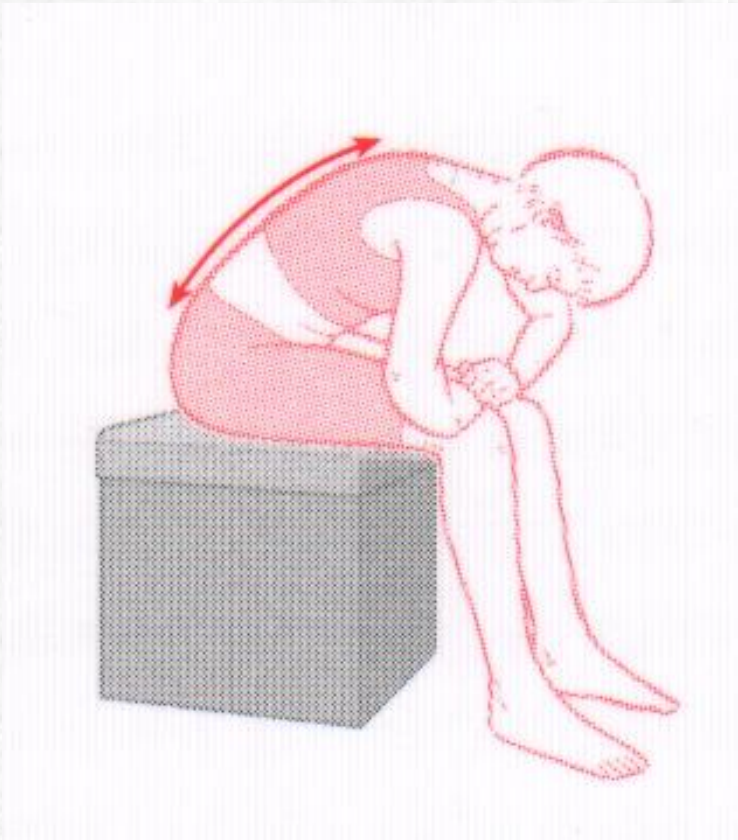




# Self Mobilizing

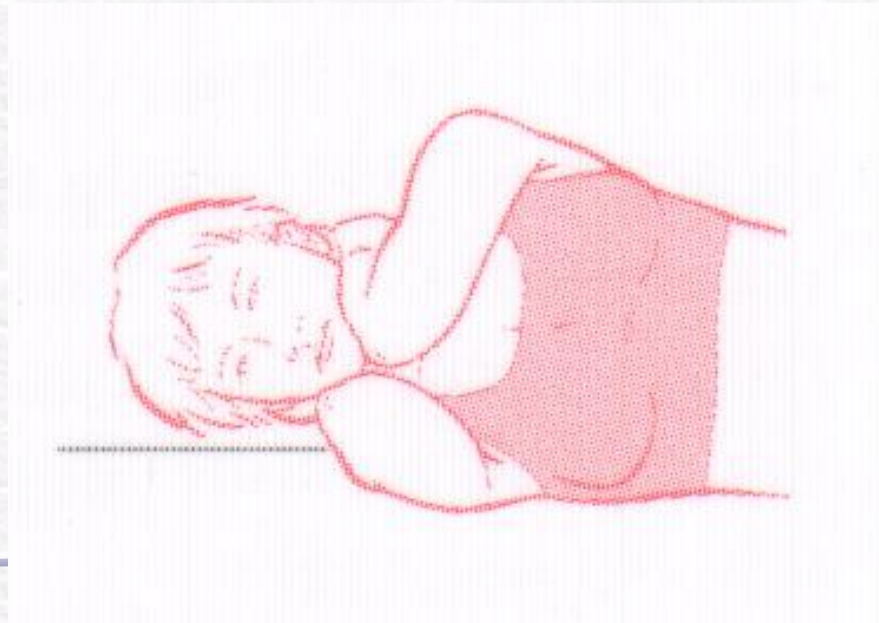
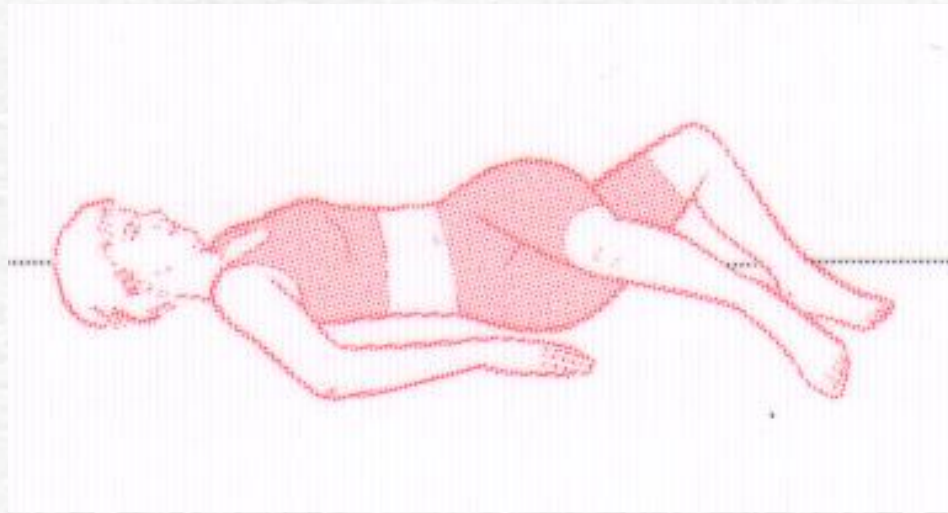


# Mobilizing Lower Back



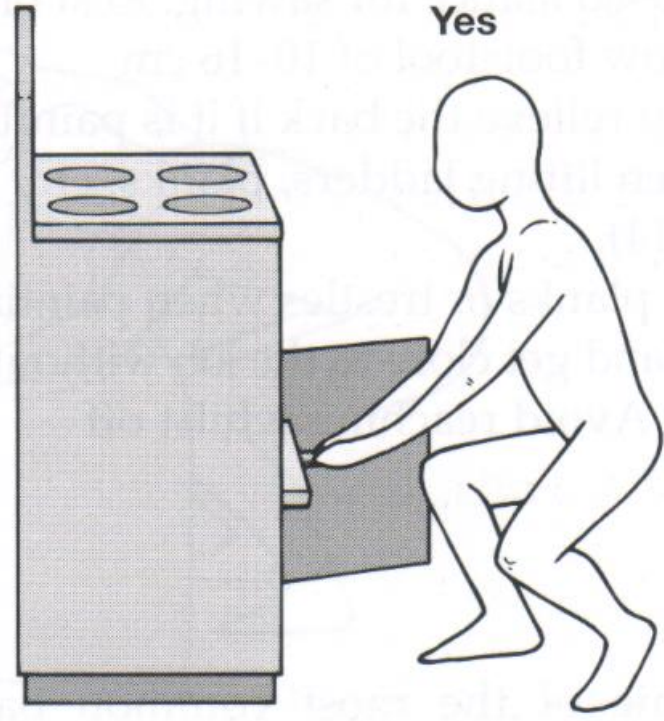
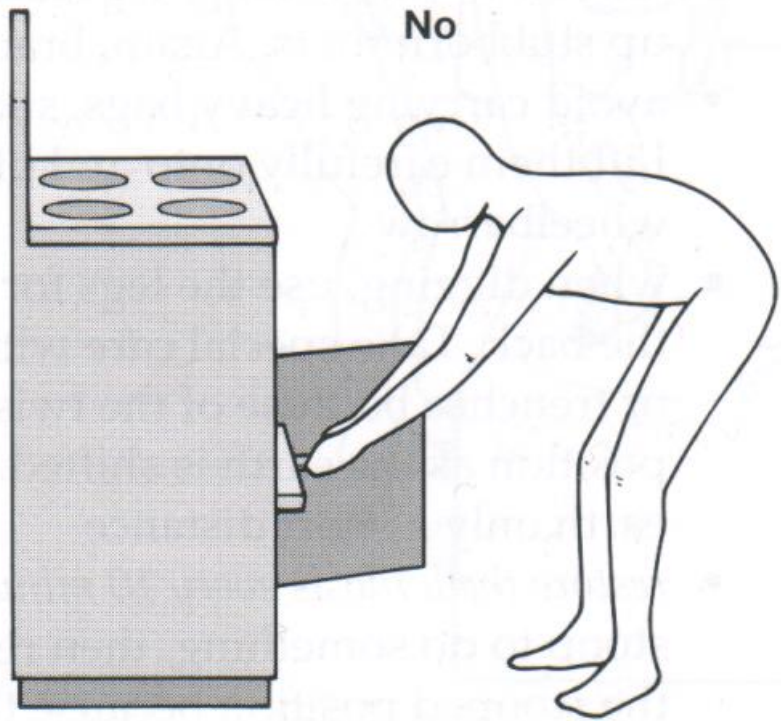


# Lower and Upper Spinal Twist



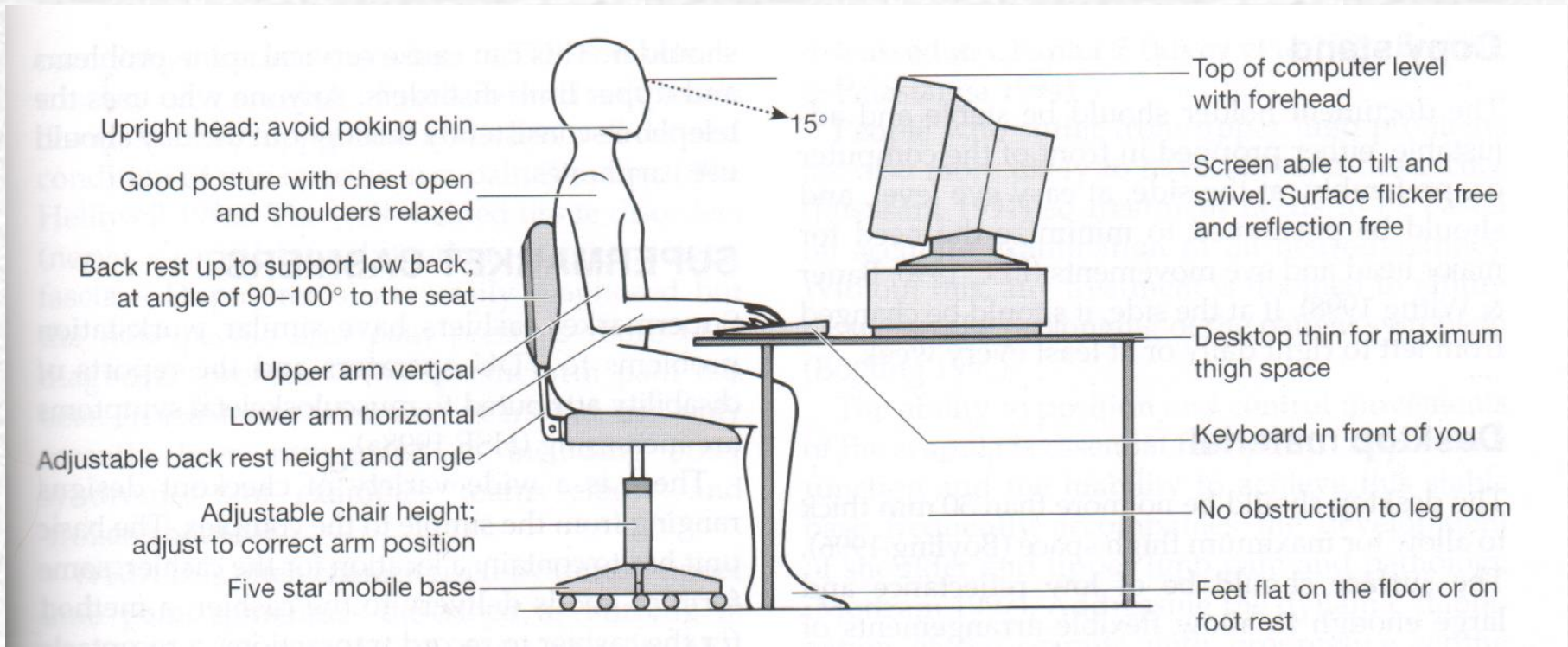
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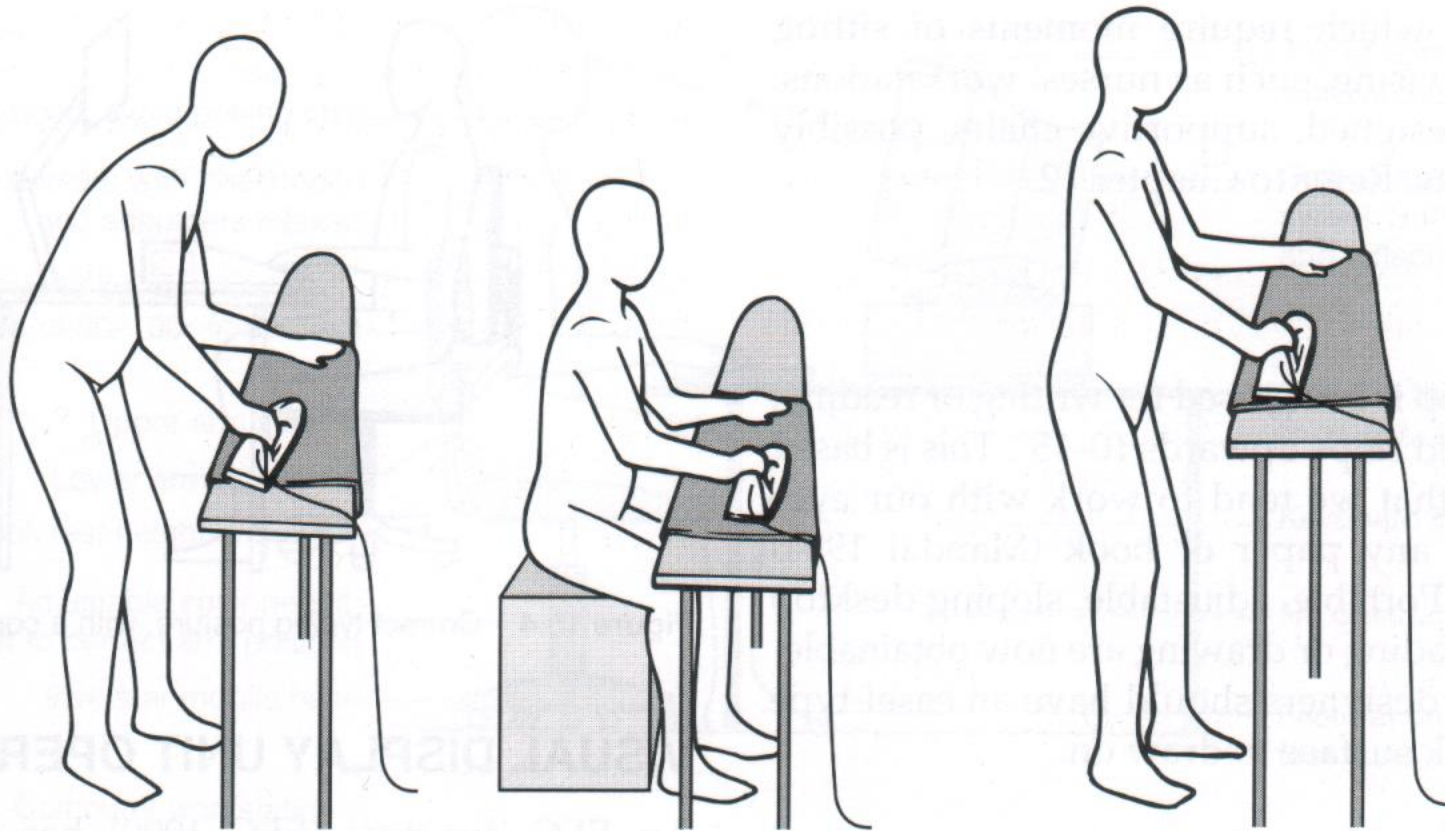
# Back Care



**Figure 15.8** Reaching into low cupboards.

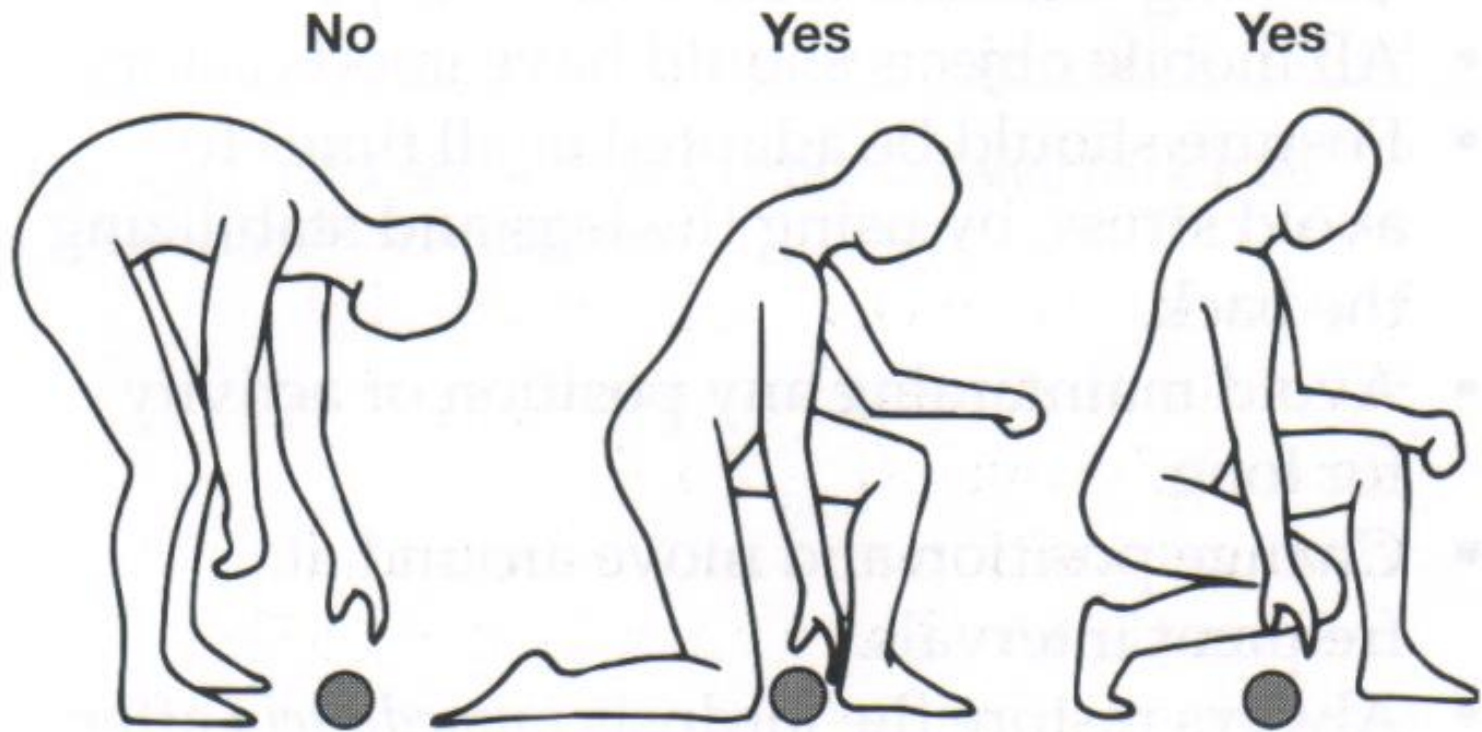






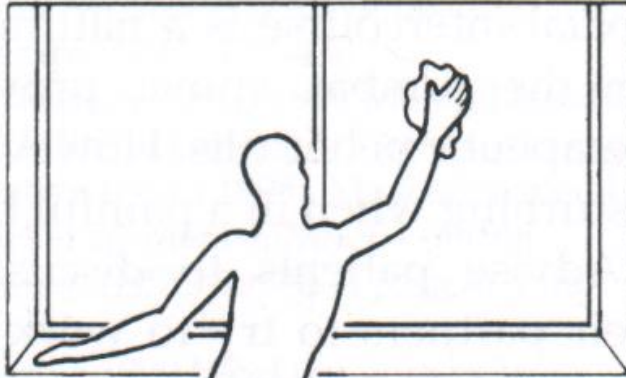
**Figure 15.2** Worktop too low. Either lower yourself or raise the worktop.



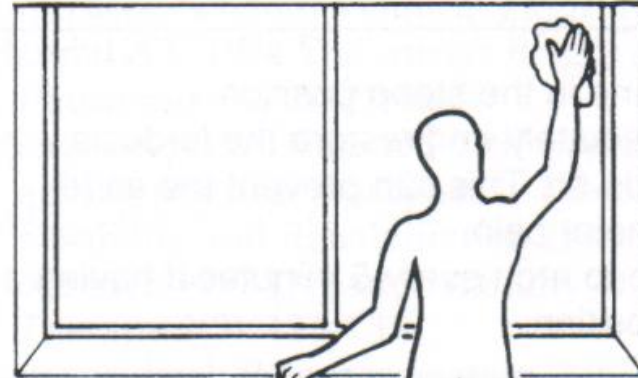


**Figure 15.10** Picking up small objects.

no



yes

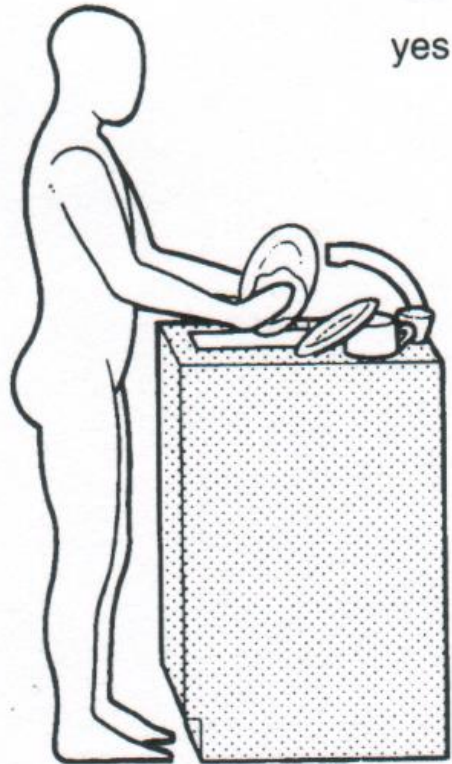


**Figure 15.9** Reaching up.

no



yes



**Figure 15.1** Correct worktop height.