

# Remedial exercises for lower leg lymphedema

By Marize Ibrahim and Angela Yung, Illustrations by Stephen Chan

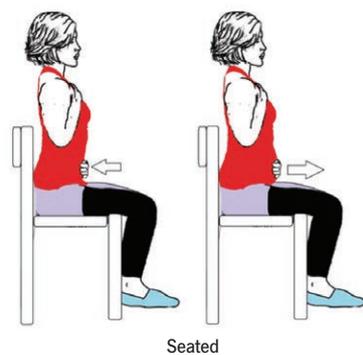
Muscle contractions enhance lymphatic drainage, which is why daily exercise is strongly encouraged for patients with lymphedema. When starting any exercise, start slowly, and progress gently, as your body adapts to the regimen. Incorporate exercise as part of your daily routine to optimize your health and maximize benefits on your lymphatic system. Compression bandages or compression garments should be worn during the exercises.

Ensure you maintain a good posture throughout each exercise. Walking is a great exercise. Start with two minutes each day as your legs can be heavy with the edema. As your muscle endurance improves, along with your lymphatic pump mechanism improvement, you will notice a reduction in the feeling of heaviness in the legs.

The following is a modified exercise program, adapted from Casley-Smith principles<sup>1</sup>, that can be done easily during

the day; however please speak with your lymphedema therapist to have the program customized appropriately for you. Remember, the exercises should not be painful. Aim to do 3-5 repetitions of each exercise, which should take approximately 20 minutes.

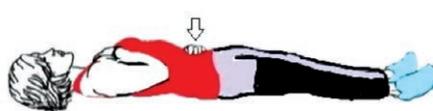
All exercises can be done either sitting or lying down, however, if possible, lying down is best, as gravity works against you in lower extremity lymphedema.



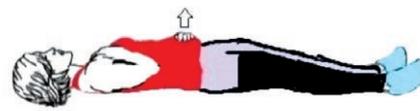
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## 1 Abdominal breathing exercises

- Relax your neck and shoulders while placing one hand on your upper chest and the other on your stomach.
- Take a deep breath through your nose and feel the hand on your stomach move out (the other hand on your chest should not be moving).
- Breathe out slowly and as long as you can until you exhale completely (the hand on your stomach should move inward with the exhale).



Lying Down



## 2 Neck range of motion exercises with deep breathing

- Turn your head slowly to the right as far as you can while you inhale then return to center as you exhale, repeat on the left.
- Move your right ear towards your right shoulder as far as you can while you inhale and then return to center, repeat on the left.

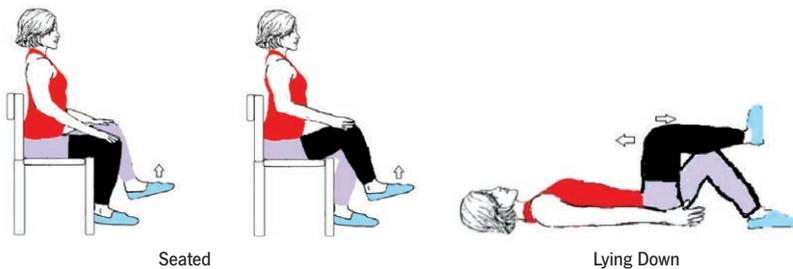


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Lying Down

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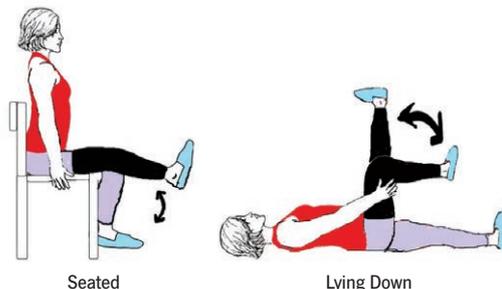


### 3 Hip tucks with deep breathing

- Keep left leg bent, do the abdominal breathing (Exercise # 1) and while you exhale, lift the right leg up towards your chest, and then slowly back down.
- Alternate and do the opposite, this time bending the right leg and lifting the left leg up with abdominal breathing, and then slowly back down.

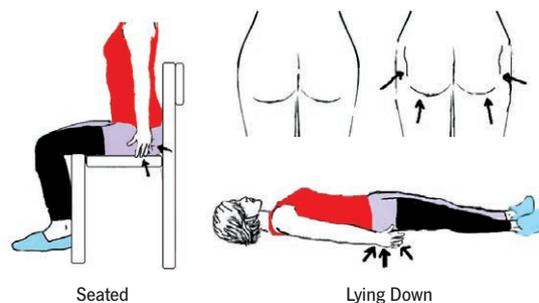
### 4 Knee kicks

- Do the abdominal breathing (Exercise # 1) and while you exhale, lift right knee straight out and relax.
- Alternate by straightening left knee out, using the same rhythmic sequence with abdominal breathing.



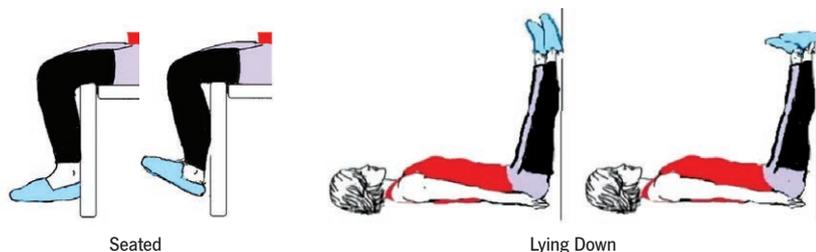
### 5 Buttock squeezes

- Do the abdominal breathing (Exercise # 1) and while you exhale, contract (squeeze) the buttock muscles for the “duration” of the breathing, and slowly relax the contraction.



### 6 Ankle pumping (can be done sitting or with legs up against a wall.)

- Do the abdominal breathing (Exercise # 1) and while you exhale, point your toes for 3 seconds then bring your toes towards you for 3 seconds.
- If it's easier, you can do one foot at a time, as you don't need to do both feet together, however ensure you use the same rhythmic sequence with abdominal breathing.



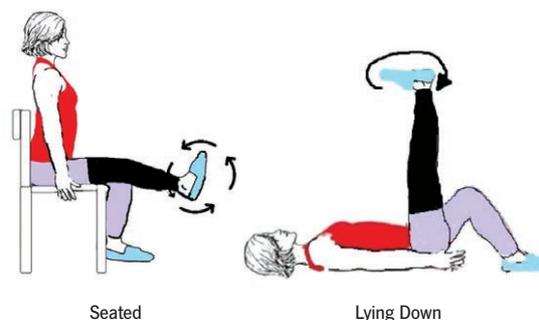
### 7 Air circles

- Keep left leg with a knee bent (or bent at 90 degrees if in a chair), do the abdominal breathing (Exercise # 1) and while you exhale, make circles with right leg in one direction then the other direction.
- Alternate legs using the same rhythmic sequence with abdominal breathing.



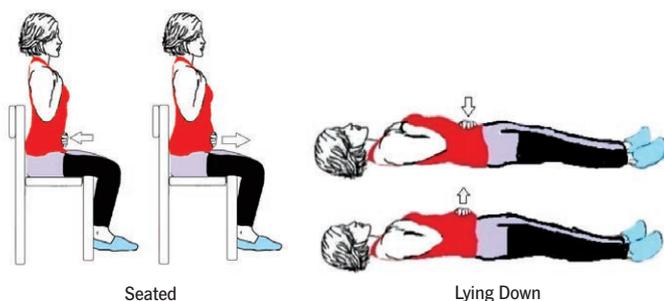
### 8 Air cycling

- Imagine you are riding a bike in the air, do the abdominal breathing (Exercise # 1) while you circle your legs one at a time to mimic the motion of riding a bike.
- Alternate legs, while using the same rhythmic sequence with abdominal breathing.



### 9 Abdominal Breathing

End your session as outlined in Exercise 1.



#### Editor's Note:

These exercise examples can be integrated into educational information given to patients as part of a self-management program.