

Resistance Exercise on Lymphedema after Breast Cancer Surgery

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Understanding Lymphedema

The incidence of lymphedema after breast-cancer surgery varies across studies from 6 to 70%.

Lymphedema can be temporary or wax and wanes over the course of one's life.



References:

- [1] Schmitz ,2009, Weight lifting in women with breast-cancer-related lymphedema
- [2]DeWitt,2016, 2016,Understanding Lymphedema for People With Breast Cancer

Bad Effect of Lymphedema

- Swelling
- Pain
- A feeling of heaviness
- Skin color and texture turn
- Difficulty in daily tasks
 - Taking a deep breath
 - Dressing
 - Bathing
 - Combing hair
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Reference:

[1]American Cancer Society,2015,Lymphedema

Mechanism

Current research suggests that weight lifting may help reduce or prevent lymphedema by rejoining blood circulation to veins in armpit and neck.

Patients' upper arm muscles are close to patients' axillary lymph nodes. As these muscles work, lymph fluid can be pumped back into patients' system and absorbed, reducing arm lymphedema.



References:

- [1] Schmitz, 2009, Weight lifting in women with breast-cancer-related lymphedema
- [2] Moseley, 2005, The effect of gentle arm exercise and deep breathing on secondary arm lymphedema

Resistance Exercise

- Elbow Flexion - Seated Exercise
- Elbow Extension - Floor Exercise
- Shoulder Horizontal Adduction
- Shoulder Flexion - Standing Exercise
- Shoulder Abduction - Standing Exercise

General Guidelines

- What you need to get started
 - A set of 1 pound free weights(dumbbell)
 - Your compression sleeve
 - A hard chair to sit on
 - An area big enough to lay down on
- Warm your affected arm and hand
- Be sure to take deep breaths, in and out, as you do each exercise
- Repeat 10 times gently
- Keep doing your exercises unless you notice unusual swelling or tenderness
- Discuss your exercise plans with your doctor

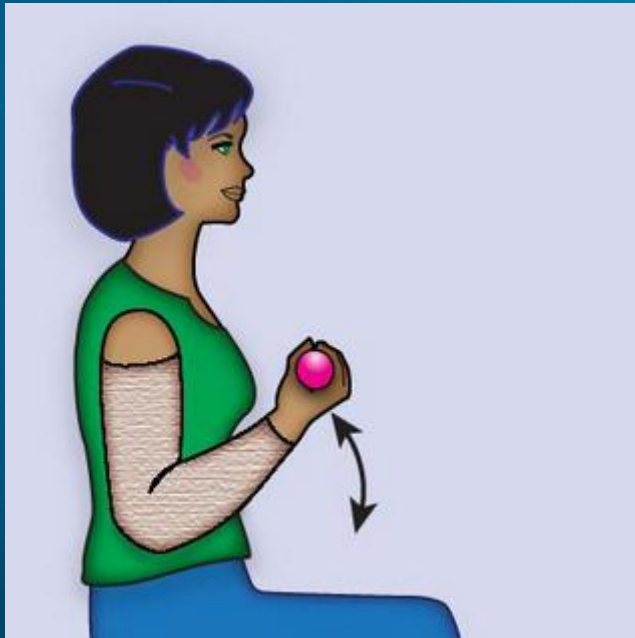
References:

[1]Stephan,2016, How to Do Arm Lymphedema Exercises

[2]American Cancer Society,2016,Exercises After Breast Surgery Breast surgery can affect your arm movement

[3]Johansson,2005, . Low intensity resistance exercise for breast cancer patients with arm lymphedema with or without compression sleeve

Elbow Flexion - Seated Exercise



Slowly bend your elbows and lift both hands towards your chest.

References:

Picture resources: <https://www.verywell.com/how-to-do-arm-lymphedema-exercises-430210>

Elbow Extension - Floor Exercise



Slowly bend your elbows and lower both hands towards your chest.

Picture resources:

<https://www.verywell.com/how-to-do-arm-lymphedema-exercises-430210>

http://www.360doc.com/content/15/0605/17/1427138_475898327.shtml

Shoulder Horizontal Adduction



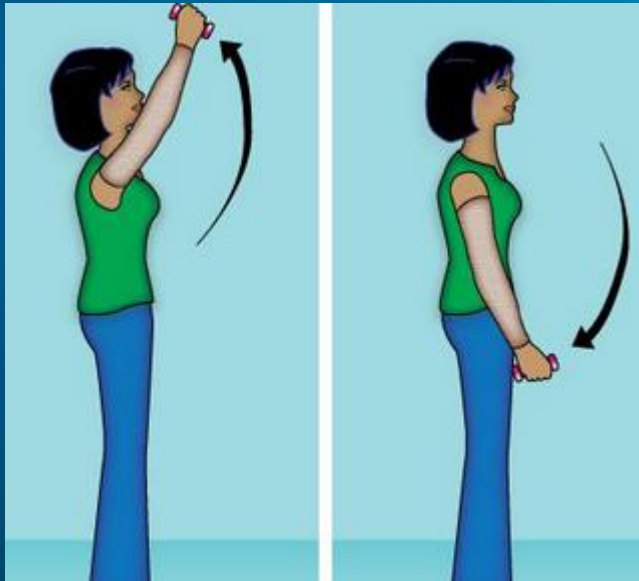
Without bending your elbows, slowly raise both arms straight up above your body until you can bring your palms together.

Picture resources:

<https://www.verywell.com/how-to-do-arm-lymphedema-exercises-430210>

<http://tieba.baidu.com/p/2863463732>

Shoulder Flexion - Standing Exercise

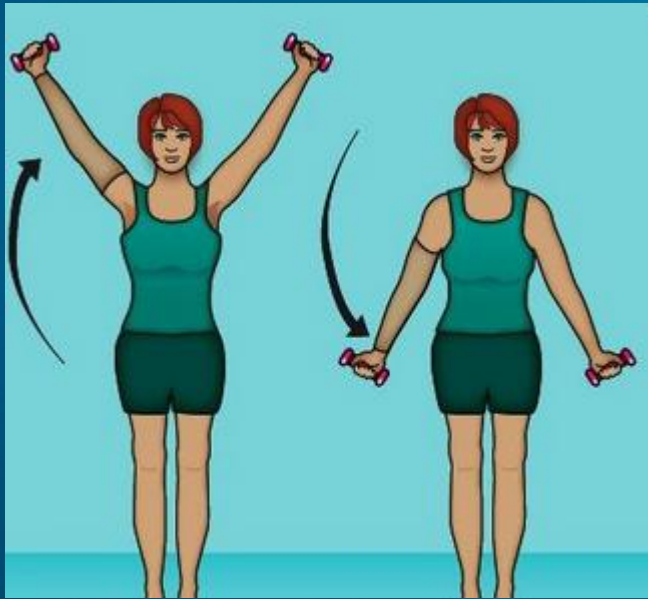


Slowly raise both arms overhead, using a gentle controlled motion.

References:

Picture resources: <https://www.verywell.com/how-to-do-arm-lymphedema-exercises-430210>

Shoulder Abduction - Standing Exercise



Move your shoulder and arms away from the midline.

Picture resources:

<https://www.verywell.com/how-to-do-arm-lymphedema-exercises-430210>

<http://tieba.baidu.com/p/2863463732>

References:

- [1] American Cancer Society. (2015). Lymphedema: What Every Woman With Breast Cancer Should Know. Retrieved November eighth 2016.
- [2] Pam Stephan,2016, How to Do Arm Lymphedema Exercises,[OL], 2016-02-26, [2016-11-07], <https://www.verywell.com>
- [3] American Cancer Society,2016,Exercises After Breast Surgery Breast surgery can affect your arm movement.[OL].2016-09-05.[2016-11-06]
- [4] Schmitz K H, Ahmed R L, Troxel A, et al. Weight lifting in women with breast-cancer–related lymphedema[J]. *New England Journal of Medicine*, 2009, 361(7): 664-673.
- [5] Moseley A L, Piller N B, Carati C J. The effect of gentle arm exercise and deep breathing on secondary arm lymphedema[J]. *Lymphology*, 2005, 38(3): 136-145.
- [6] McNeely M L, Campbell K, Ospina M, et al. Exercise interventions for upper-limb dysfunction due to breast cancer treatment[J]. *The Cochrane Library*, 2010.
- [6] Johansson K, Tibe K, Weibull A, et al. Low intensity resistance exercise for breast cancer patients with arm lymphedema with or without compression sleeve[J]. *Lymphology*, 2005, 38(4): 167-180.
- [7] Singh B, Disipio T, Peake J, et al. Systematic Review and Meta-Analysis of the Effects of Exercise for Those With Cancer-Related Lymphedema[J]. *Archives of physical medicine and rehabilitation*, 2016, 97(2): 302-315. e13.
- [8] Rosalyn Carson DeWitt- Reviewed by a board-certified physician.Updated September 08, 2016,Understanding Lymphedema for People With Breast Cancer:Causes, Symptoms, Treatment, and Prevention and Management of Lymphedema,[OL],[2016-11-9]

Thanks For Listening!