



SERVIZIO SANITARIO REGIONALE
EMILIA-ROMAGNA
Azienda Unità Sanitaria Locale di Reggio Emilia
IRCCS Istituto in tecnologie avanzate e modelli assistenziali in oncologia



LYMPHEDEMA

self-treatment

Rehabilitation Department

The self-treatment of lymphedema includes self lymphatic drainage, self-bandaging and exercises

What is lymphedema

Arm lymphedema is a side effect (a consequence) of surgery and radiotherapy treatment for breast cancer resection with axillary lymph nodes dissection.

It consists in fluid buildup in soft tissues presenting as swelling (edema) in the arm and hand on the operated side.

Lymphedema is a chronic condition that may present itself very early after surgery or after even a long time.

The most frequent symptoms are:

- Sense of heaviness;
- Skin tightening and hardening;
- Pain, burning sensations and arm numbness;
- Decreased skin elasticity and joint mobility;
- Limitation in everyday life activities;
- Frequent infections.

How to minimize risks

Identifying what causes lymphedema is not always possible; sometimes, it may be a small wound (such as an insect bite or sting or a scratch); however, it always presents itself as swelling.

Therefore, the only real treatment is prevention. It is fundamental to be careful to:

- Avoid any trauma or wound. In case of a trauma or wound, carefully disinfect and cover the wound with sterile gauze (wear gloves to do housework and during any work that may be hazardous);
- Do not take the pressure on, give injections to or draw liquids from the operated arm;
- Do not wear rings, bracelets and tight clothes (preferably wear natural fabric such as cotton or silk);
- Avoid repetitive movements and excessive efforts (do not carry heavy bags with a shoulder strap on the shoulder of the operated arm, do not iron or hold children in your arms for long periods of time);

- If the arm gets tired, put it in a “draining” position, such as resting on a pillow, possibly above the shoulder;
- Nurture and carefully clean the skin and avoid sun exposure for long periods of time;
- Avoid sudden changes in temperature and prolonged exposure to heat sources;
- Try not to put on weight and follow a Mediterranean diet, low in saturated fats (cheese, butter, meat fat, etc...), refined carbohydrates (white bread, biscuits, pastries, sweets, ice cream, soft drinks) salt and cured meat;
- Do the post-op rehab exercises during radiotherapy and chemotherapy treatment (one/twice a day);
- Exercise regularly with light physical activity (recommended activities are walking, swimming, cycling, low-impact gymnastics, stretching, pilates, yoga, qi-gong, etc...);
- During long trips, especially flights, use the compression armsleeve prescribed by the physiatrist;
- Whenever necessary, prepare one litre of draining herbal tea to drink during the day (centella 50 gr, birch 50 gr, pilosella 50 gr, orthosiphon 50 gr, couch grass 50 gr, red grapevine 50 gr, boil in water for 10 minutes and filter).

What to do in case of arm swelling

You can control lymphedema with specific intensive rehab treatment which includes manual and mechanical drainage, elastocompression (bandaging and compression armsleeve), physical exercise and respiratory education.

To obtain good results, it is fundamental to intervene as early as possible and be committed to work at home doing self lymphatic drainage, self-bandaging and the exercises as reported below.

WARNING

If the arm becomes suddenly red, hot, sore and swollen it could be a sign of an acute infection known as “erysipelas”. Seek immediate medical attention and avoid doing any exercises and lymphatic drainage.

Self-treatment

Do not wear a bra, rings, necklaces or bracelets during self-treatment.

WARNING

In this handbook we use the right arm as an example of arm with lymphedema.

The techniques must be used on the operated arm (unless otherwise specified).

During relapse, do self-treatment every day for a week.

During the stabilisation phase, decide the right frequency for self-treatment with your doctor and physiotherapist.

Self Lymphatic Drainage Techniques

These techniques must be performed directly on the skin while seated.

Finger pressure during the manoeuvres must be very light. Repeat each step of the massage 5 times on the same part of the body and each sequence 3 times.

At the end of each sequence raise both hands in the air, open your hands wide and close your hands in a fist for some times (draining manoeuvre - photo 1a and 1b).

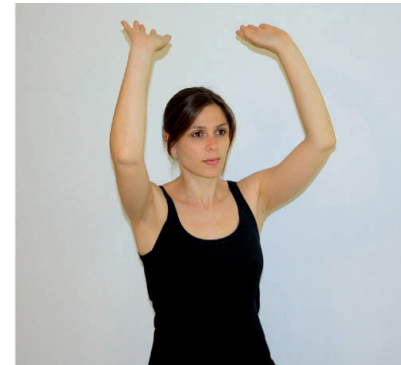


Photo 1a
Open your hands

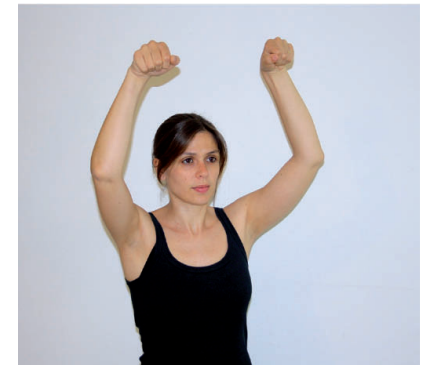


Photo 1b
Close your hands

Neck

a) Front sequence:

- Place your fingers flat on the skin below your ears (photo 2a). Draw 5 consecutive semicircles with your fingers moving backwards then downwards with both hands simultaneously.
- Place your fingers flat on the skin on both sides of your neck (photo 2b). Draw 5 consecutive semicircles with your fingers moving backwards then downwards with both hands simultaneously.
- As shown in photo 2c (hands on the collarbone) draw 5 consecutive semicircles downwards and towards the centre, placing your fingertips in the space above the collarbone, with both hands simultaneously.

Repeat the 3 manoeuvres for 3 times.

(Repeat the draining manoeuvre - photo 1a and 1b)



Photo 2a
Below your ears

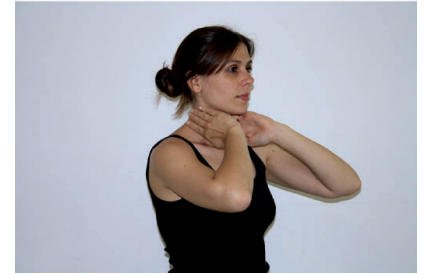


Photo 2b
Side of the neck



Photo 2c
Collarbone

b) Back sequence:

- Place your fingers flat on the skin in the upper part behind your neck (photo 3a). Draw 5 consecutive semicircles with your fingers moving backwards then downwards with both hands simultaneously.
- Place your fingers flat on the skin behind your neck in the lower part (photo 3b). Draw 5 consecutive semicircles with your fingers moving backwards then downwards with both hands simultaneously.
- As shown in photo 3c (hands on the collarbone) draw 5 consecutive semicircles downwards and towards the centre, placing your fingertips in the space above the collarbone, with both hands simultaneously.

Repeat the 3 manoeuvres for 3 times.

(Repeat the draining manoeuvre - photo 1a and 1b)



Photo 3a
Upper part behind the neck



Photo 3b
Lower part behind the neck



Photo 3c
Collarbone

Chest

a) Place the **NON-operated arm on the table**: with the hand of the operated arm push 5 consecutive times towards the back in the three positions shown in photos 4a, 4b and 4c.

Repeat 3 times.

(Repeat the draining manoeuvre - photo 1a and 1b)



Photo 4a
Below the armpit



Photo 4b
Just below



Photo 4c
Below the breast

b) Place the **operated arm on the table**: with the hand of the NON-operated arm push 5 consecutive times towards the back in the three positions shown in photos 5a, 5b and 5c.

Repeat 3 times.

(Repeat the draining manoeuvre - photo 1a and 1b)



Photo 5a
On the operated breast



Photo 5b
At the centre of the
chest

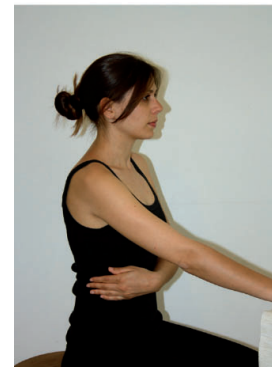


Photo 5c
On the non-operated
breast

a) Place the operated arm on the table: on the chest, with the hand of the non-operated arm **pull the skin** for 5 consecutive times in the three positions (photos 6a, 6b and 6c). The direction in which to pull is always **from the operated breast towards the other breast**.

Repeat 3 times.

(Repeat the draining manoeuvre - photo 1a and 1b)



Photo 6a
On the operated breast



Photo 6b
At the centre of the chest

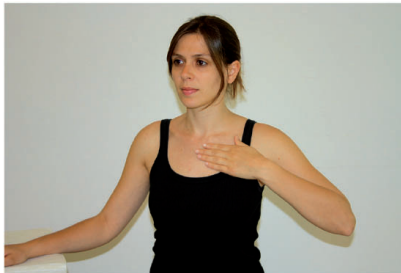


Photo 6c
On the non-operated breast

b) Repeat the previous exercise for 5 consecutive times in the three positions (photos 7a, 7b and 7c), placing the hand of the non-operated arm **below the breast**. The direction in which to pull is always **from the operated breast towards the other breast**.

Repeat 3 times.

(Repeat the draining manoeuvre - photo 1a and 1b)



Photo 7a
Below the operated breast



Photo 7b
At the centre below the breasts



Photo 7c
Below the non-operated breast

With both hands, apply pressure in depth with the tip of your fingers in the intercostal spaces (when possible) for 5 consecutive times in each point indicated by the positions shown in photos 8a, 8b and 8c. ("Soldiers" manoeuvre).

Repeat 3 times.

(Repeat the draining manoeuvre - photo 1a and 1b)

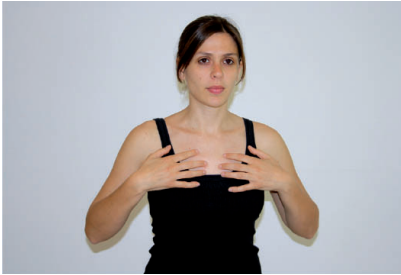


Photo 8a
On the sides of the breastbone

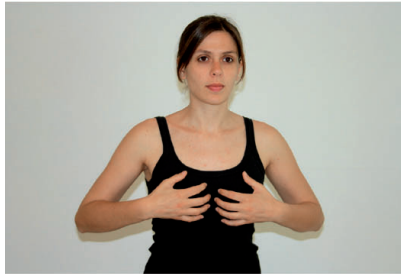


Photo 8b
Between the breasts



Photo 8c
Below the breasts with your arms crossed

Arm

These manoeuvres must be performed **while seated and only on the arm with lymphedema, resting on a surface**.

Gently place the hand of the NON-operated arm around the arm WITH lymphedema, keeping all fingers (thumb included) together as shown in the photo. Push for 5 consecutive times upwards towards the shoulder in the three points shown in photos 9a, 9b and 9c. Repeat 3 times.

(Repeat the draining manoeuvre - photo 1a and 1b)



Photo 9a
Near the elbow



Photo 9b
At the centre of the arm



Photo 9c
On the shoulder

Draw 5 semicircles on the elbow pit of the arm with lymphedema, towards the shoulder. Repeat 3 times.

(Repeat the draining manoeuvre - photo 1a and 1b)



Photo 10
Semicircles in the elbow pit
(towards the shoulder)

Forearm

a) Place the hand of the arm with lymphedema vertically, as shown in the photo (place only the little finger in contact with the table). With the hand of the NON-operated arm, push for 5 consecutive times towards the elbow in the 3 points shown in the photos 11a, 11b and 11c.

Repeat 3 times.

(Repeat the draining manoeuvre - photo 1a and 1b)



Photo 11a
Near the wrist



Photo 11b
At the centre of the forearm



Photo 11c
Below the elbow

b) Place the palm of the hand of the arm with lymphedema on the table as shown in the photo.

With the hand of the NON-operated arm, push for 5 consecutive times towards the elbow in the 3 points shown in the photos 12a, 12b and 12c.

Repeat 3 times.

(Repeat the draining manoeuvre - photo 1a and 1b)



Photo 12a
Near the wrist



Photo 12b
At the centre of the forearm



Photo 12c
Below the elbow

Draw 5 semicircles on the wrist of the arm with lymphedema, towards the elbow.

Repeat 3 times.

(Repeat the draining manoeuvre - photo 1a and 1b)



Photo 13
Palm facing up. Semicircles on the wrist towards the elbow

Place the palm of the hand with lymphedema on the table. With the fingertips of the other hand press 5 consecutive times towards the floor ("soldiers") in the points shown by the black lines in photo 14. Repeat 3 times.

(Repeat the draining manoeuvre - photo 1a and 1b)



Photo 14
On the back of your hand, deep pressure with your fingertips

Holding each finger of the hand with lymphedema individually, gently push for 5 consecutive times towards the base of the finger.

Repeat the sequence for each finger, for 3 times.

(Repeat the draining manoeuvre - photo 1a and 1b)



Photo 15
Hold each finger individually

Push only once upwards, towards the shoulder, in the 6 points shown in the photos below along the entire arm, from the wrist to the shoulder.

(Repeat the draining manoeuvre - photo 1a and 1b)



Photo 16a



Photo 16b



Photo 16c



Photo 16d



Photo 16e



Photo 16f

Apply pressure along the whole arm from the wrist to the shoulder (once in each position)

Finally, do a caressing massage, passing with your fingertips on the operated arm from the bottom upwards for 3 times.

Autobendaggio

What you need for self-bandaging:

- 2 elastic bandages for the hand,
- 1 textile sleeve,
- 1 roll of needle punched nonwoven bandage,
- 3 elastic bandages (1 6cm-wide and 2 8cm-wide).

After securing the bandage wrapping it around the wrist (without tightening), unwind the bandage from the thumb towards the little finger and bandage the fingers starting from the little finger (photo 17a).

Wrap 3 times around each finger: once below the nail, once mid-finger and once at the base of the finger.

It is important to leave the nail free and cover the finger uniformly.

In hand bandaging, it is important to always pass on the back of the hand and leave the palm of the hand free (photos 17b and 17c).



Photo 17a



Photo 17b



Photo 17c

After putting on the textile sleeve (make sure there are no wrinkles), bandage the hand and arm up to the shoulder with needle punched nonwoven bandage, leaving the fingers free. Start from the wrist to secure the roll, then go on to the hand and wrap around at least 3 times, making sure the whole hand is well covered, except from the fingers.

Go up to the shoulder overlapping the bandage for half its width at each wrap.

Wrap around the elbow twice with completely overlapping layers to protect it (photo 18).



Photo 18



Photo 19



Photo 20



Photo 21

The first elastic bandage (the narrower, 6cm-wide) must start, as the needle punched nonwoven bandage, from the wrist and wrap the whole hand and part of the forearm.

The second bandage (8cm-wide) must start from the wrist and go up towards the elbow until the roll is finished. In the points where the second bandage overlaps the first one, the gap between wraps can be wider but where the first bandage ends, the gaps between wraps must be approximately 1 cm.

The third bandage (8cm-wide) starts approximately mid-forearm and goes up to the armpit. Where it overlaps with the other bandage, gaps between wraps can be wider but where the second bandage ends, the gaps between wraps must be approximately 1 cm.

IMPORTANT

The final bandage must be compact and uniform. The bandage must be tighter at the hand and progressively less tight as you go towards the armpit. If your nails become white, immediately take off the bandage and do it again.



Photo 22

EXERCISES

These exercises must be performed while wearing the bandage or compression armsleeve. As a general rule, repeat each exercise for 10 times. Inhale at each movement (breath in) with your nose and exhale (breath out) from the mouth.

Mobilisation Exercises

While seated, with your hands on your lap, breath in and lift your shoulders, breath out and lower your shoulders (photo 23a and photo 23b).



Photo 23a
Breath in



Photo 23b
Breath out

Repeat the same exercise, lifting and lowering your shoulders, with your arms raised towards the ceiling.
Place the hand of the bandaged arm on the other hand. Never lower your arms while breathing in and out (photos 24a and 24b).



Photo 24a
Breath in

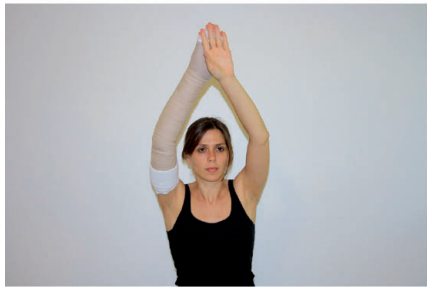


Photo 24b
Breath out

While seated, with your hand on your lap, breath in and try to bring your shoulder blades closer together opening your chest (photo 25a), then breath out bringing your shoulder blades farther away and closing your chest (photo 25b).



Photo 25a
Breath in



Photo 25b
Breath out

Repeat the previous exercise (open and close your chest and shoulder blades) with your arms raised forward at shoulder height. The hand of the bandaged arm is resting on the other hand and both palms are facing down. Never lower your arms (photos 26a and 26b).



Photo 26a
Breath in



Photo 26b
Breath out

Standing, with your hands placed on the corner of a wall at face height (photo 27a), breath in and lift your arms upwards letting your hands slide down the wall (photo 27b). Breath out and bring your hands back in the initial position at face height.



Photo 27a
Initial position



Photo 27b
Breath in

Exercises with elastic band

Seated, with the elastic band behind your back, your elbows bent and kept close to your hips, breath in and stretch out your elbows bringing your arms outwards with the palm of your hands face up.

Breath out and go back to the initial position.



Photo 28a
Initial position



Photo 28b
Breath in and stretch
out your elbows

Seated, with the elastic band in front of your abdomen and your hands in correspondence to your shoulders, keep your elbows bent and against your hips, breath in and bring your hands outwards without detaching the elbows from the hips. Breath out and go back to the initial position.



Photo 29a
Initial position



Photo 29b
Breath in and bring
your hands outwards

Seated, with the elastic band in front of your abdomen and the palm of your hands face down, breath in and lift your right arm while lowering your left arm and bringing both arms backwards.

Breath out and go back to the initial position.

Repeat the exercise exchanging arms (left arm up and right arm down).



Photo 30a
Initial position

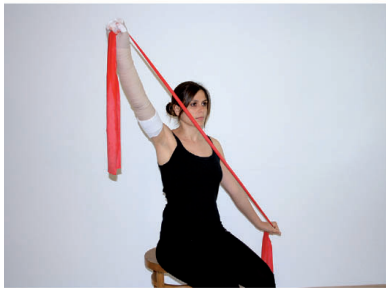


Photo 30b
Breath in

Seated, keep your left arm still along your side and your right arm bent above your head.

Breath in and stretch out the right arm upwards; breath out and go back to the initial position.

Repeat the same exercise with the other arm.



Photo 31a
Initial position



Photo 31b
Breath in

Floor exercises

Initial position: in supine position (laying on your back, on a gym mat or towel) with your legs bent and your feet on the floor (knees and feet aligned to your hips), your arms along your body.

- Without lifting your backside from the floor, breath in slightly arching your back; breath out and lay back your **WHOLE** back on the floor, without ever lifting your backside from the floor.



Photo 32a
Breath in and arch
your back



Photo 32b
Breath out

- Breath in in the initial position and breath out lifting your backside from the floor. Go back to the initial position.



Photo 33a Initial position, breath in



Photo 33b breath out and lift your pelvis

- Breath in in the initial position and breath out as you bring a knee to the chest. Breath in as you bring your foot back on the floor. Repeat the same exercise with the other leg.



Photo 34a Initial position, breath in



Photo 34b breath out

- Repeat the previous exercise bringing both knees to the chest at the same time.



Photo 35a Initial position, breath in



Photo 35b breath out

- Breath in in the initial position and breath out as you bring both knees together to your left side without lifting your feet. Breath in again as you go back to the initial position. Repeat the exercise to your right side.



Photo 36a Initial position, breath in



Photo 36b breath out

- Repeat the previous exercise with one leg crossed over the other: put your right leg over your left leg and bring your knees to your right side; put your left leg over the right leg and bend leftwards.



Photo 37a Initial position, breath in



Photo 37b breath out

- In the initial position, rotate the palms of your hand upwards, breath in as you bring your arms stretched out towards your head, sliding them outwards on the floor. Breath out and go back to the initial position.



Photo 38a Initial position



Photo 38b breath in

- In the initial position, keep your arms open with your palms face up at shoulder height and breath in. Breath out joining your hands in the air in front of your chest with your arms stretched out. Breath in again as you go back to the initial position.



Photo 39a
Initial position, breath in



Photo 39b
Breath out and put your hands together

TIPS AND RECOMMENDATIONS

Draining position

At the end of each exercise and/or at the end of the day, it is recommended to hold the draining position, lying with your legs lifted and your feet against the wall.

Open and close your toes moving your forefoot upwards and downwards, as shown in photos 40a and 40b.



Photo 40a
Breath in and bend your feet



Photo 40b
Breath out and stretch your feet

Decontracting massage with the ball

Foot: Seated, with the ball under the foot, draw circles. Alternate right and left foot.



Photo 41
Foot

Back: Standing against the wall, put the ball on the muscle, making sure not to press against the bones. Repeat all massage steps on the right and left sides.

1. Hold the ball between the wall and your shoulder (trapezius muscle, above the shoulder blade); do the exercise rightwards and leftwards



Photo 42
Trapezius muscle

2. Hold the ball between the wall and the area between the two shoulder blades (on the right and then on the left of your spine); make the ball roll from top to bottom, slightly bending and stretching your knees.



Photo 43
Between the
shoulder blades

3. Hold the ball between the wall and your lower back (lumbar region, on the two sides of the spine); make the ball roll upwards and downwards, slightly bending and stretching your knees.



Photo 44
Lumbar region

4. Hold the ball between the wall and the centre of the buttock; press against the ball and release, alternate with circular movement.



Photo 45
Buttock

Walking in place: Finally, walk in place with high knees, 10 times per leg.

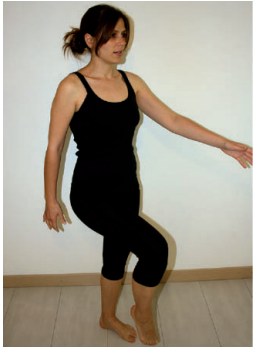


Photo 46
High knee walk

Last but not least keep in mind
that you must wear
the compression armsleeve
(not the bandage) every day,
only during the day,
also when working out.

Please remember also that
a proper diet
("you are what you eat")
and an active lifestyle are
crucial to maintain and keep
improving the results achieved.

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NOTES



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