

Post-Axillary Dissection Surgery Motor Rehabilitation

INTRODUCTION

This brochure is recommended as a practical guide to rehabilitation for patients who have undergone breast surgery.

Early mobilisation is an efficient way to achieve complete functional recovery of the arm, having undergone axillary dissection. Performing these exercises daily, combined with a physiotherapist's assistance, if necessary, will enable you to achieve an optimal post-surgery rehabilitation.

All exercises and information in this booklet are illustrated in the video: "Post-Axillary Dissection Physiotherapy Programme" on the website www.ieo.it search for Patient Care: "Rehabilitation, Physiotherapy" (The video has English subtitles)

Sensations after surgery

After surgery, you may feel some sensations at the surgical site.

The area of the wound could give you a sensation of discomfort or tension which is normal after surgery.

Sensations related to the arm, forearm and hand, shoulder and chest

Small sensory nerve lesions during surgery could cause these sensations. They vary greatly among patients and are usually described as follows: a sense of heaviness, lack of sensitivity, tingling, sensations of cold drops flowing down the arm and burning. For some women, these sensations are intensified when tired or experiencing climatic changes. A lack of sensation in the area near the armpit is a typical outcome; usually, these problems disappear as soon as the nerve fibres regenerate, which could take between one week and a year. These outcomes must not interfere with daily activities or recommended physiotherapeutic exercises. Motor exercises must be started during the first week after surgery, in order to regain complete mobility of the arm and shoulder of the operated side and must be repeated three times a day. During the exercises, your body must maintain the correct posture (with straight back, symmetrical shoulders, straight neck etc.).

In order to maintain the correct posture, doing the exercises in front of a mirror can help.

Training the arm every day is important; in fact, you should use your arm in all daily activities.

In the morning, after you have done the suggested exercises, you should continue the exercise by using your arm during your personal hygiene routine and then during domestic activity. These activities will become very important so that you can check that the movement is correct, taking the same amount of care and precision as you did when performing the exercises in this brochure.

Most patients achieve normal mobility in six weeks. Two weeks after surgery, you could feel stiffer when moving. This is due to the repair of the scar fibres in the area of the armpit and, during this period, extra rehabilitation effort is required.

Deep breathing whilst performing the exercises will help you to relax.

Sit comfortably and breathe in deeply and slowly to extend the abdomen. Now breathe out slowly, completely blowing out the air.

Repeat this exercise several times.

This technique is useful whilst completing the exercises, as it enables you to feel less discomfort and tension in the wound area.

We remind you that a bit of discomfort, tension and pain is normal whilst performing all exercises: if necessary, you can take a painkiller, but do not stop training with the exercises. Doing the exercises regularly will reduce these problems. If these problems become intolerable, such as at higher temperatures, the exercises are no longer recommended. In this case, we suggest you stop exercising according to your doctor's recommendations.

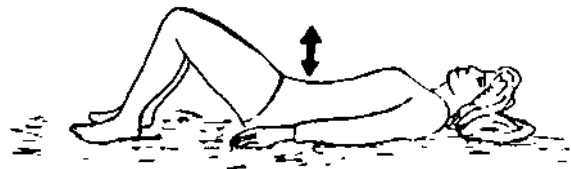
After surgery, the latissimus dorsi muscle can lack in strength. The muscle's function is to keep the scapula attached to the chest. The complication can be caused due to a "stupor" of the thoracic nerve. However, the muscle's strength will return after approximately 6 months of rehabilitation. Arm movements will be normal whilst the patient is lying on his/her back, since the scapula is kept in position by his/her body weight. For these reasons, patients with this problem are suggested to perform only the first 3 exercises and, after hospital discharge, must keep doing exercises under the supervision of a physiotherapist. The physiotherapy staff will assess whether the patient has this problem during his/her stay in hospital.

REHABILITATION PROTOCOL

Exercise 1: "Breathing Technique"

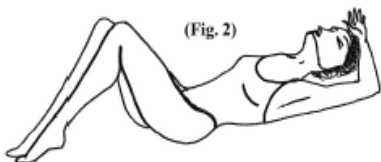
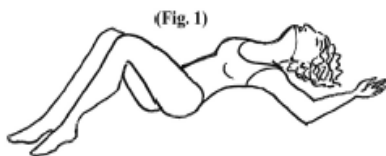
Lie down on the bed, with your arms by your sides and knees bent. Breathe deeply and slowly through the nose, raising the abdomen. Then breathe out slowly through the mouth, completely emptying the lungs and lowering the abdomen.

Continue this exercise for several minutes.



Exercise 2: "Open and Relax"

Lying down on the bed with knees bent, bend your arm and touch your shoulder with your hand. Then extend your arm, keeping your elbow in contact with the bed until you feel tension in the area of the chest or armpit (fig.1). Hold this outstretched position, relaxing the muscles of your arm and shoulder using the breathing technique for 30 seconds. Then, if the tension is reduced, continue the opening movement until you feel the tension once more and hold for 30 seconds more (fig. 2). Return to the starting position. Repeat 5 times.



Once the drainage is removed, perform the exercise without a pillow under your head to slightly increase the difficulty of the exercise.

Exercise goal: elbow totally straight and arm close to your ear.

Exercise 3: “Getting up, opening and closing your fists”

Lie down on the bed with your knees bent, with your arms by your sides.

Raise your arms slowly to a vertical position. Then open and close your fists 5 times and return to the starting position

Repeat 5 times.



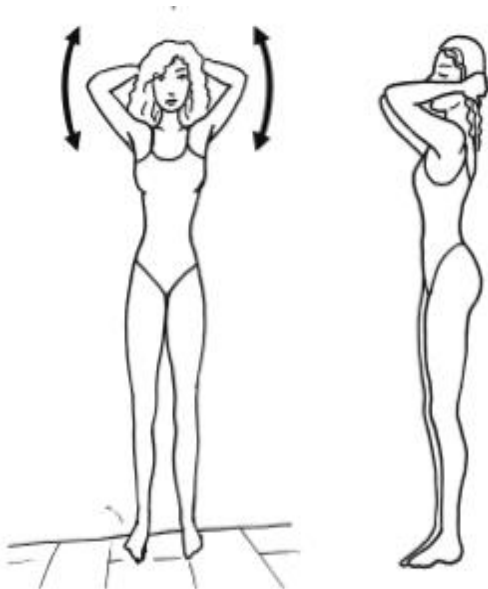
Exercise 4: “Squeeze and Stretch”

From a standing or sitting position with your feet flat on the floor, intertwine your fingers. Bring your arms up slowly over the top of your head and place them behind your neck. Then move your elbows apart slowly and

bring them back again (if you feel any discomfort in the wound area, hold the position and start the breathing exercise: breathe in deeply through the nose and breathe out slowly through the mouth). The first time you perform the exercise, you may not manage to reach the final position, but, as you repeat the exercise, you will improve your range of movement. Slowly raise your hands again from your neck to your head, then return to the resting position. Repeat 5 times.

Exercise goal: To touch the wall with both elbows.

Caution: Do not arch your back. Keep your neck straight



Exercise 5: “Climbing the wall from the front”

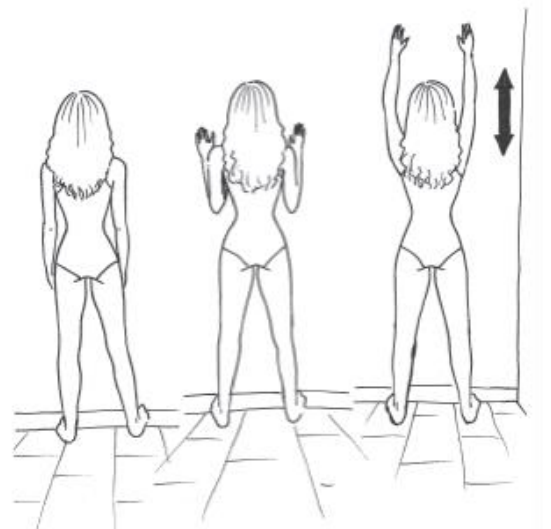
Come close to the wall by about one hand's width, with hands at shoulder height and use your fingers to

“climb” the wall with both hands in parallel. Reach up as high as you can, getting closer to the wall with your feet. Hold the position for a few seconds. Then return to the starting position.

Repeat 5 times.

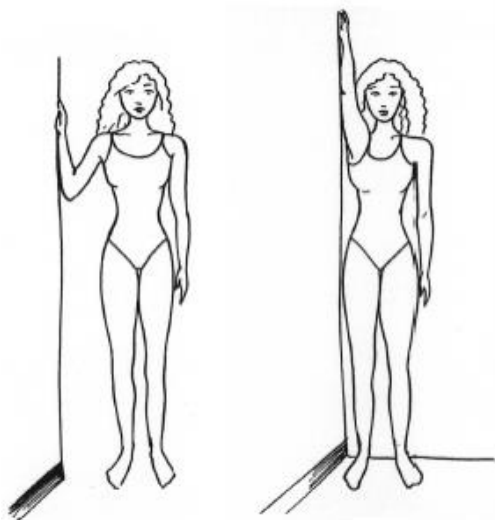
Exercise goal: To reach the same level with both hands.

Caution: Do not arch your back



Exercise 6: “Climbing the wall from the side”

You will need a piece of adhesive tape to do this exercise. Standing with the un-operated side against the wall, about three hand's width away, place your hand on the wall at shoulder level and use your fingers to climb the wall, stretching your arm and getting as close as possible to the wall.



Mark the highest point you can reach on the wall with the tape. Now do this exercise in the same way with your operated arm, trying to get as close as you can to the tape.

Now, move away from the wall and slide down with your hand to your shoulder level.

Repeat 5 times.

After discharge

These exercises need to be performed regularly, once a day (3 repetitions per exercise) until your drainage has been removed. Subsequently, they must be performed 3 times a day (5 repetitions per exercise) for 6 weeks, until you reach complete recovery, which should be within two weeks after the removal of the drainage. If not, contact a rehabilitation

centre. During radiotherapy treatment, it is still necessary to perform the exercises described in this brochure once a day for two months, in order to maintain the elasticity of the radiated tissues, in order to resolve the functional limitations of the arm after surgery and to avoid joint stiffness and lymphatic stasis.

If you encounter any problems, you are advised to contact a rehabilitation centre in order to avoid worsening any limitations of movement.

A team of physiotherapists are on hand to receive patients for assessments or treatment for a fee. The phone number for booking an appointment is +390257489747 or by email (last page).

Fibrosis

Despite performing the exercises, some “fibrotic cords” may sometimes form.

These cords could be seen during the abduction of the shoulder and extension of the elbow and need to be treated as soon as possible by a physiotherapist to prevent them from growing and hardening. Take a painkiller one hour before this procedure.

During your stay in hospital, you will receive a self-assessment questionnaire (“STAWS 2.1”) which will help you to assess whether you have fibrosis or not.

Lymphedema

“Lymphedema” is a swelling of the hand, forearm or arm that could appear on the operated side.

Axillary dissection is a surgical technique in which muscles, vascular bundles and nerves are preserved, dramatically decreasing the chances of lymphedema to between 2% and 20%.

Early mobilisation and rehabilitation exercises are excellent prevention practices against lymphedema. It can also be avoided by taking some precautions, some of which should be taken during the first 6 weeks post-surgery and others in the following period.

During the first six weeks after surgery, collateral lymphatic vessels should activate. Therefore, it is important not to tire the arm with heavy activities (washing windows or floors, lifting weights) or doing repetitive activities (ironing or using a PC for long periods). During the first 3 to 4 weeks, avoid driving. If you cannot avoid it, consider a 5-minute stop every 30 minutes of consecutive driving. Try,

during the 5-minute stop, to release your arms, shoulder, neck with rotation and lateral flexion movements.

You can also use a pillow to support your arm whilst you are lying down to aid venous drainage.

It is also important to prevent your arm from sustaining injuries by not lifting very heavy objects which you are not used to. For this reason, 6 weeks after surgery, it is important to start gradually strengthening your arm by lifting light weights (see next chapter) or swimming (if not prohibited by your physician), to accustom your arm again to the daily activities you were used to doing.

There are some recommendations that you should also consider for life:

- A slowed lymphatic drainage that could happen after axillary dissection may predispose the area to infections. Therefore, protect your hand and arm against wounds, stings, pricks and burns. In case of injury, thoroughly disinfect the area immediately.
If you have an infection, your doctor must treat it with antibiotic therapy.
- Avoid carrying bags for long distances with your arm alongside your body holding the weight. You can, however, transport any type of weight for short journeys (such as taking the bins out, for example)
- When wearing a bra, it should not be tight on your ribs or shoulders: if the skin underneath shows signs of pressure (which indicates difficulty of lymphatic drainage towards collateral vessels), use a bra with wider straps or put a soft pad between the skin and the strap. If you can't find a bra of the right size, you can buy a hook to increase the circumference
- Avoid wearing rings, tight watches and bracelets, which cause signs of pressure. Also, avoid giving blood samples or taking intravenous therapy on the operated arm. If necessary, use the other arm.
- If you are fond of tanning, use a sun cream with a high SPF factor to avoid getting burnt.
- Use protective gloves whilst gardening to avoid injuries of the skin.
- Use a moisturising cream on the operated arm to keep it moisturised.
- You are advised to perform whole-body physical activity on a regular basis, such as yoga, Nordic walking, swimming and Pilates. These kinds of activity facilitate lymphatic drainage.
- Follow a balanced diet to avoid obesity.
- Wait 4 weeks after surgery to shave your armpits, then use an electric razor. Other devices could injure the arm.

Lymphedema treatment consists of a combination of various decongestive therapies, such as manual lymphatic drainage with a multicomponent bandage; exercises and, subsequently, use of an elastic compression garment.

In some cases, it may be useful to combine manual lymphatic drainage with compression therapy, which must not be the only treatment.

If you see your arm swelling, please contact the physiotherapy service (last page).

If the swelling occurs suddenly and is accompanied by pain, redness, warmth and sometimes fever, contact a doctor to assess the presence of an infection or inflammation and the necessity for drugs.

Strengthening your arm muscles

Start strengthening your arm six weeks after drainage completion. This should be continued for 4 weeks, every other day, starting with 0.5 kg weights and continuing up to 1 kg weights. The weight (which could be a half-litre bottle of water and then a litre bottle of water) should be raised, keeping your arm straight: ahead, behind, to the side and upwards (for the last exercise, you have to bend your arm, touch your shoulder with your hand and then raise it up). Every exercise has to be done in 3 sets of repetitions, with each set made up by a variable number of repetitions, up to a maximum of 10. When you are able to do 3 series of 10 repetitions for each movement, increase the exertion by progressing to the 1 kg weights. Instead of using weights to reinforce the arm, you can also swim, again, gradually increasing your exertion. The most important general rule for strengthening is that the exercises should cause tiredness of the arm, but not pain.

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