



Recovering after cardiac surgery

Useful tips on how to return to your regular life.

ISMETT

Returning to your regular life



When undergoing open heart surgery, the first 4-6 weeks after the procedure are the most important for your recovery. You will recuperate muscle tone from the moment you return home and back to your regular activities.

The physical activity you undertake will be similar to that of the days prior to the surgery, and will gradually increase over time. If you feel too fatigued, diminish the load of activities and follow your rehabilitation program in less of a hurry.

During recovery it might seem that time passes slowly. Your body functions will be slowed down by the substantial reduction of physical activities, drug intake, the surgery itself, and psychological stress.

Do not be surprised if you are more emotional, or if you cry without any reason! Surgical stress can manifest after the hospital stay.

It is very important to learn to know your body and your emotions for a speedy recovery.

Rest immediately if you feel tired; use common sense, and set feasible targets.

Get well!

ISMETT's Cardiothoracic Surgery Team



Treating the wound



A sternal wound is an incision with specific characteristics, which resolves over the first weeks after the surgery, namely:

- Discoloration (i.e., the skin surrounding the wound is darker), of both the sternal wound and the leg incision (if any).
- Reddened wound margins.
- Itch on or around the wound.
- Mild swelling (edema) of the wound, especially on the leg (if any).
- Mild or moderate pale-pink fluid drainage from the incisions.

After a month or so, a physician will check your wounds during the OPC visit.

We suggest all patients wear a chest binder after post-op day #3.

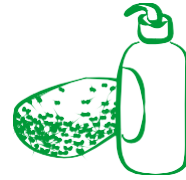
WARNING

The following symptoms must be IMMEDIATELY reported to the family doctor or transplant coordinator:

- Extensive redness and strong heat of the skin surrounding the wound.
- Abundant liquid oozing from the wound.
- Drainage liquid of white, yellow, or green color.
- Pungent odors exuding from the wound.
- Swollen or painful area around the wound.
- Fever (higher than 38 °C) or chills.
- Excessive fatigue.



Personal hygiene



Skin protects the body from the external environment. A thorough hygiene of the body helps prevent skin alterations and diseases that can hinder the success of the surgery.

- After three days from the surgical procedure, shower every day using lukewarm water. Avoid hot water as it could lower your blood pressure. Have someone with you when showering the first times, so that he/she can help you in case you faint.
- Do not use harsh brush or sponges because they could cause infections.
- Use neutral-PH soaps.
- Never rub the sternal wound, but gently wash it with water and neutral soap.
- Do not sneeze on the wound as it could cause an infection.
- If you are wearing bandages over the wound, remember to replace them the day after your hospital discharge.
- Get someone to clean your home thoroughly; your immune system will be weakened and more vulnerable to infections.
- Wear clothes made of natural fabrics (e.g., linen and cotton), possibly non-colored.

Learn how to recognize the first signs of a wound infection (e.g., burning feeling, pain, redness, abnormal wound closure) and immediately contact a physician for clarification, as necessary.



Cardiology rehabilitation

DRIVING A CAR



It normally takes 4 to 6 weeks for the sternum to fully recover after surgery.

Do not drive during the first 6 weeks after your discharge, as your responsiveness could be slowed down due to weakness and/or drugs you are taking. During this period you cannot ride any bike, motorcycle, or moped.

As a precaution, sit in the back seat to prevent hitting the dashboard in the event of heavy braking.

We suggest you refrain from long car drives until your cardiologist or cardiac surgeon authorizes you. During long-distance drives by car, stop every hour to take a quick walk and improve blood circulation in the legs, thus avoiding any swelling.

IN SHORT:

Do not drive during the first six weeks after surgery, sit in the back seat, and travel for short drives only.



AT HOME



You should resume your regular activities gradually and by alternating rest periods.

After two weeks from your return home, you can do some light chores, such as: set the table for meals, help your family cook, or dust furniture. Any other chores, like cleaning the floor, loading and unloading the washing machine, gardening, or lifting objects heavier than 5 kg must be absolutely avoided because they could cause pain to the wound and delay its healing.

As a general rule, you cannot go back to your usual chores or care of children during the first six weeks after surgery.

Your physician can tell you what the activities that you can carry out according to your health status are.

LIFTING HEAVY OBJECTS



When lifting heavy things (e.g., transporting luggage, holding kids, and carrying shopping bags) your thorax muscles are contracted, which is an effort that your body cannot take.

We recommend you refrain from lifting any weight during the first six weeks after surgery.

Please be aware that some apparently light activities can actually be quite fatiguing, such as opening closed and jammed windows, keeping automatic doors open, or hammering nails to hang pictures.



REST



During the first stages of your recovery, any physical activities are an effort for your body; remember that you will need to get a lot of rest.

When returning home, for the first two weeks take at least two naps of 20-30 minutes each. It won't be necessary to lie on a bed, you can simply rest on a sofa or couch.

Try to sleep 8 to 10 hours per night, and avoid staying up late thinking you'll sleep in the morning.

For the first 6 weeks sleep on your back (supine) to avoid applying tension on the sternum.

WALKING



Walking is an excellent exercise to improve circulation, muscle tone, strength, and your general well-being.

Walk every day, gradually increasing the distance.

Interrupt your walk with numerous breaks rather than walking for long distances without stopping.

Over the first weeks, even a gentle slope could excessively stress your body. Start walking on flat surfaces, such as department stores, gyms, or in the areas surrounding your home (if you live in flat areas), adjusting the speed so that you do not get tired.

Gradually vary the kind of walking path and speed, without ever getting tired.

Avoid walking during the warmest hours of the day during summer, or when it rains or is cold in winter.



STAIRS



Walking up the stairs requires more energy than walking.

Take your time and use the handrail. If you feel fatigued, breathless, or a bit confused, sit down and rest.

If your bedroom is on an upper floor, do not change the place you usually sleep, but rather organize things so that you walk the stairs up and down as little as possible.



PHYSICAL ACTIVITY



Interrupt all activities if you feel breathless, dizzy, lightheaded, have irregular heartbeats or chest pains. Rest until all symptoms have ceased. Contact your physician if symptoms do not disappear after 20 minutes.

Guidelines for exercises

Stop exercising if you feel breathless, lightheaded, fatigued, leg cramps or chest pains (angina). If symptoms persist, call your doctor. If after exercising your pulse is 30 beats higher than those at rest, you have stressed your body too much. In this case, change the next exercise session.

Assessment of vital signs

Monitoring your pulse helps you keep the physical activity under control. To measure the pulse, put your index and middle finger under the thumb of the opposite hand, and slide them until you reach the wrist.

If you cannot feel the pulse, move your fingers around that area. Once you feel it, count the beats for 15 seconds, then multiply them by 4 to have the total beats per minute. A physician or nurse can help you find the pulse, if you need it.



Dietetic aspects

DIET



The physician will advise you to follow a low-fat and salt-free diet after your discharge. A correct diet will reduce the risks of heart attack, and having to undergo a new angioplasty or heart surgery. Fat caloric intake must be lower than 30%. Monitor your weight and eat less saturated fats and cholesterol.

The American Heart Association (AHA) recommends an intake of fatty acids corresponding to 8-10% of calories. Polyunsaturated fatty acids should constitute up to 10% of the calories. Polyunsaturated fatty acids represent the remaining of the total fat intake, and approximately 10-15% of total caloric intake.

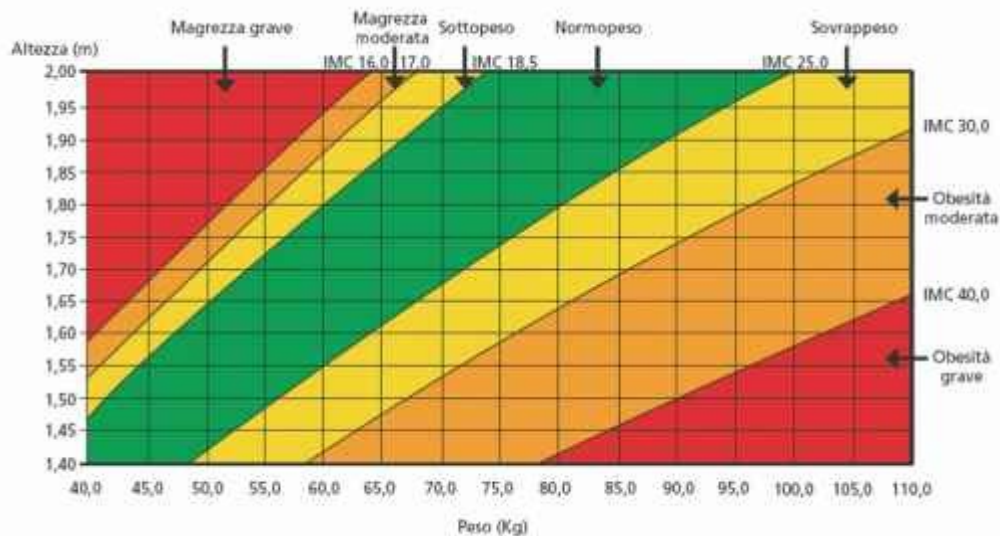
The daily dose of cholesterol intake is 300 mg. You should not eat more than 2.4 g of salt a day.

Avoid adding salt when cooking or eating. Start to modify your diet when your appetite goes back to normal.

Daily weight.

- Weigh yourself every morning, after urinating and before eating.
- Use the same scale each time.
- Keep a daily record of your weight.
- Inform your physician if your weight increases more than 900 g overnight.

In case of any doubts after the surgery, contact your physician.



FOOD



The goal of the diet followed by patients who have undergone surgery is to improve the nutritional intake and ease the recovery.

As a precautionary measure, salt intake must be limited during the first period.

Sodium (salt) can be found in:

- Food (e.g., water, fruits, vegetables, meat).
- Salt added when cooking or eating.
- Processed foods (industrial or artisanal).
- Food eaten at restaurants.

If you do not suffer from arterial hypertension, salt can be gradually reintroduced in the diet up to the level of previous normal and healthy habits.

You must also monitor scrupulously, and in the long term, the quantity of cholesterol and total fat intake, in particular saturated ones.

GUIDELINES FOR A HEALTHY DIET

Consuming a wide variety of foods is the easiest and safest way to guarantee an adequate intake of all essential nutrients. Vary your options as much as possible, and adequately combine different foods.

Spread out your food intake throughout the day.

Have three large meals (i.e., breakfast, lunch, and dinner), and two simple snacks (e.g., a fruit, low-fat yoghurt, fresh juices, or 2 slices of rusk) every day.



Cereals and products derived from cereals are the main source of carbohydrates

In a balanced diet, 50-60% of total calories should derive from carbs.

- Regularly eat bread, pasta, rice, and other cereals (best if whole-wheat), avoiding dressings that are high in fats.
- Increase your intake of fresh and dry cereals and grains; use oils and fats with moderation (these can be replaced with seasoning and spices).
- Choose **whole-wheat** products.

Sugar, sweets, and soft drinks should be consumed in moderation

The main sugar sources are sweets and soft drinks.

- Reduce intake of sweets and soft drinks.
- If you crave sweets, eat baked cookies, cakes with no fillings, which contain less sugar and fat.
- Limit jams, marmalade, and honey.
- Avoid foods with a high sugar content (common sugar).

Fats: choose the right quality and limit the quantity

The fat intake for an adult should be around 25-30% of his/her total caloric intake.

- Use moderate quantities of fats and oils when dressing and cooking your food.
- Limit your intake of animal fats (e.g., butter, lard, suet, cream) for dressing. Use raw vegetable fats (e.g., extra-virgin olive oil) for your dressing.
- Limit your intake of fried food.



Proteins: opt for fish!

The protein (i.e., meat, fish, eggs, pulses, cheeses, and cold cuts) intake should be around 12-15% of a person's total caloric intake.

- Eat fish, either fresh or frozen, at least 2-3 times a week.
- Prefer lean meats, and remove excess fat. Eat processed or preserved meats (e.g., bresaola and ham) once a week.
- Consume maximum two eggs per week.
- Opt for skimmed or semi-skimmed milk.
- Choose low-fat cheese and dairy products (no more than 2-3 times a week).

Eating vegetable fibers is of the outmost importance

Eating fibers has positive effects on lipid metabolism, reducing cholesterols and triglycerides levels.

- Eat 5-6 portions of fresh fruit and vegetables every day.

Drinks

Wait for your physician's authorization before drinking alcoholic drinks, even in moderate amounts.

The daily alcohol intake should be 1-2 glasses of wine, each of 125 ml.

Drink alcoholic beverages only with meals, and remember that if you exceed the suggested amount the negative effects of alcohol outweigh its positive effects.

Favor low-alcohol drinks, like wine and beer.



Drinking with moderation does not only means limiting the amounts. You must also avoid drinking the suggested amount in a short time, allowing your body to degrade ethanol in a more efficient way.

- Avoid or reduce alcohol consumption if you are taking medicines (including over-the-counter drugs), unless your family doctor has explicitly authorized you to.
- Reduce or avoid alcoholic drinks if you are overweight, obese, diabetic, or have hypertriglyceridemia.
- Coffee and tea can trigger tachycardia, arrhythmias, or palpitations in certain individuals; if so, we recommend limiting their intake. You can replace them with decaffeinated coffee or theine-free teas.



Cholesterol and triglycerides



High blood cholesterol and triglyceride levels enhance the risk of cardiovascular diseases.

Blood cholesterol should not exceed 200 mg/dl. The following factors can trigger a rise of blood triglycerides levels:

- High-fat diets
- Overweight
- High caloric intake, especially of simple sugars and carbs
- Alcohol
- Sedentariness
- Inadequate monitoring of your blood sugar levels (if diabetic).

You can lower your blood cholesterol and triglycerides levels by reducing:

- Total fat amounts, limiting unsaturated fats to the recommended doses and decreasing saturated fats
- High-cholesterol foods
- Alcohol consumption
- Sugar intake
- Body weight and/or maintaining the optimal weight, also eating more fibers (e.g., vegetables or whole-wheat products)
- And avoiding fried foods.



The table below shows lists foods to prefer and to avoid.

Learn to read food labels.

	AVOID	REDUCE	REPLACE WITH
Dairy products	Whole milk and yoghurt, aged cheeses (e.g., pecorino, grana, and provola)	Semi-skimmed milk or yoghurt, fresh cheeses (e.g., crescenza, stracchino, mozzarella)	Skimmed milk, yoghurt, fat-free cheeses, or low-fat cheeses (1-2%) (E.g., ricotta or cottage cheese)
Meat (No more than 170 g of cooked meat a day)	Offal (e.g., spleen, liver, and lungs)	Egg yolks, butter, fish preserved in oil	Lean meats, fish, skin-off poultry, egg white, tuna in brine
Cereals	Egg pasta, snacks, chips	Baked foods (e.g., crackers or breadsticks)	Whole-wheat bread, cereals, rice, pasta, and potatoes
Fats	All fats (especially saturated ones), butter, lard, bacon, cream, aged cheeses, margarine, and cocoa butter (chocolate)	-	Polyunsaturated oils (e.g., sunflower, corn, soya) monounsaturated oils (e.g., olive, peanut)
Fruit and vegetables*	Coconut, vegetables seasoned with butter or lard	Olives	Fresh/frozen fruits and vegetables
Simple sugars	Sucrose (sugar), cane sugar, honey	Fructose (e.g., fruit and fruit juices)	-
Sweets	All	-	-

*Patients following a WARFARIN therapy must ask for the specific table.



SALT CONTENT IN SOME FOODS

TABELLA 1 – LE FONTI "NASCOSTE" DI SALE

Alimenti	peso dell'unità di misura g	contenuto per unità di misura	
		sodio g	sale g
Pane	50 (1 fetta media)	0,15	0,4
Pane sciapo	50 (1 fetta media)	tracce*	tracce
Biscotti dolci	20 (2-4 biscotti)	0,04	0,1
Cornetto semplice	40 (1 unità)	0,16*	0,4
Merendina tipo pan di spagna	35 (1 unità)	0,12*	0,3
Cereali da prima colazione	30 (4 cucchiali da tavola)	0,33*	0,8

TABELLA 2 – ALIMENTI CONSERVATI E TRASFORMATI RICCHI DI SALE

Alimenti	peso dell'unità di misura g	contenuto per unità di misura	
		sodio g	sale g
Olive da tavola conservate	35 (5 olive)	0,46*	1,1
Verdure sott'aceto	60 (3 cucchiali da tavola)	0,48*	1,2
Prosciutto crudo (dolce)	50 (3-4 fette medie)	1,29	3,2
Prosciutto cotto	50 (3-4 fette medie)	0,36	0,9
Salame Milano	50 (8-10 fette medie)	0,75	1,9
Mozzarella di mucca	100 (porzione)	0,20	0,5
Provolone	50 (porzione)	0,34	0,9
Formaggino	22 (1 unità)	0,22*	0,6
Parmigiano grattugiato	10 (1 cucchiaino da tavola)	0,06	0,2
Tonno sott'olio (sgocciolato)	52 (1 scatoletta)	0,16	0,4
Tonno sott'olio a bassa percentuale di sale (sgocciolato)	52 (1 scatoletta)	0,05*	0,1
Patatine in sacchetto	25 (una confezione individuale)	0,27	0,7
Patatine in sacchetto a tenore ridotto di sale	25 (una confezione individuale)	0,09*	0,2

Medicines



After cardiac surgery, you will be almost certainly be prescribed a pharmacology therapy to support your healing process.

It is possible that you will continue the same therapy you were prescribed before the surgery.

Pharmacology therapy will help you:

- Optimize your heart pump function
- Reduce your heart workload
- Lower blood coagulation
- Prevent gastritis and ulcers secondary to post-surgical stress.

You may also be prescribed painkillers to ease pain or make you sleep better at night.

Remember to keep a stock of medicines at home, so that you will never be out of them.

Remember the following information on all medicines you are on:

- Brand name and active ingredient
- Dose
- Use
- Side effects.



Among the possible medicinal categories that you may be prescribed there are:

ACE inhibitors (e.g., Captopril and Enalapril)

Dilate blood vessels, reducing the arterial pressure and heart workload. They also help cardiac kinesis, slowing down the progress of the disease.

BETA BLOCKERS (e.g., Metoprolol and Propranolol)

Help your heart work better, reducing heart rate and arterial pressure.

DIURETICS (e.g., Furosemide)

Lower the level of salts in your body and remove excess liquids causing respiratory problems and swellings.

DIGITALIS (e.g., Digoxin)

Increase the strength of heart contractions and prevent rapid heartbeats and palpitations.

VASODILATORS

Dilate blood vessels, lowering arterial blood pressure and helping the cardiac function.

ANTI-ARRHYTHMIC DRUGS

Treat or prevent abnormal cardiac rhythms.

ANTICOAGULANTS (e.g., Warfarin and Acenocoumarol)

Thin the blood and prevent clot formation. Because dosage must be adapted to your coagulation levels, periodic blood tests will be necessary.

GASTROPROTECTORS (e.g., Omeprazole)

Protect the gastric mucosa from lesions caused by the intake of multiple medicines at the same time.



Sexual life after surgery



After undergoing cardiac surgery, you will go through an intense period, both from a physical and an emotional perspective.

Stress related to surgery can also affect your sex life.

During the first weeks after the surgery stay close to your partner, hold hands, cuddle, and caress each other. These activities require low amounts of energy, and can serve as an antidote to stress and depression.

Many couples have experienced that these expressions of love can help to slowly, and with higher confidence, achieve full sexual intercourse (approximately 1 to 3 weeks after your return home).

Because of your sternal wound, you should avoid positions that could cause pain or discomfort to the sternum. As you go along with the rehabilitation program, your resistance to physical efforts will increase, and you will soon be ready for your regular sexual life.

The effort necessary for a full sexual intercourse corresponds to a brisk walk or climb two ramps of stairs.

The heart rate rarely exceeds 120 beats per minute, and blood pressure rises in a moderate and temporary manner.



After open heart surgery it is possible to feel a rise in your heart beat, breathing, and muscle tension.

All these symptoms are normal and should not worry you.

Performance anxiety and depression are two psychological factors that could reduce your interest in and ability to have sexual intercourse. These are also normal symptoms, which should disappear after approximately 3 months.

If your depression persists for a period of 3-6 months, consider asking for psychological support.

Some medications could also have an impact on your sexual desires and performance

In this case contact your physician. Changing medication or dosages can sometimes efficiently solve the problem.

Never suspend a pharmacology therapy without prior medical approval. Try to foster an open dialogue with your partner.



Here below there are some few useful tips on how to resume a satisfactory sexual life:

- Start the rehabilitation program as soon as possible.
- Be understanding, and listen to your partner's emotions. After a major surgery, you might feel more emotional and experience sudden mood swings.
- Stay focused on your daily activities and try to take it easy on yourself: a good sense of humor is always helpful!
- Adapt your sexual expectations to the circumstances. Altered physical and emotional conditions can trigger anxiety when returning to your sex life.
- Stay calm and relaxed before having sexual intercourse.
- Opt for a position that does not weigh down on your chest or require an excessive and prolonged muscular effort.
- Choose a familiar place, at a comfortable temperature, and a partner that you know well.
- Wait at least one hour after meals before having sex.

Contact your physician if you experience chest pains, angina, breathlessness, accelerated heart rate, or extreme fatigue in relation to your sexual activities.



Your family doctor



When returning home, contact your family doctor and/or cardiologist within the first week; show them the discharge letter given to you before leaving the hospital.

ISMETT's cardiac surgeons will schedule a follow-up visit after approximately 20 days from your discharge.

The exact date of the visit will be stated in the discharge letter.

During the follow-up visit you will be requested to show a recent thorax radiography, to be performed in any radiological institute, and blood chemistry tests.

ISMETT's surgeon will check your wound and adjust the pharmacology therapy, if necessary.

If everything is normal, successive check-ups can be performed by your cardiologists. You will be monitored throughout your life, with follow-up visits to be scheduled with your cardiologist.

If the symptoms you experienced before the surgery reappear, immediately contact your physician and/or go to the closest emergency room.

Once you are stable, contact us.



For further information:

ISMETT
Via E. Tricomi, 5
90127 Palermo, Italy

Telephone: + 39 091 2192 111
Fax + 39 091 2192 400
mail@ismett.edu
www.ismett.edu



Region of Sicily

ISMETT

UPMC



Facility Accredited with
Joint Commission International