

Healing After Surgery

Acupressure

Acupressure is one of the world's oldest medical therapies. It was developed more than 5,000 years ago in China as a way to restore natural energy. To do this, it uses finger placement and pressure on certain points along your body's energy pathways.

This therapy has been proven effective to help:

- Manage pain, headaches, stress, and nausea.
- Lessen fatigue and depression.
- Improve sleep quality.

You can apply acupressure to yourself. Or you can ask a caregiver to do it for you. There are several acupressure points on the body. You may like to try three in the ear and one on the hand. See the images for more direction.

HOW TO USE ACUPRESSURE

1. Use your fingertips to apply gentle, firm pressure on each point.
2. Press and hold for 30 seconds to 3 minutes.
3. Breathe slowly and deeply through your nose as you apply the pressure.

There are acupressure points on both sides of the body. You may use this therapy as often as you like; there is no limit.

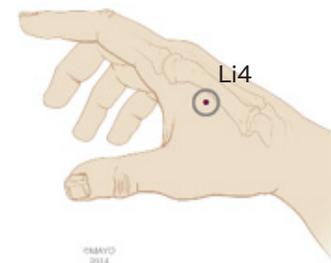
CAUTION

If you are pregnant, do not use Li4. Otherwise, Li4 acupressure is safe to use after surgery. You should not apply pressure over point that may be located on or near your surgical site until these are healed, or over areas with burns, infection, contagious diseases of the skin or active cancer.

FINDING A TRAINED SPECIALIST

To find a trained acupressure provider in your community, look online for a national database of providers, accredited Eastern Medicine schools and other resources: [National Certification Commission for Acupuncture and Oriental Medicine NCCAOM](#)

or a massage therapist who practices acupressure: abmp.com/public



FOR MORE INFORMATION

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Healing After Surgery

Aromatherapy

Aromatherapy uses your sense of smell to promote physical and psychological well-being. This therapy helps relieve symptoms such as pain, headaches, stress, nausea, anxiety, and sleeplessness.

HOW DOES THIS WORK?

Inhaling essential oils stimulates your olfactory system. This is the part of your brain connected to smell. It includes your nose and your brain. When the molecules you inhale reach your brain, they affect your limbic system. The limbic system is linked to your emotions, heart rate, blood pressure, breathing, memory, stress, and hormone balance. Inhaling essential oils may help promote relaxation and provide a comforting environment.



Possible benefits and uses of common essential oils

Essential Oil	Uses	Description
Ginger (Zingiber officinale)	<ul style="list-style-type: none"> • Nausea and upset stomach • Constipation and diarrhea • Muscle pain 	<ul style="list-style-type: none"> • Balancing, stimulating and warming • Warm spicy and woody essential oil
Lavender (Lavendula angustifolia)	<ul style="list-style-type: none"> • Relaxation • Improved sleep • Mood boosting • Muscle aches and headaches 	<ul style="list-style-type: none"> • Harmonizing, balancing, soothing, and relaxing • Stimulating in large quantity • Floral essential oil
Lemon (Citrus limon)	<ul style="list-style-type: none"> • Headaches • Mental fatigue • Mind clearing 	<ul style="list-style-type: none"> • Stimulating, calming and mind clearing • Fresh and sweet essential oil
Mandarin (Citrus reticulata)	<ul style="list-style-type: none"> • Nervousness, restlessness and anxiety • Improved sleep • Nausea or stomach upset 	<ul style="list-style-type: none"> • Stimulating yet calming and revitalizing • Uplifting • Sweet and sharp essential oil
Spearmint (Mentha spicata)	<ul style="list-style-type: none"> • Nasal congestion • Nausea or stomach upset • Muscle aches and headaches • Hiccups 	<ul style="list-style-type: none"> • Relaxing • Spicy and sweet essential oil

PLAN AHEAD

Before surgery, buy your essential oils to use at home after surgery. Health and wellness stores likely will have the best variety of brands and scents. Essential oils also are available to buy online.

HOW TO USE ESSENTIAL OIL

- **Inhale:** A little oil goes a long way. Apply 2 to 3 drops of the essential oil to a cotton ball. Place the cotton ball in a plastic, zippered bag. Reuse every 30 minutes as needed. Although this application has a very low level of risk for most people, use the oil in a well-ventilated space.
- **Absorb through the skin (dermal use):** Be sure to dilute your essential oil with another product before you apply the solution over the painful areas. Consider mixing one drop of essential oil with one teaspoon of almond or jojoba oil.
 - **Never** apply an essential oil directly onto your skin. These oils may cause skin irritation and other reactions.
 - **Never** apply essential oils to your eyes or within 4 inches of your surgical incision.
 - **Never** swallow (ingest) an essential oil unless you have asked your health care provider, and you have talked with an aromatherapist trained in the safety issues of ingesting oil.

CAUTION

Be an informed consumer. Essential oils have little regulation and oversight. It can be difficult to know which products are safe to use. It also is difficult to know what information is reliable and true.

- While you may like aromatherapy very much, it could make your condition worse. If you are pregnant or nursing or you have skin allergies, ask your physician whether you should use aromatherapy.
- If you have a respiratory condition like asthma or COPD, do not use aromatherapy
- To reduce the risk of adverse effects, always use pure essential oils. Do not use oils that have additives. Be sure to read the ingredient list and directions on the product to learn how the oil is produced. You may want to research several brands to find the best one for you.
- Essential oils are volatile compounds. This means that they can easily change from liquid to gas. Most essential oils are free of adverse side effects when they are used properly. But it is important to follow safety precautions shown on the product's package.
- Infants and young children are more sensitive to essential oils. Be careful when using essential oils around them.
- You can't use your own essential oils while you are in the hospital. But you may ask your nurse whether there are essential oils in your hospital unit. You may be able to use some oil with your nurse's help after surgery.
- Diffusers are not allowed in patient rooms. If you have a respiratory condition like asthma or COPD, check with your physician before you use essential oils.

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OTHER RESOURCES

The National Association for Holistic Aromatherapy (NAHA) website includes suggestions for different ways to use essential oils, instructions for diluting them, a marketplace for purchasing them and a search directory to help you find aromatherapy resources near you. <https://naha.org/explore-aromatherapy/safety>

Healing After Surgery

Relaxed Breathing

Relaxed breathing is a tool used to help you relax and to ease muscle tension. It also can help relieve pain.

When a person is stressed, it's easy to get into the habit of taking short, shallow breaths. These typically are centered in the upper chest and shoulders. When you practice relaxed breathing, you work to breathe from your belly. These deep breaths can help:

- Release painful tension from your muscles.
- Stimulate your body to produce chemicals that help lower your blood pressure and heart rate.
- Create a calming effect on other functions related to stress in the body.

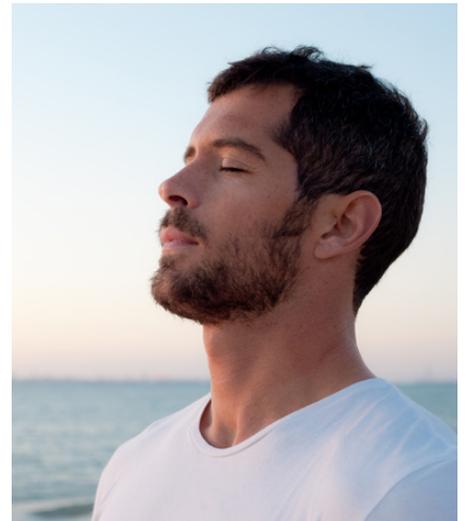
Relaxed breathing also is called abdominal breathing and diaphragmatic breathing. It can be used anywhere and anytime.

HOW TO DO THIS

You may wish to use a relaxed-breathing app, video or CD to guide you until you are comfortable doing this on your own. Practice at home when it is convenient for you. The more practice you do, the more prepared you'll be to use this tool when you need it.

- Find a quiet, private place where you can sit or lie comfortably.
- Breathe in slowly through your nose until your lungs feel comfortably full. This could be to a count of 4, for example. Think about breathing from your abdomen, also called the belly. Your belly should move out, or expand, as you breathe in. Think of your belly like a balloon. It gets bigger as you inhale and smaller as you exhale.
- Breathe out slowly, to the count of 4. Make a small circle with your lips. Imagine blowing on a candle just hard enough to make the flame flicker but not blow out.

At first, it may feel awkward to breathe this way. Practice until it feels natural and relaxing.



TIPS FOR SUCCESS

- If you first tried this exercise sitting down, also try it while you're lying down. Put a piece of paper on your belly so you can see it move.
- Slow, smooth, even breathing is best. If you wish, place one hand on your upper chest and the other hand on your belly. This helps you feel your muscles as you breathe. When you can feel the muscles, you're more likely to extend your belly further than your chest when you inhale.

- If it helps, breathe into a whistle or on a feather so you can see and hear when you exhale.
- As you start to feel comfortable with this breathing, try to extend your exhale a little longer.

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OTHER RESOURCES

- Calm App. This offers images for relaxed breathing:
<https://www.calm.com/>
- Breath2relax App. It shows relaxing scenes and a metronome. You can adjust the rate (the timer) for your inhales and exhales.
- Inner Balance App. This is a biofeedback tool with a breath pacer. It can help you adjust your inhale and exhale rate.
- Video: [Relaxation and Relaxed Breathing](https://www.mayoclinic.org/pe?mc=MC7698-10)
<https://www.mayoclinic.org/pe?mc=MC7698-10>

Healing After Surgery

Guided Imagery

Your mind and body react the same to imagined pictures and real pictures, also called images. Guided imagery uses all of your senses to help you imagine enjoyable moments. These may be real memories or images you've seen in books or movies which you'd like to experience.

All you need to use this relaxation tool is your imagination. As you practice guided imagery, your body relaxes. Over time, being relaxed will help you heal.

Many people find it helpful to practice relaxed breathing before they use guided imagery.

PRACTICING GUIDED IMAGERY

Begin by relaxing your breathing. Then revisit a favorite memory or imagine a relaxing place — somewhere you'd like to be. Use your five senses to picture every detail about this place. Make the images as "alive" or vivid as possible.

As you imagine yourself in that scene, ask yourself these questions:

- What do you see here?
- What do you hear?
- What do you smell?
- If you'd eat something here, what would you taste?
- What do you feel under your feet and in your hands?

After each question, pause to picture the answer using your senses. Remember: Be as detailed and vivid as possible. Check in with your body as you do this. How does it feel? If you notice tension, return to your relaxed breathing. Adjust your image as needed to help your body relax better. Don't worry about "getting it right." Just have fun imagining.

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OTHER RESOURCES

- Apps: Guided Imagery, Simply Being
- Book: Mayo Clinic Guide to Stress Free Living, by Dr. Amit Sood

- Relaxation Techniques:
Try These Steps to Reduce Stress
<https://www.mayoclinic.org/healthy-lifestyle/stress-management/in-depth/relaxation-technique/art-20045368>
- Guided Imagery Video (Relaxation Evening Sky):
<https://mayoclinic.org/pe?mc=MC7194-03>
- Guided Imagery Video (Relaxation Seaside Serenity):
<https://www.mayoclinic.org/pe?mc=MC7194-06>

Healing After Surgery

Heat and Cold Treatments

Heat and cold treatments are cost-effective ways to reduce pain after surgery.

- Right after surgery, cold is usually the best choice.
- For the first 2 weeks after surgery, heat should not be applied on or near your surgical site. However, you may use heat at any time for muscle and joint aches that are far from your surgical site. For example, appropriate heat can be used safely on neck muscles or your lower back if you've had knee-replacement or abdominal surgery.

PLAN AHEAD

Before surgery, locate your heat and cold resources. Inexpensive options are available at most local and online pharmacies, as well as at medical supply stores.

COLD TREATMENTS

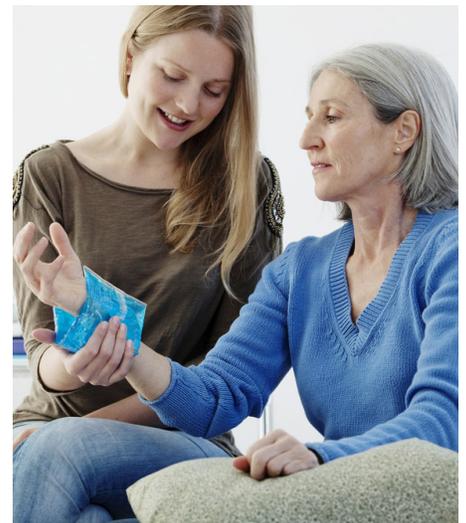
Ice packs

Ice packs are the most common cold treatments. If you don't have an ice pack, a bag of frozen peas also works well.

How to use ice packs:

1. Place a towel over the affected area.
2. Put the ice pack on the towel. Cover the ice pack with several layers of dry towels or a blanket for insulation.
3. Leave the ice pack in place for 15 to 20 minutes.
4. Check your skin every 5 minutes. Remove the ice pack immediately if your skin in the area you are treating begins to lose its natural redness. This color loss may indicate frostbite.
5. Place the ice pack in a freezer after each use.

If needed, you can make your own ice pack. Combine 1/3 cup rubbing alcohol with 2/3 cup water. Pour this mixture into a sealable freezer bag. Put that bag into another sealable freezer bag. Place the bag in the freezer. The bag is ready to use when the contents are slushy.



Ice massage

Ice massage may be helpful if your post-surgical pain and inflammation are in a small area of your body, such as the elbow.

How to use ice massage:

1. Pour water in a paper or foam cup. Set in a freezer.
2. When the water is frozen, peel away the top edge of the cup to expose some of the ice.
3. Undress the painful area of your body and place a towel on the skin. This will capture water from the melting ice cup.

4. Massage the frozen ice on the area. Continually move the ice pack in a circular motion using mild pressure. You may feel cold, burning and/or numbness while you massage the area. It usually takes 1 to 2 minutes until the uncomfortable sensations end.

5. Do not perform an ice massage for more than 5 to 7 minutes.

6. Put the ice massage cup in a freezer after each use.

Caution about cold treatments

Do not use cold treatment on skin that:

- Is numb.
- Has reduced feeling.
- Has poor blood supply, or potential pressure injuries, such as may occur with diabetes.

HEAT TREATMENTS

Microwavable hot packs, hot water bottles and heat lamps are available at reasonable prices. If you choose to purchase such a product, follow the instructions included with the product.

Hot packs and water bottles

1. Hot packs and water bottles should be wrapped in a layer or two of towels before being placed on the body. You may need to use additional layers over bony areas.
2. Leave the hot pack in place for about 20 minutes. Your skin should feel comfortably warm but not hot.

Check your skin every 5 minutes or so until you are sure that it is not being heated too much. Look for signs of overheating and stop treatment immediately if you notice red blotches or patches where your skin is being heated. Continued heating could cause a burn or blister.

Caution about heat treatments

- Never lie directly on a heat pack or hot water bottle.
- Do not use heat treatment on:
 - Skin that is red, irritated, infected or recently traumatized.
 - Open wounds, directly over a surgical incision, scar tissue or skin that is numb or medicated.
 - An area that has poor blood supply or potential pressure injuries. This may happen when a person has diabetes, for example.

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Healing After Surgery

Massage

Massage involves rubbing or kneading soft tissues of the body. Skin, muscles, tendons, and ligaments are soft tissues. Massage can be used to help reduce pain, promote healing and improve your recovery after surgery. It also can promote relaxation and reduce stress and anxiety.

Ask your care team how a massage trained therapist can treat you safely. Friends and family members also can perform massage. But they may need special instructions to be able to treat you safely. If you are a caregiver, remember that even simple hand holding or light pressure on the back of the hands, lower arms or back may help reduce your loved one's stress and pain.

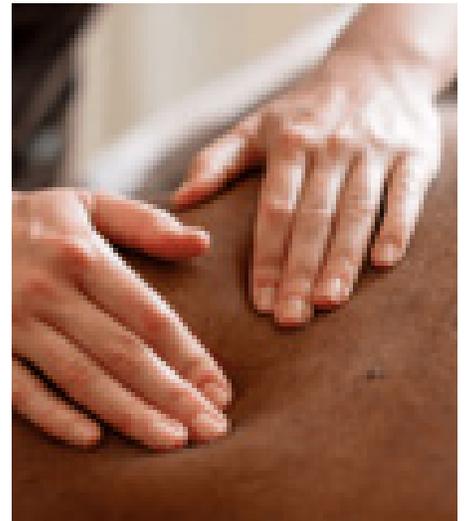
If you plan to use a massage therapist when you get home, try to arrange this before surgery. Look for a massage therapist who is licensed or certified. Ask the therapist whether he or she has recent experience working with people recovering from surgery. You may be asked what type of surgery you plan to have or what area the surgery will affect. (Refer to sample questions)

PRACTICING MASSAGE

1. Create a warm and relaxing space to do this.
2. Have your loved one sit or lay in a comfortable position. Regularly ask if your loved one is comfortable.
3. Use a lubricant, such as coconut or jojoba oil. If your health care provider tells you not to use these products, follow your provider's directions.
4. Do not massage incisions. Avoid massaging bony areas, such as elbows and knees.
5. Do not massage the surgical area. Massage the tissue above and below the surgical area.
6. Massage gently, slowly and rhythmically. Be careful not to massage so hard that it is painful. Regularly ask your loved one if what you are doing is uncomfortable. Stop if it is.

CAUTION

Massage should not be performed near a blood clot (deep vein thrombosis (DVT), burns, open wounds, or recent surgical incisions. Medical clearance from your physician should



be obtained prior to massage if you have the following conditions: severe osteoporosis, bone metastases, thrombocytopenia, or pulmonary embolus.

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for joining these will be provided through your portal and posted on the <http://healingaftersurgery.mayo.edu/> website.

OTHER RESOURCES

To help you find a board certified massage therapist in your area, refer to the following national registries:

National Certification Board for Therapeutic Massage and Bodywork (NCBTMB) therapist directory
https://www.ncbtmb.org/directory-search/?stype_selected=gd_bctherapist

American Massage Therapy Association (AMTA) therapist directory
<https://www.amtamassage.org/findamassage/index.html>

Associated Bodywork & Massage Professional Practitioner search page
<https://www.abmp.com/public>

QUESTIONS TO ASK WHEN CHOOSING A PROSPECTIVE MASSAGE THERAPIST

Have you worked with anyone who has had my surgery?

Ideally, you want to work with a therapist who has experience supporting recovery from the specific surgery you received. At minimum, you should find a therapist who has experience working with people recovering from surgery in general.

Would you adapt your pressure?

There are recovery and healing-related risks inherent in pressure that is “too deep.” You want a therapist who will work at a safe, appropriate pressure that supports your recovery rather than challenges your body.

How would you position me if I can't lie on my stomach or my back?

Safe, effective massage can be provided in a variety of comfortable, well-supported positions. The therapist should have specific bolsters, pillows, and protocols to position you safely in a relaxed position, regardless of your surgery-related limitations.

Do you know how to safely work with swelling?

Massage can often help with swelling as long as the therapist takes into consideration pressure and direction of strokes.

Do you have training and experience in scar tissue mobilization and recovery?

Many therapists have specialized training in this. If you want this specific work, find a therapist with specialized training.

Look for a licensed massage therapist who has successfully completed board examinations conducted either by the National Certification Board for Therapeutic Massage and Bodywork (NCBTMB) or Massage & Bodywork Licensing Examination (MBLEx)

Healing After Surgery

Meditation

Meditation is a practice in which a person uses a learned skill, such as mindfulness, to train oneself to be attentive and aware of the present moment. There are many different meditation practices you can use to develop a calm and focused mind.

If you practice meditation before surgery, you'll be able to use meditation more effectively after surgery. Some of the proven benefits of meditation include:

- Reduced anxiety and stress
- Improved sleep
- Reduced pain

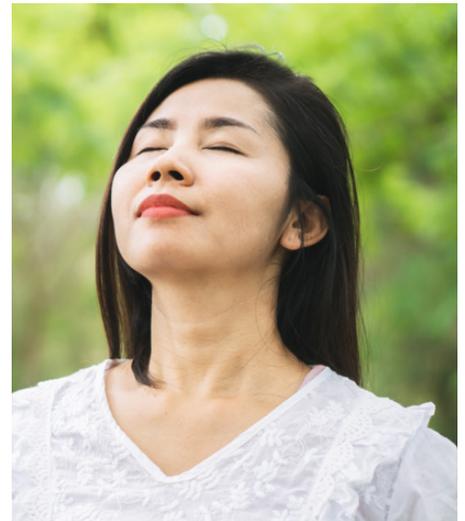
GETTING STARTED

Allow yourself 10 minutes to practice meditation every day. Many people find it helpful to practice relaxed breathing before or during a meditation session.

1. Sit in a chair or lie in a bed with your body flat on the bed. Find a position that is comfortable for you. Use pillows if needed so you can be comfortable and still.

2. Close your eyes. If you prefer to keep them open, rest your gaze on a nearby object. Try not to stare. Instead, soften your gaze.
3. Draw your attention to the places where your body touches the chair or bed. Notice the sensations in your legs and your hands. Let yourself settle into your body and the moment. Remind yourself that you don't have anywhere to be for the next ten minutes.
4. Next, pay attention to your breath. Start to breathe slowly and deeply. Focus on the steady rhythm of your breath as it moves in and out of your body. Let your belly relax. Notice how it gently rises and falls each time you breathe. Notice how the air moves through your nostrils. Notice how your chest expands and relaxes as you keep breathing.

You may find that your mind wanders while you meditate. This is normal. When you realize this has happened, gently draw your attention back to your breath and move on.



For the last few minutes of your meditation, focus on parts of your body that you want to heal. Each time you breathe in, imagine that you are sending healing energy to those areas. Each time you breathe out, breathe out anything that causes you stress.

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OTHER RESOURCES

- www.mindful.org
- Mayo Clinic video: [Take a Break for Meditation](https://mayoclinic.org/pe?mc=MC7194-09)
<https://mayoclinic.org/pe?mc=MC7194-09>
- Book: Mayo Clinic Guide to Stress Free Living, by Dr. Amit Sood

Healing After Surgery

Music

Many people know that music can change your mood, enhance relaxation and focus your attention. It also can reduce anxiety and pain and promote healing after surgery.

Listening to music and music therapy may:

- Have a positive effect on blood pressure and heart rate.
- Relieve feelings of depression and hopelessness.
- Help you learn relaxation and visualization techniques.
- Distract you from thinking about medical procedures, pain or treatment.

Music that promotes relaxation often has a regular, slow-to-moderate rhythm. It doesn't have exceedingly high or low notes. It has a melodic sound that is smooth and flowing.

Every person has different tastes in music. A person's preferences are influenced by the environment, their education and cultural factors.

PLAN AHEAD

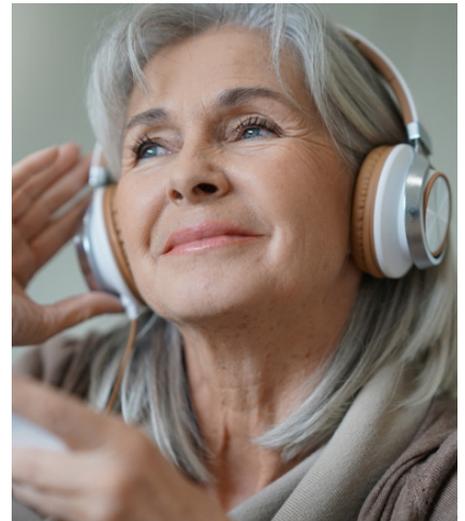
Consider how you would like to listen to music. Personal options include cell phones, a CD player and online sites or apps which you can access on your phone or a laptop. In the hospital, the TV often has music channels. And the hospital may have a library with music CDs available too. Ask a member of your care team if your preferred option is OK to use in the hospital.

Next, think about the music that would help you relax. Download those songs onto your device. Or collect the CDs you'd like to bring to the hospital.

If it would be helpful, ask a friend or member of your family to create playlists for you. This is a great way for them to contribute to your recovery. Explain that soft music with a slow, steady beat is most effective during the first weeks after your surgery. Be sure to tell them what kind of music you prefer.

WHAT IS MUSIC THERAPY?

Music therapists use music to restore, maintain and improve their patients' mental and physical health. A music



therapist may sing or play an instrument for a patient. When you listen to recorded music and attend a concert, you may be using music as a therapy.

A registered music therapist is trained in music, music therapy and biological and behavioral sciences. If you wish, ask a member of your care team whether a music therapist is available for you while you are in the hospital.

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RESOURCES

Calm is an app that offers relaxing music selections. They offer a free limited trial: <https://www.calm.com>

Some patients find the simple sounds of singing bowls to be more soothing than music. You can listen to them here: <https://www.youtube.com/watch?v=gq8snFSEwIU>

American Music Therapy Association (AMTA) <https://www.musictherapy.org/>

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Progressive Muscle Relaxation

Progressive muscle relaxation teaches you how to effectively relax your muscles. This can help you ease your pain after surgery.

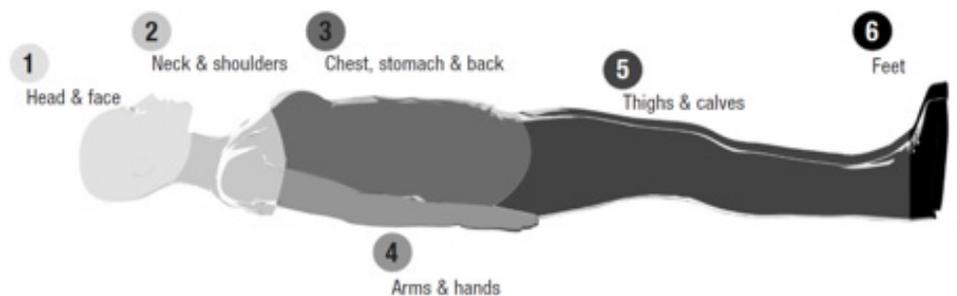
It's common to have pain after surgery. When you have pain, muscles often contract. This is one of the ways your body tries to protect you. If your muscles remain tight and don't relax, they can cause you more pain than you had before.

When you use this relaxation tool before surgery, it can help you become aware of tension in your body. With this information, after surgery, you can use this tool to relax your muscles. This can help you avoid worsening pain.

Muscle relaxation can be practiced while sitting or lying down comfortably.

HOW TO DO THIS

Before you begin, ask a member of your surgical team if you should not use progressive muscle relaxation near the site of surgery. If you are told to avoid the surgical area, focus your muscle relaxation in other body areas.



1. Lie in a comfortable position. Support your head and neck as needed. You may wish to position a pillow under your knees for support.
2. Before you begin, notice the weight of your body. Take 5 slow, deep breaths. Each time you exhale, think about feeling “heavy” as you lie still.
3. After these soothing breaths, turn your focus to a body area that is far away from the surgical area. (See image.) Tighten all of the muscles in that area for 5 to 10 seconds. This is also called contracting your muscles. While you do this, continue to breathe slowly and deeply. Avoid holding your breath. This breathing helps keep the rest of your body relaxed.
4. After you hold the muscle contraction for 5 to 10 seconds, exhale and release your tight muscles. **Repeat this process 2 to 3 times in this body area.** Notice the difference between the muscles when they are contracted and when they are relaxed.
5. Move to the next nearby body area. Repeat the 5 slow, deep breaths and the contract-and-relax muscle practice. See steps 3 and 4.
6. Eventually work your muscle contract-relax locations towards the surgical area. You may initially need to avoid contracting muscles in the surgical area. Your goal is to release the muscles in the area around the surgical area, so they don't stay tight and cause you increased pain.

PRACTICE

As with any skill, your ability to relax will improve with practice. You may not feel better right away. But try to practice 20 to 30 minutes every day. As your skills improve, you can shorten your practice sessions.

In time, you will notice when your muscles are tight. In those moments, it should take just a few contract-and-relax repetitions in that area, along with slow, easy breathing, to help your muscles relax.

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OTHER RESOURCES

You may want to watch a video or listen to a CD or tape to guide you as you learn how to do this. Look for relaxation products at bookstores, local yoga and meditation studios or online.

- Video:
[How to do Progressive Muscle Relaxation](https://www.youtube.com/watch?v=1nZEdqcGVzo)
<https://www.youtube.com/watch?v=1nZEdqcGVzo>
- Video:
[Relaxation Progressive Muscle](https://mayoclinic.org/pe?mc=MC7194-05)
<https://mayoclinic.org/pe?mc=MC7194-05>
- Video:
[Progressive Muscle Relaxation](https://mayoclinic.org/pe?mc=MC5719-01)
<https://mayoclinic.org/pe?mc=MC5719-01>
- Video:
[Relaxation Passive Muscle](https://mayoclinic.org/pe?mc=MC7194-04)
<https://mayoclinic.org/pe?mc=MC7194-04>
- Handout:
[Using Relaxation Skills to Relieve Your Symptoms](https://sharedfiles.mayoclinic.org/bedside/ope/GNT-20324209.html)
<https://sharedfiles.mayoclinic.org/bedside/ope/GNT-20324209.html>
- Video:
[Relaxation and Relaxed Breathing](https://www.mayoclinic.org/pe?mc=MC7698-10)
<https://www.mayoclinic.org/pe?mc=MC7698-10>
- Relaxed Breathing Apps:
Calm, Breathe

Healing After Surgery

Tai Chi

Tai chi is a traditional Chinese exercise method. Each gentle exercise or stretch slowly flows into the next movement without pause. This ensures that your body is in constant motion.

Studies have shown that tai chi's focus on slow smooth movements, breath control and relaxation is as effective as many other forms of exercise and treatment. Tai chi can help to reduce one's sense of pain, maintain strength and reduce symptoms of depression. It also helps to improve sleep, balance, cardiopulmonary health, and overall feelings of well-being.

GETTING STARTED

Be sure to ask your surgeon if you have limits on how you should move and how much weight you should lift after surgery.

Tai chi is self-paced and low-impact. These aspects enable most people to be able to practice it — no matter their age and physical ability. It works well for people who find movement difficult. Tai chi even can be done while you sit in a chair.

Search online to find tai chi classes near you. Or contact local fitness centers, senior centers and YMCA or YWCA sites. If you are new to tai chi,

these national registries can help you find classes and specialized health practitioners:

- Tai Chi Foundation: <https://taichifoundation.org/tags/health-practitioner-directory>
- American Tai Chi and QiGong Association: <http://www.americantaichi.org/taichiCertification.asp>

CAUTION

Ask a member of your care team when it is safe for you to begin tai chi. Many people can do tai chi shortly after surgery if they follow these precautions:

- No leg or arm movements after a joint replacement surgery and any other type of limb surgery.
- No standing balance postures if you are at risk of falling or have lower extremity weight bearing precautions.
- No arm raises after shoulder and cardiac surgery.
- If you had spinal-fusion surgery, for 3 months after surgery do not bend or twist your neck or lower back.



FOR MORE INFORMATION

If you have questions after you read this, you can call a pain management support team member at: 1-833-919-1432, Monday – Friday, 8 am – 5 pm (CST). Leave a voicemail if after hours or on the weekend, and you will receive a call back on the next business day. Patient group calls are also available at various times throughout the week. Instructions for joining these will be provided through your portal and posted on the <http://healingaftersurgery.mayo.edu/> website.

OTHER RESOURCES

You can learn more about tai chi from these resources:

- Handout: Tai chi: Discover the many possible health benefits
<https://sharedfiles.mayoclinic.org/bedside/ope/GNT-20232980.html>
- Video: Gentle Movements Tai Chi Qigong
<https://mayoclinic.org/pe?mc=MC5997>
- Video: Beginning Level Short Form Tai Chi Foundation: <https://vimeo.com/398652087>

Healing After Surgery

TENS

TENS refers to “Transcutaneous Electrical Nerve Stimulation.” This is a medical device that sends small electrical impulses through the skin to stimulate nearby nerves. These impulses create a mild tingling feeling. When the nerves are stimulated, fewer pain signals are able to reach the brain. This reduces the pain you are likely to feel.

For many people, TENS treatments are done for about 30 minutes, 3 to 4 times a day. There are many types of portable TENS units. One option is the TENS-7000™. It uses a 9-volt battery. You may be able to borrow or rent a TENS unit from the hospital after your surgery. But it would be better if you can practice using your own TENS unit in the days before surgery. Some TENS units can be purchased for as little as about \$25. An example of a TENS unit is shown here.

CAUTION

- Do not use TENS if you are pregnant.
- Do not use TENS if you have an electrical device in your body, such as a pacemaker, the presence of telemetry or other electronic monitoring system or an automatic implantable cardioverter defibrillator (AICD).

- Do not put electrode pads over your chest, ribcage or breast bone, open wounds, infections or surgical hardware.
- If you have cancer, TENS may be used if placed distant to the site of cancer, however, it is important to seek guidance from your Oncologist in this situation as well as prior to using TENS for palliative cancer care.

Depending on your surgery, you may need to wait 1 to 2 weeks before you use TENS near any incisions.

APPLYING THE ELECTRODES

1. Read the instructions included with your TENS unit.
2. Identify where your pain is. Use at least two electrode pads. Four pads may be more effective to treat pain.
3. Trim any excess body hair in the area where you'll put the pads.
4. Wash the area with mild soap and warm water. Dry with a clean, dry cloth before you place the pads.
5. Apply the pads to your body.



OPERATING THE TENS UNIT

Refer to the instructions included with your TENS unit to learn what setting the company suggests that you use first.

To operate the unit, typically you will:

1. Connect the electrode wires to the TENS unit.
2. Turn the unit on at the recommended, comfortable setting.
3. Leave the unit on for about 30 minutes.
4. Turn the unit off when the treatment is over.
5. Remove the electrode pads from your body.
6. Repeat your treatment 3 to 4 times a day.

GETTING THE BEST RESULTS

Start with the manufacturer's recommended setting. When you are comfortable using the unit:

- Ask a member of your care team about changing the mode and pulse rate. Also ask about changing the treatment timeframe.
- Test different distances between the TENS electrode pads. The spacing will affect the flow of the electrical current.
- If you travel with your TENS unit, be sure you have a new 9-volt battery with you.

RESOURCE

- Handout: [Transcutaneous electrical nerve stimulation \(TENS\)](https://sharedfiles.mayoclinic.org/bedside/ope/GNT-20248283.html)
<https://sharedfiles.mayoclinic.org/bedside/ope/GNT-20248283.html>
- Video: [Using TENs for Pain Relief](https://www.mayoclinic.org/pe?mc=MC2058-01)
<https://www.mayoclinic.org/pe?mc=MC2058-01>

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Healing After Surgery

Walking

Walking is one of the best natural ways to manage pain and promote healing. Most people are encouraged to walk in the days after surgery. Do be sure to follow any instructions about weight bearing that your care team may have provided. Short, frequent walks can help restore your strength and physical stamina. They can help you get ready to safely return to your independent everyday activities. It's an excellent aerobic exercise. And, very importantly, walking is a great way to relieve pain after surgery.



PLAN AHEAD

If you were not physically active before surgery or you haven't been active after your surgery, start a slow, progressive walking program. Progressive here refers to slowly increasing your walk time.

When you return home after surgery, break up daily walks into shorter walks. Your goal is to walk 30 minutes a day. Increase your walking speed and time as you are able.

You may want to create a daily walking schedule. The table below is an example of a physical activity calendar. Consider setting a reminder on your cell phone, tablet or computer. Or use an activity tracker, such as a FitBit™ or Apple Watch™.

Example of a progressive walking schedule							
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Early Morning							
Mid-Morning	5 minutes	6 minutes	7 minutes	7 minutes	8 minutes	9 minutes	10 minutes
Noon				7 minutes	8 minutes	9 minutes	10 minutes
Early Afternoon	5 minutes	6 minutes	7 minutes				
Late Afternoon				6 minutes	6 minutes	6 minutes	
Evening	5 minutes	5 minutes	6 minutes	5 minutes	5 minutes	5 minutes	10 minutes
Total walk time	15 minutes	17 minutes	20 minutes	25 minutes	27 minutes	29 minutes	30 minutes

Based on recommendations from the National Heart, Lung, and Blood Institute

As you continue to recover, consider continuing with a regular walking program.

The American Heart Association recommends 150 minutes of aerobic exercise per week. This can be accomplished over a series of days, example: walking 30 minutes a day for 5 days a week would equate to a total of 150 minutes of aerobic exercise over the course of a week.

CAUTION

If you feel unsteady or you worry about falling, tell a member of your care team. And when you walk, consider one or both of these suggestions:

- Have someone walk with you.
- Ask your health care provider or physical therapist whether a gait device (cane or walker) would be indicated.

FOR MORE INFORMATION

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Healing After Surgery

Yoga

Yoga is a mind-and-body practice that originated in India more than 5,000 years ago. It focuses on thoughtful breathing, meditation, and gentle stretches that result in a series of poses.

Yoga is an effective way to improve your circulation. In turn, that lessens pain and swelling. Improved circulation also can boost healing after surgery. In addition, practicing yoga can release muscular and emotional tension. This promotes relaxation and calms the mind.

GETTING STARTED

Be sure to ask your surgeon if you have limits on how you should move and how much weight you should lift after surgery.

Gentle yoga can be safe and beneficial, even following most surgeries. You can do the poses at your own pace. And as needed, you can do yoga lying down, sitting or standing.

Qualified Yoga teachers should attain a 200 hour Yoga teacher training certificate (at minimum). Yoga classes often are available at community colleges, local YMCAs and YWCAs, and

at other gyms and wellness centers. If you need to change your yoga practice due to post-surgery movement limitations, consider contacting a certified yoga therapist. Yoga therapy is the adaptation of yoga practices for people with health challenges. Yoga therapists prescribe specific regimens of postures, breathing exercises, and relaxation techniques to suit individual needs. To attain yoga therapy credentialing, a certified yoga teacher must acquire 500-1000 additional training hours.

These national registries can help you find yoga professionals in your area:

- Yoga Alliance: <https://www.yogaalliance.org/Directory?Type=Teacher>
- International Association of Yoga Therapists (IAYT): <https://www.iayt.org/search/custom.asp?id=4160>

CAUTION

Ask a member of your care team when it is safe for you to begin yoga. Many people can do yoga shortly after surgery if they follow these precautions:



- No leg or arm movements after a joint replacement surgery and any other type of limb surgery.
- No standing balance postures if you are at risk of falling or have lower extremity weight bearing precautions.
- No arm raises after shoulder and cardiac surgery.
- If you had spinal-fusion surgery, for 3 months after surgery do not bend or twist your neck or lower back.

- Observe lower extremity weight bearing and fall precautions.
- Patients should wait until all drains are removed before starting yoga

FOR MORE INFORMATION

If you have questions after you read this, you can call a pain management support team member at: 1-833-919-1432, Monday – Friday, 8 am – 5 pm (CST). Leave a voicemail if after hours or on the weekend, and you will receive a call back on the next business day. Patient group calls are also available at various times throughout the week. Instructions for joining these will be provided through your portal and posted on the <http://healingaftersurgery.mayo.edu/> website.

OTHER RESOURCES

For more information about yoga, view these resources:

- Handout: [Mindful Movements To Help You Heal and Recover](https://sharedfiles.mayoclinic.org/bedside/ope/GNT-20421908.html)
<https://sharedfiles.mayoclinic.org/bedside/ope/GNT-20421908.html>
- Video (16 minutes): [Mindful Movements: Gentle Yoga, Gratitude](https://mayoclinic.org/pe?mc=MC6734-05)
<https://mayoclinic.org/pe?mc=MC6734-05>
- Video (20 minutes): [Mindful Movements: Gentle Yoga, Compassion](https://mayoclinic.org/pe?mc=MC6734-06)
<https://mayoclinic.org/pe?mc=MC6734-06>