

# Managing Stress

How stress affects you and ways to cope



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If you or a loved one is experiencing a mental health crisis, dial 988 to talk to a trained mental health professional. The 988 Suicide & Crisis Lifeline is free, confidential and always available. For the Crisis Text Line, text **HOME** to **741741**.

# What Is Stress?

Feeling stress is one of the most common human experiences. Everyone experiences stress at some point in life, but not everyone experiences stress in the same way. Most people use the word “stress” when they refer to a feeling of being overwhelmed by negative events or experiences. However, stress in its simplest form can be described as a person’s reaction to changes or demands in their life.

Stress is not always a consequence of a negative circumstance. Positive life events such as getting married, changing jobs or having a baby can also cause stress. This type of stress is known as “eustress,” or positive stress. In contrast, negative life events such as job loss or a cancer diagnosis may cause a negative form of stress called “distress.” Either type of stress—eustress or distress—can cause a state of worry or tension, but can also spark personal growth.

# Stress and Cancer

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After a diagnosis of cancer, it is natural for feelings of distress to surface among patients and their caregivers. Distress is defined by the National Comprehensive Cancer Network (NCCN) in its *Guidelines for Distress Management* as “a multifactorial, unpleasant experience of a psychological (ie, cognitive, behavioral, emotional), social, spiritual and/or physical nature that may interfere with one’s ability to cope effectively with cancer, its physical symptoms and its treatment.”

Stress may be caused by many factors in different ways, including:

**Physical discomfort** due to the cancer itself

**Physical discomfort** because of treatments such as chemotherapy, radiation therapy or stem cell transplant

**Tests and treatments** that require you to wait for results

**Identity and relationship** changes

**Sense of grief** for your pre-diagnosis life, the life you imagined you would have

**Sense of betrayal** by your body

**Finances, work and family** (normal stressors) that may be made worse by treatment and recovery issues

**The effect of medications** or changes in the body, caused by treatment

**Depression and recurring worry** that may surface years after treatment, even though the person is in good health

**Dread or sadness** around the time of the anniversary of the diagnosis or the dates of other major medical events

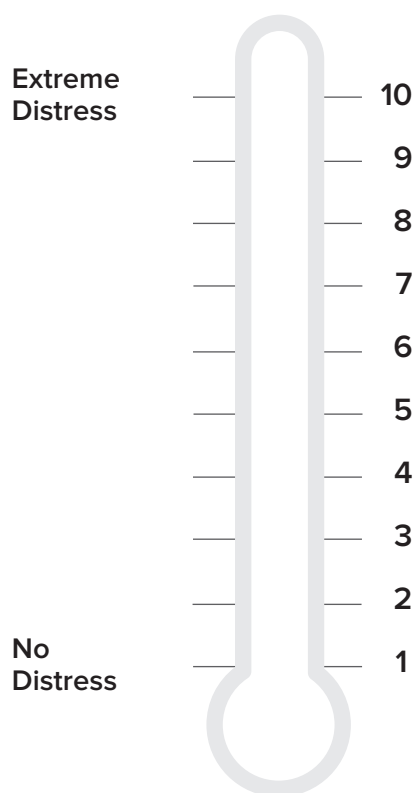
**Distress Screening.** Distress can occur at any time during or after cancer, even many years after treatment has ended. Ideally, patients are checked for distress at every healthcare visit. At times, the patient may not want to speak about stress in front of their caregiver. The caregiver should be sure that the patient has private time to talk with a healthcare professional. If the patient is not able to talk about or is not aware of their distress, a caregiver should speak up for the patient.

In August 2012, the Commission on Cancer of the American College of Surgeons set standards for hospital cancer programs. Their patient-centered focus includes checking all patients with cancer for signs of distress.

In response to these standards, the NCCN developed the “Distress Thermometer” (see **Figure 1**, right). This is now a well-known tool for initial screening. It is similar to the rating scale used in doctors’ offices to measure pain: 0 (no pain) to 10 (extreme pain). The distress thermometer serves as a rough, initial, single-item questionnaire that identifies distress from any source, even if unrelated to cancer. A high number indicates that patients should speak to a healthcare professional for assistance in decreasing their distress.

## NCCN Distress Thermometer

Instructions: Please circle the number (0-10) that best describes how much distress you have been experiencing in the past week including today.



**Figure 1.** From NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Distress Management.

The NCCN also developed the “Problem List” (see **Figure 2**, below), designed to be used at the same time as the Distress Thermometer. This list asks patients to identify their problems in five different categories. If a patient has many items in the “Yes” column checked, they should speak to a trained healthcare professional.

### Problem List

Have you had concerns about any of the items below in the past week, including today? Be sure to check YES or NO for each.

YES	NO	Practical Concerns	YES	NO	Emotional Concerns	YES	NO	Physical Concerns	
<input type="checkbox"/>	<input type="checkbox"/>	Access to medicine	<input type="checkbox"/>	<input type="checkbox"/>	Anger	<input type="checkbox"/>	<input type="checkbox"/>	Changes in eating	
<input type="checkbox"/>	<input type="checkbox"/>	Child care	<input type="checkbox"/>	<input type="checkbox"/>	Changes in appearance	<input type="checkbox"/>	<input type="checkbox"/>	Fatigue	
<input type="checkbox"/>	<input type="checkbox"/>	Finances	<input type="checkbox"/>	<input type="checkbox"/>	Fear	<input type="checkbox"/>	<input type="checkbox"/>	Loss or change of physical abilities	
<input type="checkbox"/>	<input type="checkbox"/>	Having enough food	<input type="checkbox"/>	<input type="checkbox"/>	Feelings of worthlessness or being a burden	<input type="checkbox"/>	<input type="checkbox"/>	Memory or concentration	
<input type="checkbox"/>	<input type="checkbox"/>	Housing	<input type="checkbox"/>	<input type="checkbox"/>	Grief or loss	<input type="checkbox"/>	<input type="checkbox"/>	Pain	
<input type="checkbox"/>	<input type="checkbox"/>	Insurance	<input type="checkbox"/>	<input type="checkbox"/>	Loneliness	<input type="checkbox"/>	<input type="checkbox"/>	Sexual health	
<input type="checkbox"/>	<input type="checkbox"/>	School	<input type="checkbox"/>	<input type="checkbox"/>	Loss of interest or enjoyment	<input type="checkbox"/>	<input type="checkbox"/>	Sleep	
<input type="checkbox"/>	<input type="checkbox"/>	Taking care of myself	<input type="checkbox"/>	<input type="checkbox"/>	Sadness or depression	<input type="checkbox"/>	<input type="checkbox"/>	Substance use	
<input type="checkbox"/>	<input type="checkbox"/>	Taking care of others	<input type="checkbox"/>	<input type="checkbox"/>	Worry or anxiety	<input type="checkbox"/>	<input type="checkbox"/>	Tobacco use	
<input type="checkbox"/>	<input type="checkbox"/>	Transportation	<b>Spiritual/Religious Concerns</b>			<b>Other Concerns:</b> <hr/> <hr/> <hr/> <hr/> <hr/>			
<input type="checkbox"/>	<input type="checkbox"/>	Treatment decisions	<input type="checkbox"/>	<input type="checkbox"/>	Changes in faith or beliefs				
<input type="checkbox"/>	<input type="checkbox"/>	Work	<input type="checkbox"/>	<input type="checkbox"/>	Conflict between beliefs and cancer treatment				
<b>Social Concerns</b>			<input type="checkbox"/>	<input type="checkbox"/>	Death, dying or afterlife				
<input type="checkbox"/>	<input type="checkbox"/>	Ability to have children	<input type="checkbox"/>	<input type="checkbox"/>	Relationship with the sacred				
<input type="checkbox"/>	<input type="checkbox"/>	Communication with healthcare team	<input type="checkbox"/>	<input type="checkbox"/>	Ritual or dietary needs				
<input type="checkbox"/>	<input type="checkbox"/>	Relationship with children	<input type="checkbox"/>	<input type="checkbox"/>	Sense of meaning or purpose				
<input type="checkbox"/>	<input type="checkbox"/>	Relationship with family members							
<input type="checkbox"/>	<input type="checkbox"/>	Relationship with friends or co-workers							
<input type="checkbox"/>	<input type="checkbox"/>	Relationship with spouse or partner							

**Figure 2.** From NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Distress Management.



Early and routine evaluation and screening leads to early management of distress. In general, research suggests that early detection and treatment of distress leads to:

**Better adherence to treatment**

*(for example: taking medications as prescribed by the doctor)*

**Better communication with the healthcare team**

**Fewer calls and visits to the oncologist's office**

**Decreased risk of developing severe anxiety or depression**

## The Stress Response

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In order to learn how to cope with stress, it is important to understand how our bodies respond to stressful situations. Stress can cause physical changes in the body, including high blood pressure, muscle tension or shaking, digestive issues, insomnia, irritability and depression.

When the body is subjected to a real or imagined threat, that information gets sent to a part of the brain called the amygdala. This part of the brain is involved in emotional processing. The amygdala interprets the information and when it perceives danger, it sends a distress signal to another part of the brain called the hypothalamus. The hypothalamus is like a command center, communicating with the rest of the body through the autonomic nervous system. This system controls normal body functions that are automatic, such as breathing, blood pressure, heartbeat and the dilation or constriction of key blood vessels and the bronchioles (small airways) in the lungs.

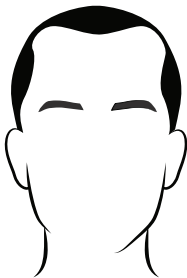
The autonomic nervous system has two components: the sympathetic nervous system and the parasympathetic nervous system. The sympathetic nervous system triggers the “fight or flight” response that provides the body with a burst of energy so it can respond to danger. The “fight or flight” response is a necessary and useful mechanism that enables us to act appropriately in an emergency

situation. It quickly impacts the heart rate, blood flow, blood pressure, blood sugar, breathing, metabolism and digestion. The parasympathetic nervous system acts like a brake. It promotes a rest response that calms the body down after the danger has passed. After a brief stressor, the body returns to its natural resting state (called homeostasis).

## “Fight or Flight” Response



**After the amygdala sends a distress signal, a hormonal cascade is initiated, adrenaline circulates through the body, and the body becomes very alert, sensing danger. The heartbeat becomes faster than normal. Pulse rate and blood pressure also go up, and breathing speeds up. Sight, hearing and other senses become sharper.**



**As the initial surge of adrenaline subsides, hormone levels return to normal and the body slows down and starts to relax.**

If the stressor continues, it may become chronic stress, during which additional hormones, such as cortisol, keep the body in a heightened state of alert.

## The Importance of Stress Management

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The prolonged activation of stress hormones affects many organ systems throughout the body. Elevated cortisol suppresses the immune system, decreasing the body's ability to fight infections. Stress hormone imbalance can affect blood pressure, kidney function, thyroid function, fertility, inflammation, fat and protein metabolism, and blood sugar levels. This may in turn increase the risk for serious diseases like heart disease and stroke.

People who are stressed may engage in unhealthy behaviors (smoking or drinking too much alcohol) as they try to cope with their feelings. Such behaviors can, in turn, increase a person's risk for cancer and other diseases.

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## There is great benefit to managing stress, particularly for cancer patients.

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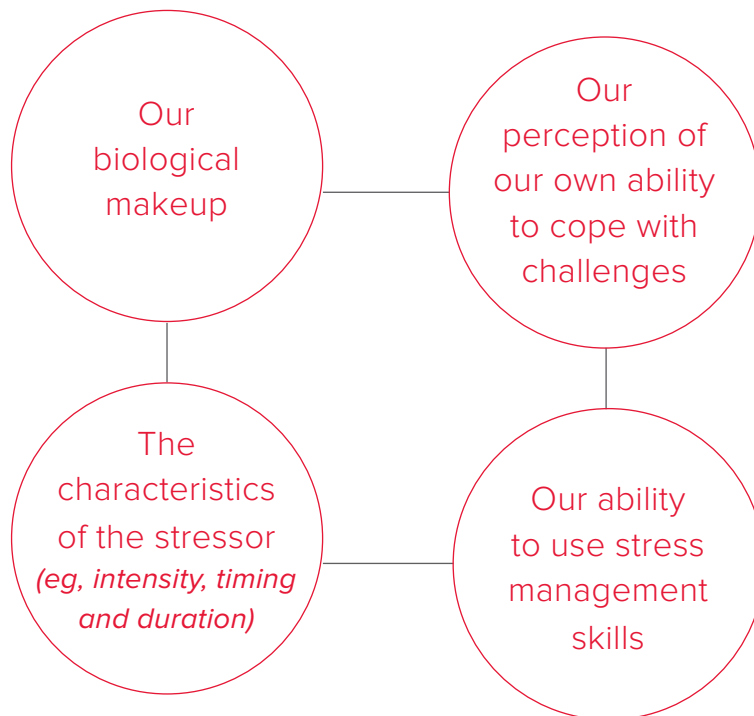
There is great benefit to managing stress, especially for cancer patients. One study examined the stress-buffering effect of social support on both immune function and infection risk in breast cancer patients. The study found that patients experiencing more stress before starting chemotherapy were at a higher risk of infection during treatment; however, social support helped reduce the effects of stress in patients.

The goal of stress management is to develop effective coping strategies that return the body to its resting state as soon as possible after a stressful event. Certain types of psychotherapy can increase a person's ability to cope with stress and traumatic events (see *Evidence-Based Approaches* on page 11).

# Stress Management Skills for Cancer Patients and Their Caregivers

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A person's well-being relies on balance of the body, mind and spirit. How well we cope with stress depends on a variety of individual factors, including:



Some of these factors are out of a person's direct control, and everyone will experience stress at different points in their lives. But people can influence their ability to react and cope with stress.

Stress management skills are coping skills. People with good coping skills are less likely to experience negative stress reactions. Cancer patients and their caregivers can benefit greatly from learning and utilizing these skills as they face the stress associated with cancer and its treatment.

## Evidence-Based Approaches

Evidence-based approaches are interventions that have been well-researched and proven to have an effective outcome for many people when used as intended. The following are current evidence-based approaches used by mental health professionals to assist cancer patients with stress.



**Cognitive Behavioral Therapy (CBT)** is a type of psychotherapy that focuses on modifying one's thoughts and actions that contribute to anxiety, depression and insomnia. CBT and its variations are powerful techniques that have been adapted to help people cope with all types of conditions and stressful events. There is strong evidence that CBT can help with depression, anxiety, post-traumatic stress, pain and fatigue in people with cancer.



**Acceptance and Commitment Therapy (ACT)** is a type of psychotherapy that can help people overcome distress and counterproductive thinking. It is based on the idea that a greater well-being can be achieved by accepting negative thoughts, feelings and hardships. Cancer patients who received interventions based on ACT showed a better emotional state, better quality of life and greater psychological flexibility in regard to a variety of stressors.



**Medication** may be appropriate for some people. In some cases, stress can be a symptom of depression and anxiety disorders. Medication can help with the symptoms of depression and anxiety. Many people with a cancer diagnosis take medication to improve these symptoms.

## Finding a Mental Health Professional

Speak to your healthcare team or insurance provider for a referral to a mental health professional to access these evidence-based therapies. You may also be able to find a licensed mental health professional who is trained in providing these therapies at one of the following resources:

- [www.psychologytoday.com/us/therapists](http://www.psychologytoday.com/us/therapists)
- [www.helpstartshere.org/find-a-social-worker](http://www.helpstartshere.org/find-a-social-worker)
- [www.aosw.org/patients-caregivers/find-an-osw-near-me/](http://www.aosw.org/patients-caregivers/find-an-osw-near-me/)

If you are uninsured, or if your co-pay for behavioral health services is high, look for a provider or center that offers a sliding-scale or reduced-cost services to eligible patients. Many psychology graduate schools also offer sliding-scale services.

## Relaxation Techniques

Relaxation techniques promote health by relaxing the body and quieting the mind. These are used to relieve stress and muscle tension, lower blood pressure and reduce pain. These techniques can be used for relieving stress during treatment, challenging procedures, or at bedtime, for both children and adults.



**Deep breathing/belly breathing** involves focusing on taking slow, deep, even breaths. The way you breathe affects your whole body. Breathing exercises help people reduce tension and relieve stress. When a person breathes deeply, a message is sent to the brain to calm down and relax. The brain then sends this message to the body. Breathing exercises are easy to learn and don't require any special tools or equipment. See page 18 for an example.



**Guided imagery** focuses the mind on a sequence or story of positive thoughts and mental images. Guided imagery can be performed individually or in group settings. There are many recordings and apps available that enable people to practice guided imagery anywhere.

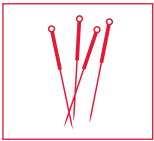


**Progressive muscle relaxation (PMR)** is a technique used to evoke a relaxation response in the body. During PMR, major muscles of the body are systematically tensed and relaxed, and attention is paid to the sensations felt during the process. Many people find it helpful to practice PMR during stressful situations or before going to bed, to assist with relaxation. See page 20 for an example.

## Integrative Medicine and Complementary Therapies

Integrative medicine is a type of treatment approach that combines complementary therapies (for example, yoga and massage) with conventional therapy (for example, chemotherapy and radiation therapy). This promotes the physical, emotional and spiritual health of a person. Many complementary therapies have been studied and have shown benefits for cancer patients dealing with stress, anxiety or depression. A growing number of cancer centers and hospitals offer complementary therapies along with conventional therapies as part of a patient's plan of treatment. This is very useful to patients, because they can receive their standard treatment and their complementary treatment in the same setting.

The following is a list of complementary therapies that may be effective in managing stress and anxiety. They may also help improve a patient's overall well-being. Some of these therapies have been used for years as complementary therapies and have been studied in clinical trials, while others are relatively new. These therapies do not work for everyone. Patients should always consult with their healthcare team before starting any type of complementary therapy. A growing number of hospitals, cancer centers and individual healthcare providers offer complementary therapies. You may be able to receive these therapies and your conventional cancer treatment in the same setting.



**Acupuncture** – Acupuncture has been used for thousands of years as a part of traditional Chinese medicine. Acupuncturists insert very thin needles through the skin at strategic places in the body. Sometimes heat and pressure is used along with the needles. Acupuncture has been found to be helpful in relieving anxiety in cancer patients.

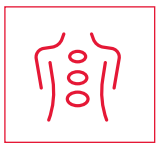


**Physical Activity** – Several studies have demonstrated that physical exercise (walking, swimming, strength training, etc.) improves a cancer patient's fatigue, increases energy levels and improves quality of life. Patients who exercise are generally less tired, less depressed and sleep better than patients who do not exercise. The National Comprehensive Cancer Network (NCCN) recommends 30 minutes of aerobic exercise 5 days a week or more. Strength-training and stretching should also be included.

Try to avoid being inactive for long periods. Some patients may want to start with a 10-minute walk around the block while others may feel they can do more. If you have mobility issues, ask to be referred to a physical therapist to learn exercises tailored to your needs, such as exercises done while sitting in a chair or other modified techniques. Before starting an exercise program, patients should consult with their healthcare team.



**Hypnosis** – Hypnosis involves a therapist who induces relaxation in a patient to bring on a suggestive state. Then the therapist directs the person’s attention to specific thoughts and feelings. While under hypnosis, a person may feel calm, relaxed and more open to positive suggestions that may help reduce physical symptoms such as pain, nausea, stress and anxiety.



**Massage Therapy** – Research suggests that massage therapy may help relieve symptoms such as pain, fatigue and anxiety in cancer patients. Massage therapy involves pressure to muscle and connective tissue to reduce tension and pain, improve circulation and encourage relaxation. Patients should consult with their healthcare team before starting massage therapy to learn if there are any special precautions needed.



**Meditation** – Meditation is a mind-body practice that focuses the mind and increases awareness. Meditation has a long history of use for increasing calmness and physical relaxation, improving psychological balance and enhancing well-being. The most widely studied form of meditation in cancer patients is mindfulness-based stress reduction (MBSR), which includes meditation, yoga and group dynamics. This technique may help cancer patients relieve anxiety, stress and fatigue.



**Music/Art Therapy** – Music and/or art therapy, delivered by a licensed therapist, may help improve a person’s health and well-being. Music therapy may include listening to music, creating music, singing, and/or moving to music. In recent years, the use of music therapy has become more common for cancer patients. Music therapy may reduce stress and anxiety as well as help patients and families cope better with stressful medical procedures and treatments such as radiation therapy and chemotherapy sessions.



Art therapy provides a safe environment for patients to express feelings that are difficult to communicate with words by creating art. Art therapy may help reduce stress and anxiety and increase self-esteem. Patients do not need to be skilled artists or musicians to benefit from art or music therapy. The process of making art provides the benefits. See *Art Templates to Reduce Stress* starting on page 27.



**Tai chi** – Tai chi originated in China. It combines physical movement, breathing exercises and meditation to improve health and quality of life. In some patients, tai chi is effective in relieving pain, reducing fatigue and stress, and improving sleep quality.



**Yoga** – This is an ancient Indian practice combining both the mind and the body. The various types of yoga usually combine physical postures, breath control and meditation or relaxation. Yoga may help improve anxiety, depression and stress in cancer patients. Some studies suggest it may be particularly effective to reduce anxiety in patients undergoing chemotherapy or radiation therapy and to help patients who have fatigue. Patients can work with a yoga therapist who specializes in cancer care and can safely adapt this practice to meet their needs.



**Aromatherapy** – This is the use of essential oils from plants, such as lavender. Essential oils may be mixed with water into a diffuser and inhaled. Some studies suggest this may help reduce stress and anxiety in cancer patients. Aromatherapy may work by sending chemical messages to the area of the brain that affects mood and emotions. Keep in mind that one side effect of cancer treatment can be sensitivity to certain smells which could trigger nausea or vomiting in some patients.



**Reiki** – This is a Japanese energy healing approach founded on a belief in life force energy in living beings that supports healing and well-being. A reiki practitioner puts their hands lightly on or near the person to direct and improve this energy. Reiki may help calm anxiety, relieve tension and create a sense of relaxation.



**Spirituality** – For many people, spiritual practices and prayer provide stress reduction benefits. For some, prayer for oneself or others, prayer to heal an illness, or simply sitting in silence to quiet the mind can help people reduce stress.

For more information about integrative medicine and complementary therapies that may help cancer patients manage stress, visit [www.LLS.org/booklets](http://www.LLS.org/booklets) to view *Integrative Medicine and Complementary Therapies Facts*.

## Stress Management for Medical Procedures

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Aside from the stress caused by a cancer diagnosis, patients report that having to undergo frequent medical procedures may add to their distress. Healthcare professionals also report that some patients postpone or do not complete cancer treatment because of procedure-related panic, distress or claustrophobia.

Patients should have the chance to use a relaxation technique before a potentially distressing procedure to instill a sense of confidence and control. The following can be used before a medical procedure, such as a blood draw, in order to relieve anxiety and stress.

- **Mindful moist mouth.** Take a sip of water, hold it on the tongue for ten seconds before swallowing and then repeat the process three times. This helps alleviate dry mouth, a common symptom of stress.
- **Squeeze balls (also known as stress balls).** Using a stress ball or another squeezable item such as a small bean bag, squeeze tightly and slowly release the ball. At the same time, take a slow comfortable breath. Each time you squeeze the ball, take a slow breath. Repeat four times.
- **Distraction.** While smart phones or devices can increase stress when used without limits, they can also provide a useful distraction when undergoing medical procedures. In particular, podcasts, music, or videos can help reduce anxiety and stress by refocusing attention on something you enjoy.

## Stress Management Tips for Caregivers

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If you are a caregiver, you cannot always take a day off, but learning techniques to ease stress throughout the day can be extremely helpful. In order to care for your loved one, you have to take care of yourself too. You need at least 30 minutes for yourself every day.

**Be Prepared.** When caring for a loved one with cancer, there will be times that are difficult and emotional. It is unavoidable. Prepare for these moments by having a strategy in place to help yourself calm down if you feel anxious or overwhelmed. Having a plan in place, in advance, will help you better manage unexpected intense emotions.

**Ask for Help and Delegate Tasks.** As a primary caregiver for a loved one with cancer, you may worry that if you do not take care of your loved one, then no one else will. More than likely, there are friends and family members who really want to help and can assist you in some way—they just may not know how. Be sure to contact these people and let them know you need help or a break.

**Support for Caregivers.** Caregiving can be a lonely experience. Caregivers often do not feel they should seek support for themselves. But in order to ensure that they can care for a loved one, it is very important that they take good care of themselves, too.

There are several ways to reach out to other caregivers who are in similar situations or have recently been through similar experiences. You can contact LLS for helpful resources. And you can always call members of the patient's healthcare team for suggestions about local meetings and programs. Many hospitals and treatment centers host support groups for survivors and caregivers.

LLS offers a free Caregiver Workbook to use as a guide throughout your time as a blood cancer patient's caregiver. Visit [www.LLS.org/CaregiverWorkbook](http://www.LLS.org/CaregiverWorkbook) to learn more, or call (800) 955-4572 to order a copy.

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Caregiving  
can be  
a lonely  
experience.

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You need at least 30 minutes for yourself every day.

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Try the following strategies:

- Do a breathing exercise.
- Repeat a meaningful mantra or affirmation.
- Close your eyes and sit in silence.
- Listen to a guided imagery.
- Stand up and stretch.
- Take a walk outside.
- Call a close friend or family member.

A variety of breathing exercises can be found online. Try a few different ones to find one that works for you.

For another breathing exercise, visit [www.LLS.org/patient-education-videos/how-do-i-video-series](http://www.LLS.org/patient-education-videos/how-do-i-video-series) to watch the video *How Do I?: Use Breathing to Help Manage Anxiety*.

### Deep Belly Breathing Exercise:

#### One:

Sit in a comfortable position and close your eyes.

#### Two:

Place one hand on your stomach and your other hand on your chest.

#### Three:

Take a deep breath through your nose. Notice that the hand on your stomach will rise. The hand on your chest will remain still.

#### Four:

Exhale through your nose. The hand on your stomach will move, and the hand on your chest will remain still. Focus on your breathing and your hands.

# Do-It-Yourself Stress Management

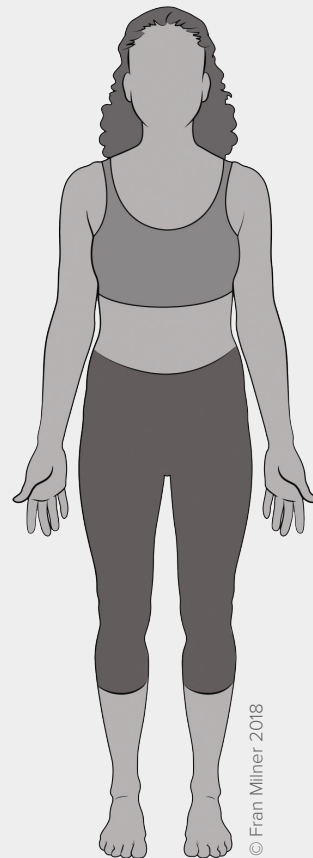
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There are many techniques that patients and caregivers can perform by themselves on their own time or as part of a small group. The following are some examples of specific stress-relieving exercises.

**Yoga Exercise.** The most basic of all poses in yoga is the Mountain Pose. You can begin your yoga practice with this simple pose. The pose encourages your connection with earth, connects you with your own body, and grounds you in the present moment. It is very relaxing and calming. Here is how to do it:

## Mountain Pose

- 1 Stand barefoot on a mat, rug or the floor. Shoulders, neck, and upper body are relaxed, yet straight. Your arms are at your side.
- 2 Become aware of your breath. Inhale slowly into your belly and exhale. Continue taking deep slow breaths.
- 3 Feel the ground underneath your feet. Spread your toes and lift them off the ground. Then relax and let them fall back on the mat.
- 4 Imagine roots spreading from your feet deep down into the earth. Feel the connection and the stability that these roots offer you.
- 5 Continue breathing slowly and evenly. You are now standing strong as a mountain.



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From: Stephanie Petrillo Gould, MED, IAYT, CYT. Yoga and breathing strategies for coping with stress.

**Progressive Muscle Relaxation Script.** Here is an example of this type of relaxation.

Begin by finding a comfortable position—either sitting or lying down in a place where you will not be interrupted. Many people find just sitting in a comfortable chair or on the couch is a good position to start. Allow your attention to focus only on your body. If you begin to notice your mind wandering, that is okay. You should accept that your mind will wander during this exercise. Just bring it back to the muscles you are working on when you realize you are thinking about something other than this exercise. Your mind may wander many times; this takes practice.

Take a deep breath into your abdomen (stomach), hold for a few seconds and exhale slowly. As you breathe, notice your stomach rising and your lungs filling with air. Take your time and just spend a minute or two breathing and noticing your breathing. As you exhale, imagine the tension in your body being released and flowing out of your body. And again inhale... and exhale. Feel your body already relaxing. As you go through each step, remember to keep breathing normally. Try not to hold your breath. Continued on next page...

To listen to a guided audio progressive muscle relaxation exercise, visit [www.psychologytools.com/resource/progressive-muscle-relaxation-audio/](http://www.psychologytools.com/resource/progressive-muscle-relaxation-audio/) to download. You can also search online for more progressive muscle relaxation scripts.

## Now let us begin progressive muscle relaxation.

Tighten the muscles in your forehead by raising your eyebrows as high as you can. Hold for about 5 seconds. Release your eyebrows back to normal, feeling that tension fall away.

Pause for about 5-10 seconds and just breathe.

Now smile widely, feeling your mouth and cheeks tense. Hold for about 5 seconds and release, appreciating the softness in your face.

Pause for about 5-10 seconds, and just breathe.

Next, tighten your eye muscles by squinting your eyelids tightly shut. Hold for about 5 seconds, and release.

Pause for about 5-10 seconds and just breathe.

Gently pull your head back as if to look at the ceiling. Hold for about 5 seconds, and release, feeling the tension melting away.

Pause for about 5-10 seconds and just breathe.

Now feel the weight of your relaxed head and neck sink. Breathe in and breathe out. Let go of all the stress...Breathe in...and breathe out. Then lift your head back up.

Now, tightly, but without straining, clench your right fist and hold this position for about 5 seconds...and release.

Pause for about 5-10 seconds and just breathe.

Now, feel the tension in your right forearm and hand. Feel that buildup of tension. You may even visualize that set of muscles tightening. Hold for about 5 seconds... and release, enjoying that feeling of limpness.

You can continue the exercise by progressively tightening the muscles in your other hand and arm. You can continue to do this series in the shoulders, the upper back, the chest, the lower back, the stomach, the legs and the feet. Be sure to pause for about 5-10 seconds in between muscle groups in order to breathe and relax. At the end of the exercise, there should be a feeling of complete body relaxation.

# General Tips for Reducing or Managing Stress

## To Reduce Stress

Some types of stress are predictable and, if so, may be avoidable. You can reduce your amount of stress by making some simple and small changes.

### Avoid scheduling conflicts

Use a day planner, smart phone or online calendar to keep track of appointments and activities. When you schedule activities, allow plenty of time to finish one task before starting the next. Avoid scheduling too many events for the same day or week.

### Be aware of your limits

If you do not have the time, energy, or interest, it is fine to nicely say “no” when people ask you to take on tasks. At work, do not volunteer for projects that would make your workload unmanageable. If saying “no” feels difficult, tell the person asking you what you are willing to do instead, if anything. This could be doing a smaller part of the task or having more time to complete the task.

### Ask for help

Ask family and friends for help. Your loved ones are likely to offer their support, so think about particular tasks you need help with beforehand. Your support system will be pleased to help in specific ways. You can ask for help with shopping, driving you to a doctor’s appointment, meal preparations, pet-sitting, or picking up a child from school.

### Prioritize your tasks and break them down into smaller steps

Make a list of the things you routinely do, such as work and household chores. Rank these things by importance, considering the things you must do and the things that are most important to you. Look at large tasks and if possible, break them down into smaller steps. This process can make seemingly overwhelming tasks easier to handle.

### Get help with financial problems

Talk with an oncology social worker or a financial advisor who specializes in cancer-related insurance and financial matters. Financial aid programs exist and you may be eligible to join one. Call (800) 955-4572 for resources.



## To Manage Stress

Although you can reduce stress in your life, you can not completely avoid it. Still, there are strategies to help you cope, relax and feel less anxious.

<b>Spend time outside</b>	Take a walk outside in a park or other natural setting to experience sunlight, fresh air and the sounds of nature.
<b>Schedule social activities</b>	Make time to socialize with family or friends. This also is a good opportunity to share your feelings, if you choose to.
<b>Eat well</b>	Maintaining a healthy diet will give you more energy to deal with daily stressors. Visit <a href="http://www.LLS.org/nutrition">www.LLS.org/nutrition</a>
<b>Get plenty of sleep</b>	Sleep is essential to help the body stay healthy and heal. Try to get seven or more hours of sleep each night. Naps during the day can also help. (However if you have difficulty sleeping at night, avoid naps during the day.) If you are having difficulty sleeping, talk with your healthcare team about ways to manage insomnia.
<b>Schedule daily relaxing time</b>	Spend time reading a book, watching a TV show, gardening, or listening to music.
<b>Do things you enjoy</b>	Laughter can reduce stress. Do activities that bring fun, humor and joy into your daily life.
<b>Speak to a therapist</b>	Talking about your challenges with a licensed psychologist or clinical social worker can help. Many insurance companies cover these types of services.
<b>Join a support group</b>	Support groups offer the chance to talk about feelings and fears with others who share and understand similar experiences.
<b>Find comfort in spirituality or religion</b>	Attending religious services or finding a religious or spiritual community can help relieve anxiety, fear and stress.
<b>Write in a journal</b>	Writing about the stresses and events in your life provides a private way to express your feelings at your own pace. Visit <a href="http://www.LLS.org/booklets">www.LLS.org/booklets</a> to order the <i>Write It Out</i> journal.
<b>Take a digital break</b>	Studies have shown that social media may increase anxiety. Try to decrease time spent scrolling.

## Dealing with Loneliness

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Many people with a cancer diagnosis feel a sense of isolation or loneliness. They may think that friends and loved ones do not understand what they are going through. They may also be unable to spend time with friends and family in the same ways they did before cancer. While a mental health provider can offer significant support and guidance, connecting with other people who have been through cancer themselves can provide a powerful sense of community and understanding. There are many ways to connect with other cancer survivors both in person and online, including peer-to-peer programs and support groups. LLS offers the following resources to connect with others:

- **Online Chats:** Our live, weekly online chats provide a friendly forum where you can share your experiences and chat with others. Each chat is moderated by an oncology social worker. Visit [www.LLS.org/chat](http://www.LLS.org/chat) to learn more.
- **The Patti Robinson Kaufmann First Connection® Program:** This is a telephone support program that links you with a trained peer volunteer who has experienced a similar situation. Visit [www.LLS.org/FirstConnection](http://www.LLS.org/FirstConnection) to learn more.
- **LLS Community:** At this one-stop virtual meeting place, you can talk with others and get the latest blood cancer resources. Visit [www.LLS.org/community](http://www.LLS.org/community) to sign up.
- **Family Support Groups:** LLS family support groups gives patients and their families a place to go where they can share and learn. Health professionals with oncology experience lead the groups. Call **(800) 955-4572** or visit [www.LLS.org/LocalPrograms](http://www.LLS.org/LocalPrograms) for more.

You can also ask members of your healthcare team about other programs in your area.

## How Technology Can Help

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One of the benefits of the increased use of technology and the Internet is that people have access to web- and smartphone-based tools to help them manage their own stress levels. Below is a list of a few websites and mobile applications that are designed to help patients relieve stress, get help with emotional and practical concerns and improve quality of life.

**American Institute of Stress.** The American Institute of Stress is a non-profit organization established to serve as a clearinghouse for information on all stress-related subjects. There is a blog as well as current research about stress, plus information and resources about how stress affects daily activities. Both information and resources about stress (including military-induced stress) are available. Visit [www.stress.org](http://www.stress.org) for more information.

**Breathe2Relax.** Free for iPhone or Android. Breathe2Relax is a portable stress management app that provides detailed information on the effects of stress on the body. You can also access instructions and practice exercises to help learn deep (“diaphragmatic”) breathing. Breathing exercises can decrease the body’s stress response and help stabilize mood, control anger, and manage anxiety. This app can be used as a stand-alone stress reduction tool or can be used together with clinical care directed by a healthcare worker.

**CareZone.** Free for iPhone or Android. This organizational app helps patients remember treatments, make notes on plan-care, summarize drug administration protocols, and give reminders of medication times and doctors’ visits. It can also help simplify treatment by taking and keeping pictures of medications, prescriptions and supplements. The app also has a journaling area for tracking appointments and keeping notes of items to discuss with doctors.

**Create To Heal.** Free for iPhone. Although this app is not meant as a treatment management tool, it does focus on creativity and stress relief as a complement to standard treatment. The app was tested over five years using hundreds of cancer patients. It provides guided meditations, soothing music, and art to reduce stress and assist in the healing process.

**Relaxation Videos.** Online videos are available to help people with stress. Search water sounds, bird calls, quick relaxation, guided meditation, and relaxing yoga. You can also search for topics of personal interest such as cookie decorating, woodworking or even videos about cats. These videos are about things you like or love and you can relax as you watch.

**Smiling Mind.** Free for iPhone or Android. Smiling Mind is a modern meditation app, based on a program developed by psychologists and educators to help bring balance to people's lives and make mindfulness meditation accessible to all.

**The Center for Stress and Anxiety Management Blog.** The Center for Stress and Anxiety Management provides a blog on their website that includes information about a variety of topics about stress and anxiety for adults and children. It provides tips and tools to combat anxiety and stress. Visit [www.csamsandiego.com/blog](http://www.csamsandiego.com/blog) for more information.

## Clinical Trials for Stress Reduction and Complementary Therapies

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Patients are encouraged to explore clinical trials. Clinical trials test new drugs and treatments before they are approved by the FDA and become standard treatments. Clinical trials are carefully controlled research studies, conducted under strict guidelines to help researchers determine the good effects and possible side effects of new treatments. Clinical trials are designed to be accurate and safe. Patient participation in clinical trials is important in the development of new and more effective treatments, and may provide patients with additional treatment options.

Conventional cancer treatments like chemotherapy, immunotherapy and radiation therapy have undergone years of rigorous study. Clinical trials to study various stress management, supportive therapies and complementary therapies are also underway in many locations across the country to assess their safety, benefits and effectiveness.

If you are interested in a clinical trial for stress reduction, The Leukemia & Lymphoma Society (LLS) offers help for patients and caregivers in understanding,

identifying and accessing clinical trials. Pediatric and adult patients and caregivers can work with Clinical Trial Nurse Navigators who will help find clinical trials and provide personalized support throughout the entire clinical trial process. Visit [www.LLS.org/CTSC](http://www.LLS.org/CTSC) for more information.

## The Silver Lining About Stress

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As mentioned earlier, stress is a normal body reaction to change. In fact, many people facing cancer, both patients and caregivers alike, have reported personal growth from facing stressful experiences. This phenomenon, called “post-traumatic growth” demonstrates that in the face of trauma or great challenge, humans can find greater meaning, richer relationships, a sense of resiliency and deeper spirituality in their lives.

This is not to say that the emotional and physical stresses of cancer disappear, but many people do change their thinking in ways that allow them to “not sweat the small stuff,” and “discover what’s really important in life.” While you may not come to feel that “cancer is the best thing that happened to me,” as some with the most extreme form of post-traumatic growth have exclaimed, you may find that life’s sweet moments are a little sweeter. The good news is that many of the mind-body therapies listed in this resource help cultivate post-traumatic growth. And cultivating post-traumatic growth can be your best tool for managing stress.

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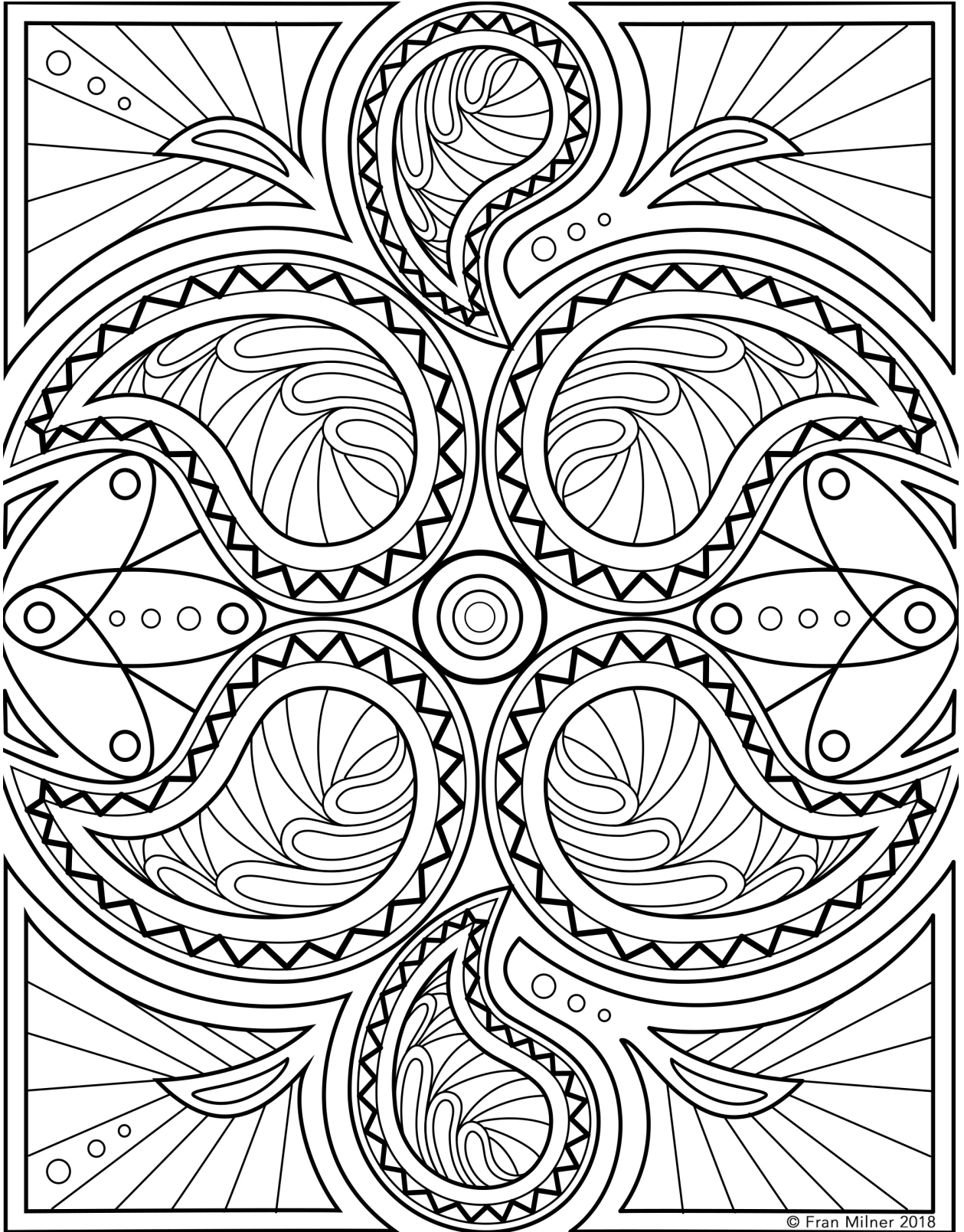
Many people do change their thinking in ways that allow them to not sweat the small stuff.

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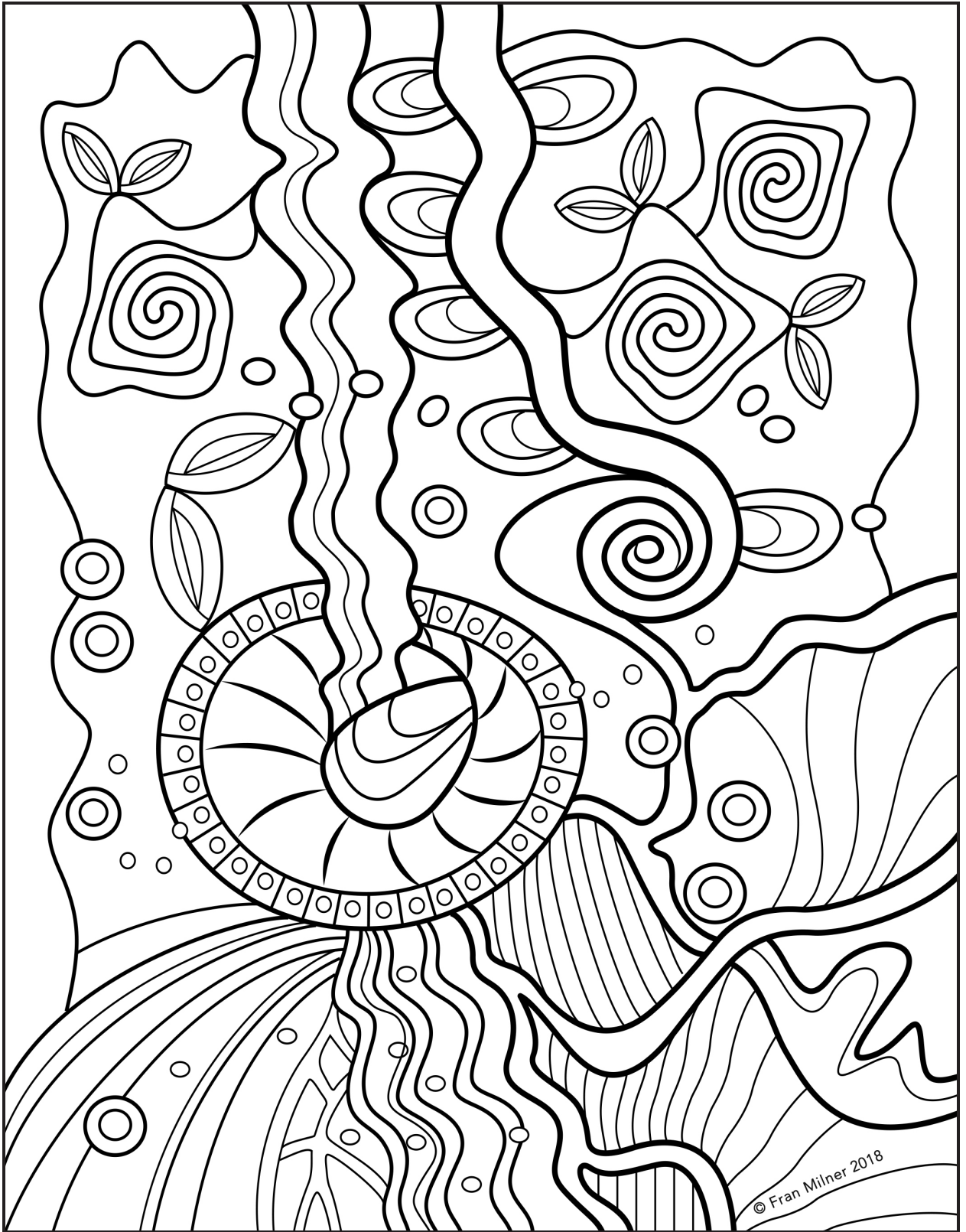
### Art Templates to Reduce Stress

*As a way to relax, use the following coloring pages to take a few moments for yourself.*

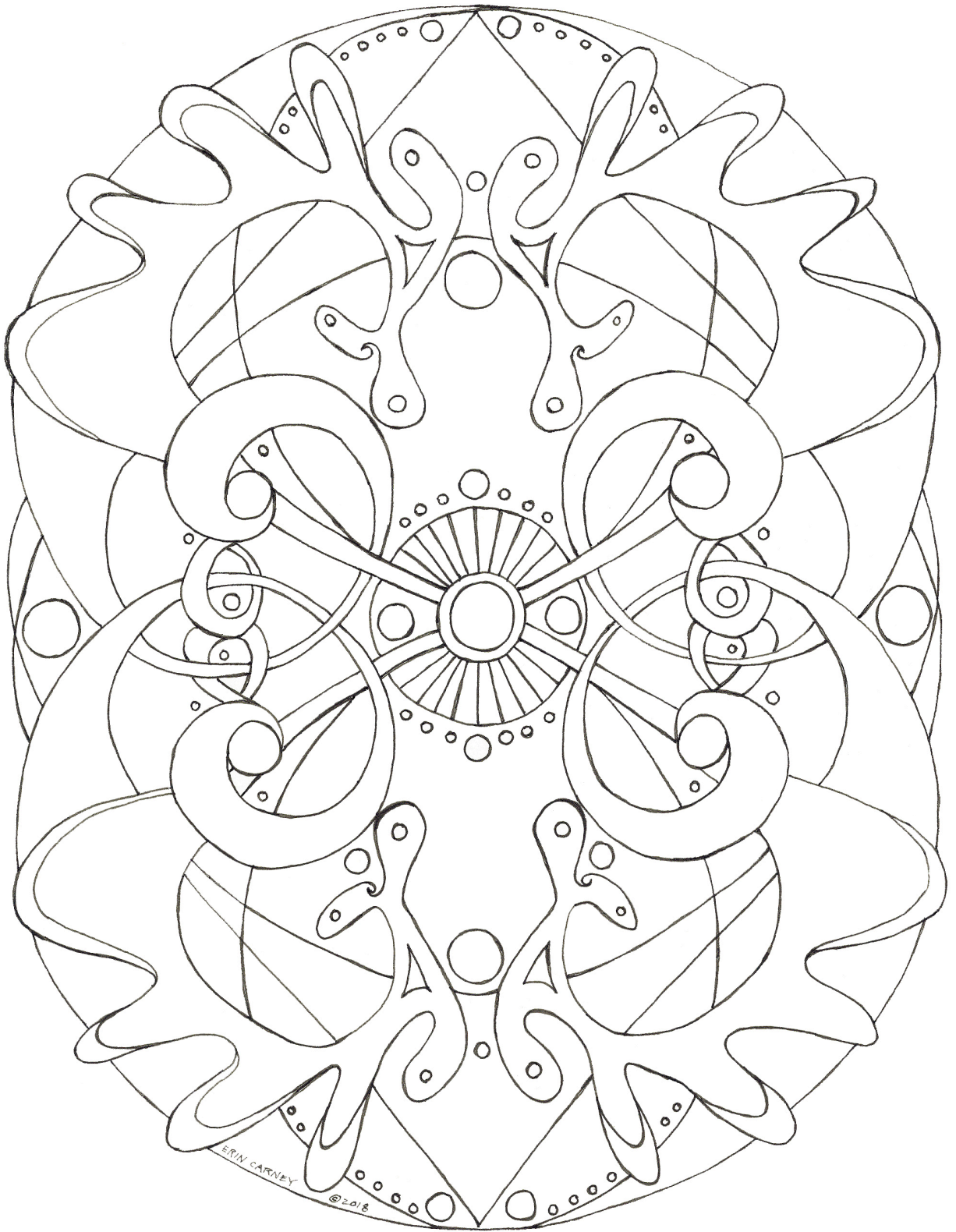
A special thanks to Fran Milner and Erin Carney for providing the illustrations for this book.



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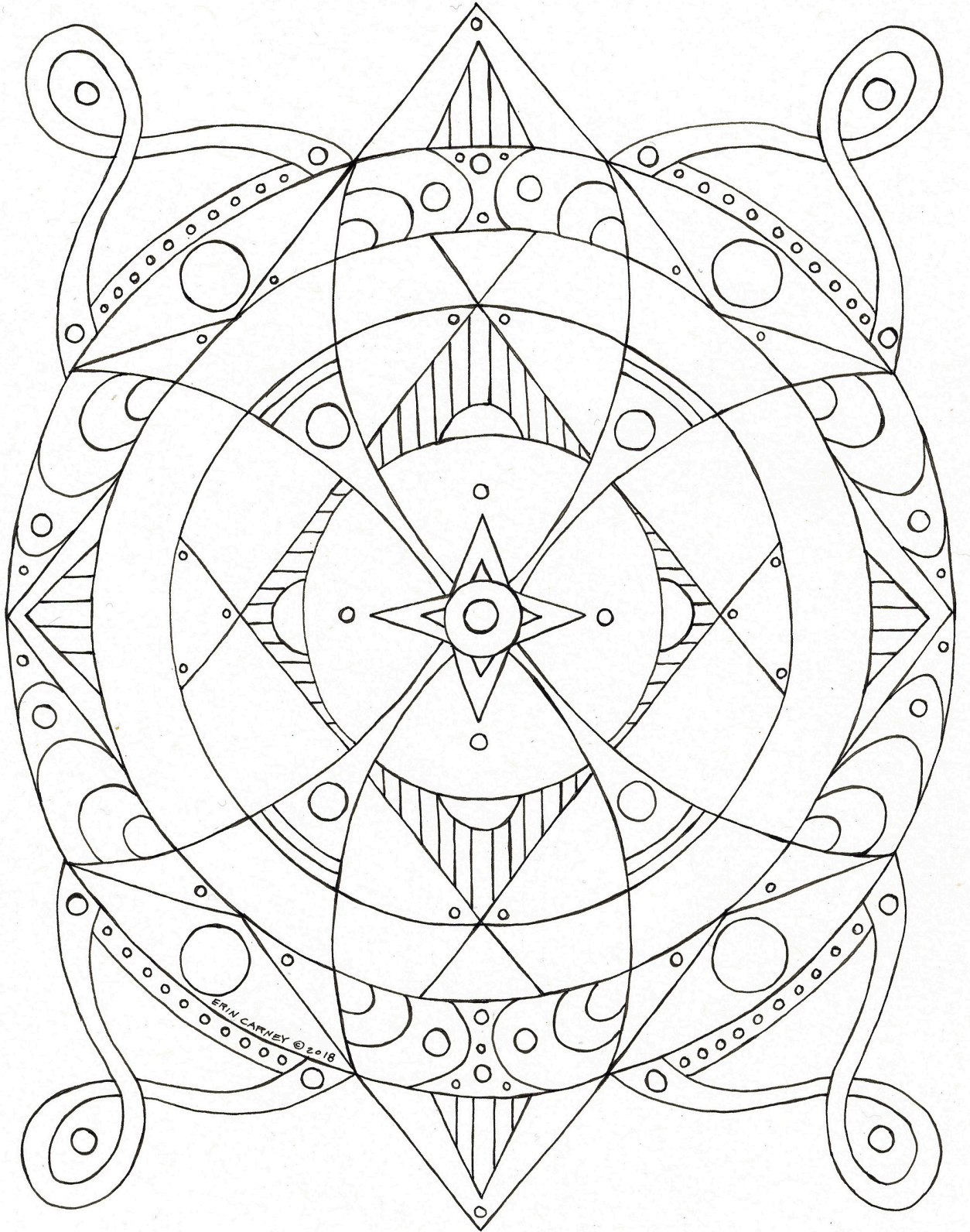


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## Glossary

**Adrenal glands.** The adrenal or endocrine glands are located on top of each kidney. They hold and release several stress hormones including epinephrine, norepinephrine and cortisol.

**Adrenaline.** See Epinephrine.

**Amygdala.** The part of the brain that reacts with fear to things that we think are scary or dangerous. It also controls the way we react to certain stimuli or an event that causes an emotion that we believe is potentially harmful or threatening.

**Autonomic nervous system (ANS).** The ANS consists of the sympathetic and parasympathetic nervous systems. The ANS requires no conscious thought. It regulates automatic body functions like breathing and heart rate.

**Bronchioles.** The smallest airways within the lungs that are not surrounded by any cartilage. Each lung has around 30,000 bronchioles.

**Cortisol.** A stress hormone released by the adrenal glands that helps the body prepare for “fight or flight” by promoting the release of glucose and lipids in the body. Cortisol also helps the body go back to normal after a stressor, but too much stress produces too much cortisol, causing increased blood sugar levels.

**Epinephrine.** Also known as adrenaline. A special neurochemical that is responsible for immediate physical readiness for stress, including increased heart rate and blood pressure. It works in unison with norepinephrine.

**Hypothalamus.** Part of the brain involved with emotional processing. When a threat is perceived, the hypothalamus secretes a substance called “corticotropin-releasing factor” into the pituitary gland to activate the fight-or-flight response.

**Norepinephrine.** A special neurochemical also known as noradrenaline. It is responsible for immediate physical readiness for stress, including increased heart rate and blood pressure. It works in unison with epinephrine (adrenaline).

**Parasympathetic Nervous System.** The branch of the central nervous system that specifically calms the body. It slows the heart, dilates blood vessels, decreases pupil size, increases digestive juices and relaxes muscles in the gastrointestinal tract.

**Post-Traumatic Stress Disorder (PTSD).** An anxiety disorder that develops in reaction to physical injury or severe mental or emotional distress such as military combat, violent assault, natural disaster, or other life-threatening events. Symptoms of PTSD may interfere with daily life and include re-living the traumatic event in nightmares or flashbacks; avoiding people and places connected to the event; and having trouble concentrating and sleeping. Having cancer may also lead to PTSD.

**Sympathetic Nervous System.** The branch of the central nervous system that triggers the fight-or-flight response when some element of threat is present. It is in charge of increasing heart rate, blood pressure, breathing rate and pupil size. It also causes blood vessels to narrow and decreases digestive juices.

## Other Organizations

### **MedlinePlus**

[www.nlm.nih.gov/medlineplus](http://www.nlm.nih.gov/medlineplus)

MedlinePlus provides links to current healthcare information. It is compiled by the National Library of Medicine at the National Institutes of Health (NIH).

### **National Cancer Institute**

Office of Cancer Complementary and Alternative Medicine (OCCAM)

<http://cam.cancer.gov>

(800) 4-CANCER or (800) 422-6237

OCCAM's website contains information and research on complementary and alternative therapies. Visit: <https://www.cancer.gov/about-cancer/treatment/clinical-trials/search> to search complementary and alternative clinical trials for cancer patients.

### **National Center for Complementary and Integrative Health (NCCIH), National Institutes of Health**

[www.nccih.nih.gov](http://www.nccih.nih.gov)

(888) 644-6226

NCCIH's website contains reliable, objective and evidence-based information on integrative healthcare including the fact sheets "Cancer: In Depth" and "Health Topics from A to Z."

### **Society for Integrative Oncology**

[www.integrativeonc.org](http://www.integrativeonc.org)

(518) 694-5543

Develops practice guidelines on the use of integrative therapies during cancer treatment.

## Resources and Information

LLS offers free information and services for patients and families affected by blood cancers. This section lists various resources you may find helpful.

### For Help and Information

**Consult with an Information Specialist.** Information Specialists can assist you through cancer treatment, financial and social challenges and give accurate, up-to-date disease, treatment and support information. Our Information Specialists are highly trained oncology social workers and nurses. Language services are available. For more information, please:

- Call: (800) 955-4572 (Monday through Friday, 9 a.m. to 9 p.m. ET)
- Email and Live chat: [www.LLS.org/InformationSpecialists](http://www.LLS.org/InformationSpecialists)

**Clinical Trials (Research Studies).** Research is ongoing to develop new treatment options for patients. LLS offers help for patients and caregivers in understanding, identifying and accessing clinical trials. Pediatric and adult patients and caregivers can work with our Clinical Trial Nurse Navigators who will help find clinical trials and provide personalized support throughout the entire clinical trial process. Visit [www.LLS.org/CTSC](http://www.LLS.org/CTSC) for more information.

**Nutrition Consultations.** Schedule a free one-on-one nutrition consultation with one of our registered dietitians who have expertise in oncology nutrition. Consultations are available to patients and caregivers of all cancer types. Dietitians can assist with information about healthy eating strategies, side effect management and more. Please visit [www.LLS.org/nutrition](http://www.LLS.org/nutrition) for more information.

**Free Information Booklets.** LLS offers free education and support booklets for patients, caregivers and healthcare professionals that can either be read online or ordered. Please visit [www.LLS.org/booklets](http://www.LLS.org/booklets) for more information.

**Telephone/Web Education Programs.** LLS offers free telephone/Web and video education programs for patients, caregivers and healthcare professionals. Please visit [www.LLS.org/programs](http://www.LLS.org/programs) for more information.

**Financial Assistance.** LLS offers financial support to eligible individuals with blood cancer for insurance premiums, co-pays, and non-medical expenses like travel, food, utilities, housing, etc. For more information, please:

- Call: (877) 557-2672
- Visit: [www.LLS.org/finances](http://www.LLS.org/finances)

**Resources for Families.** Blood cancer occurs in a small number of children. Families face new challenges, and the child, parents and siblings may all need support. LLS has many materials for families including a caregiver workbook, children’s book series, an emotion flipbook, dry erase calendar, coloring books and a coloring app, a school re-entry program, and other resources. For more information, please:

- Call: (800) 955-4572
- Visit: [www.LLS.org/FamilyWorkbook](http://www.LLS.org/FamilyWorkbook)

**Podcast.** *The Bloodline with LLS* is here to remind you that after a diagnosis comes hope. Listen in as patients, caregivers, advocates, doctors and other healthcare professionals discuss diagnosis, treatment options, quality-of-life concerns, treatment side effects, doctor-patient communication and other important survivorship topics. Visit [www.LLS.org/TheBloodline](http://www.LLS.org/TheBloodline) for more information and to subscribe to access exclusive content, submit ideas and topics, and connect with other listeners.

**3D Models.** LLS offers interactive 3D images to help visualize and better understand blood cell development, intrathecal therapy, leukemia, lymphoma, myeloma, MDS, MPNs, and lab and imaging tests. Visit [www.LLS.org/3D](http://www.LLS.org/3D) for more.

**Free Mobile Apps.**

- **LLS Coloring For Kids™** – Allows children (and adults) to express their creativity and offers activities to help them learn about blood cancer and its treatment. Visit [www.LLS.org/ColoringApp](http://www.LLS.org/ColoringApp) to download for free.
- **LLS Health Manager™** – Helps you track side effects, medication, food and hydration, questions for your doctor, and more. Visit [www.LLS.org/HealthManager](http://www.LLS.org/HealthManager) to download for free.

**Suggested Reading.** LLS provides a list of selected books recommended for patients, caregivers, children and teens. Visit [www.LLS.org/SuggestedReading](http://www.LLS.org/SuggestedReading) to find out more.

## **Connecting with Patients, Caregivers and Community Resources**

**LLS Community.** The one-stop virtual meeting place for talking with other patients and receiving the latest blood cancer resources and information. Share your experiences with other patients and caregivers and get personalized support from trained LLS staff. Visit [www.LLS.org/community](http://www.LLS.org/community) to join.

**Weekly Online Chats.** Moderated online chats can provide support and help cancer patients and caregivers reach out and share information. Please visit [www.LLS.org/chat](http://www.LLS.org/chat) for more information.

**Local Programs.** LLS offers community support and services in the United States and Canada including the *Patti Robinson Kaufmann First Connection® Program* (a peer-to-peer support program), local support groups and other great resources. For more information about these programs or to contact your region, please:

- Call: (800) 955-4572
- Visit: [www.LLS.org/LocalPrograms](http://www.LLS.org/LocalPrograms)

**Advocacy and Public Policy.** Working closely with dedicated volunteer advocates, LLS's Office of Public Policy elevates the voices of patients to state and federal elected officials, the White House, governors and even courts. Together, we advocate for safe and effective treatments. We pursue policies that would make care more accessible to all patients. And, most of all, we advocate for the hope for a cure. Want to join our work? Visit [www.LLS.org/advocacy](http://www.LLS.org/advocacy) for more information.

**Other Helpful Organizations.** LLS offers an extensive list of resources for patients and families. There are resources that provide help with financial assistance, counseling, transportation, patient care and other needs. For more information, please visit [www.LLS.org/ResourceDirectory](http://www.LLS.org/ResourceDirectory) to view the directory.

### **Additional Help for Specific Populations**

**Información en Español (LLS information in Spanish).** Please visit [www.LLS.org/espanol](http://www.LLS.org/espanol) for more information.

**Language Services.** Let members of your healthcare team know if you need translation or interpreting services because English is not your native language, or if you need other assistance, such as a sign language interpreter. Often these services are free.

**Information for Veterans.** Veterans who were exposed to Agent Orange while serving in Vietnam may be able to get help from the United States Department of Veterans Affairs. For more information, please

- Call: the VA (800) 749-8387
- Visit: [www.publichealth.va.gov/exposures/AgentOrange](http://www.publichealth.va.gov/exposures/AgentOrange)

**Information for Firefighters.** Firefighters are at an increased risk of developing cancer. There are steps that firefighters can take to reduce the risk. Please visit [www.LLS.org/FireFighters](http://www.LLS.org/FireFighters) for resources and information.

**World Trade Center Health Program.** People involved in the aftermath of the 9/11 attacks and subsequently diagnosed with a blood cancer may be able to get help from the World Trade Center (WTC) Health Program. People eligible for help include:

- Responders
- Workers and volunteers who helped with rescue, recovery and cleanup at the WTC-related sites in New York City (NYC)
- Survivors who were in the NYC disaster area and those who lived, worked or were in school in that area
- Responders to the Pentagon and the Shanksville, PA, crashes

For more information, please

- Call: WTC Health Program at (888) 982-4748
- Visit: [www.cdc.gov/wtc/faq.html](http://www.cdc.gov/wtc/faq.html)

**People Suffering from Depression.** Treating depression has benefits for cancer patients. Seek medical advice if your mood does not improve over time, for example, if you feel depressed every day for a two-week period. For more information, please:

- Call: The National Institute of Mental Health (NIMH) at (866) 615-6464
- Visit: NIMH at [www.nimh.nih.gov](http://www.nimh.nih.gov) and enter “depression” in the search box

**Feedback.** Visit [www.LLS.org/PublicationFeedback](http://www.LLS.org/PublicationFeedback) to give suggestions about this booklet.

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**Get support.**  
Reach out to our  
**Information Specialists.**



The Leukemia & Lymphoma Society® team consists of highly trained oncology social workers and nurses who are available by phone, email and live chat Monday through Friday, 9 a.m. to 9 p.m. (ET).

- Get one-on-one personalized support and information about blood cancers
- Know the questions to ask your doctor
- Discuss financial resources
- Receive individualized clinical-trials searches
- Get connected to resources

Contact us at  
**800.955.4572**  
or **[www.LLS.org/](http://www.LLS.org/)**  
**InformationSpecialists**

(Language interpreters  
can be requested.)



For more information, please contact our Information Specialists  
**800.955.4572** (Language interpreters available upon request).

**National Office** 3 International Drive, Suite 200, Rye Brook, NY 10573

The mission of The Leukemia & Lymphoma Society (LLS) is to cure leukemia, lymphoma, Hodgkin's disease and myeloma, and improve the quality of life of patients and their families. Find out more at [www.LLS.org](http://www.LLS.org).