



# Lifestyle Medicine Toolkit for Cancer Risk Reduction & Survivorship



AMERICAN COLLEGE OF  
**Lifestyle Medicine**

**“This toolkit from the American College of Lifestyle Medicine is an impactful resource to not only highlight the importance but also provide a practical and usable resource to implement lifestyle strategies for cancer risk reduction and survivorship”**

**Kirsten Sullivan | Director,  
Prevention & Survivorship,  
American Cancer Society**



**“Cancer survivors face an overwhelming array of often conflicting advice. This toolkit will help providers steer their patients towards simple, effective and scalable evidence-based approaches to help cancer survivors thrive beyond their diagnosis.” “The scalable levels of the strategies ensures that a provider can meet their patient where they are so that they can build better habits without being discouraged by unrealistic expectations”.**

**Nigel Brockton, Vice President, Research  
American Institute for Cancer Research**



## **Toolkit Taskforce Leadership Team**

Sami Mansfield, ACSM- CET

Nhi Ma Do, PA-C, MPAS, IFMCP, DipACLM

Ila M. Saunders, Pharm.D., BCOP, DipACLM, FHOPA

Kirsten Soriano, NBC-HWC

Jenna Unke, MMS, PA-C, DipACLM

And a special thank you to the Cancer MIG members and other ACLM colleagues for your insightful discussion and feedback to make this resource a reality!

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**E**very year an estimated 20 million people worldwide will begin to live their lives as cancer survivors by receiving a cancer diagnosis.<sup>1</sup> While overall survival rates are improving due to combinations of earlier detection, treatment advancements, and survivorship care, cancer is still the second leading cause of death worldwide.

The role of lifestyle medicine in cancer risk reduction through survivorship is generally known to be beneficial. Yet, gaps continue to exist, often linked to time, costs, and access barriers. This toolkit aims to bridge these gaps through education, access, and resources to help improve quality of life and outcomes.

Research has continued to emerge, showing that healthy lifestyle habits, such as eating a plant-forward diet, participating in regular exercise, reducing inactivity, achieving and maintaining a healthy weight and body composition, can help reduce the risk of many types of cancer incidence and recurrence.

Along with increased weight, unhealthy lifestyle habits are a known risk factor in 30-50% of new diagnoses, according to the World Cancer Research Fund (WCRF) CUP research.<sup>1</sup> This is significantly higher than cancers from known genetic mutations, estimated at around 10%.

**Why is this important?** It reiterates that we have significantly more influence over our risk reduction, survivorship, and quality of life around cancer and chronic disease. Even for genetic carriers, a healthy lifestyle can decrease risk. For example, BRCA carriers can reduce their risk of a breast cancer diagnosis by up to one-third by engaging in regular healthy habits.<sup>6</sup>

For cancer survivors, defined here as individuals who have completed their primary treatments, a healthy lifestyle can help reduce and improve cancer-related side effects and the risk of other comorbidities. In addition, meeting lifestyle medicine recommendations decreases mortality from cancer and all causes.<sup>7</sup>

Beyond cancer, lifestyle medicine can address up to 80% of chronic diseases which impact cancer survivors at proportionally higher rates.<sup>8</sup> While many of these reasons to

**“Evidence-based tools from lifestyle medicine are a key component of care for individuals with a diagnosis of cancer. Lifestyle medicine tools are an important complement to standard cancer-directed therapy.”**

**- Amy Comander, MD, DipABLM**

# Introduction

**Having overweight or obesity increases the risk for 13 types of cancer, along with diabetes, cardiovascular disease, stroke, and high blood pressure, according to the National Cancer Institute.<sup>2-5</sup>**

engage in a healthy lifestyle are about living better and longer, the benefits can also be experienced in daily life, not only physically but also mentally. Mental health quality and social isolation continue to impact cancer survivors and racial and ethnic minority groups disproportionately. Lifestyle medicine strategies can improve not only lifespan but health span, the number of years that an individual is in good health.

**This toolkit was made for anyone who is interested in implementing lifestyle medicine.** It focuses on information and educational resources that meet the needs of a broad range of patients. The tools are basic, accessible, low cost, and often require a minimal time commitment to implement while still providing an impact. These strategies can be added into clinical workflow and will be easy for patients to understand and use. We hope it can help you create conversations to introduce lifestyle medicine, provide resources, and most importantly strategies in each of the pillars.

**Consider how to implement lifestyle medicine into your practice and scope of caring for patients.** There are numerous ways to begin this work and we encourage you to find the one that works best for you, your patients, and colleagues. See the Implementation Using Behavior Change & Motivational Interviewing section for strategies on implementation.

Cancer can be a significant motivator for many individuals, both in a desire to prevent as well as improve survival and reduce the risk of cancer recurrence and other comorbid conditions.

While it's important to not create feelings of blame or shame related to a cancer diagnosis, having empathetic and empowering conversations with your patients is an essential component of care.

Many of the individuals that you care for may be unfamiliar with the impact and significance of lifestyle medicine so we encourage you to use this toolkit as a guide to help engage in conversations while providing actionable steps and resources.

# About this Toolkit

## The Lifestyle Medicine Cancer Toolkit

was developed as a provider-focused clinical resource, as well as an individual resource.

This toolkit focuses on the time points of cancer risk reduction and survivorship for individuals completed with primary treatments.

While most of these strategies benefit individuals undergoing treatment or living with advanced cancer, we encourage a discussion with the oncology team and the patient for awareness, collaboration, transparency and support.

It's important to note that, when possible, we highlighted clinical evidence but gaps in the literature exist for many of the pillars.

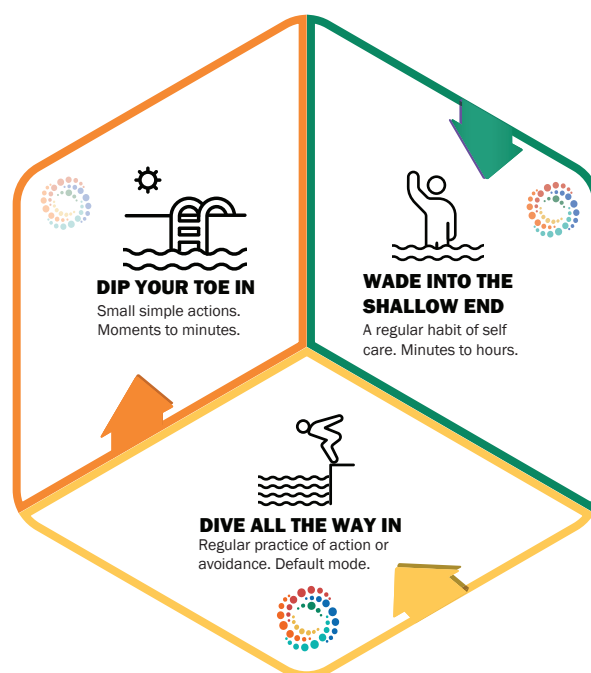
We encourage you to use this as a starting point and a guide and add resources or strategies that fit into your practice or profession.

This toolkit is designed to make lifestyle medicine accessible to a diverse population, not limited to finances, health literacy, gender identity, race, financial resources, or geographical barriers.

The resources provided here, while not an entirely inclusive list, were ones that we found to be simple, accessible, and require limited financial resources as a starting point. We encourage you to add to this list to fit the needs of your population.

The toolkit is divided into sections for each of the primary pillars and an additional section for metabolic health and obesity.

Each section introduces the pillar and available evidence, and strategies divided into three categories of readiness to guide the prescription of the daily dose of lifestyle medicine.



## Time for Self Care

Caregivers can also apply the information in this toolkit to their own lives as they are also prone to chronic illnesses such as high cholesterol and high blood pressure and are at an increased risk of being overweight. While most caregivers know the importance of healthy habits, the demands of time, energy, and other practical resources make things more challenging. Caregivers are less likely to have a regular self-care routine, follow routine screenings and visit their own medical providers as often as needed. In addition, the emotional roller coaster of care giving, along with the everyday demands of life, increases the risk of excessive use of alcohol, tobacco and other unhealthy habits.

We encourage you to begin implementing this toolkit with yourself, your colleagues, family and community as you work this into your patient care.

# Nutrition

Evidence shows that following a minimally processed, predominantly plant-based eating pattern is an important part of cancer risk reduction and survivorship especially in some types of cancer, including breast cancer.<sup>9</sup>

These foods provide important nutrients such as fiber, vitamins, and minerals, as well as phytochemicals (healthy compounds produced by plants) which are thought to be cancer protective.<sup>10</sup> Fiber, which is found naturally occurring in nearly all plant foods, is an essential ingredient for a healthy gut.

Here are some other tips to share with your patients or clients that can help them in making better food choices.

Look for minimally processed foods by reading food labels and looking for items with minimal added sugar, salt, and fat.

Take a peek at ingredients and strive for choosing foods with ingredients you can pronounce.

Beware of buzz words such as organic, all natural, sugar free, no additives, probiotics, GMO-free, and grass-fed. Some of this may be marketing or ways of trying to promote processed foods.

Learn and stay up to date on how to read a nutrition facts label using the USDA's website. You can read food labels to find the total and added sugar, sodium, and fat content of packaged food and beverages.

Visit: <https://www.fda.gov/food/new-nutrition-facts-label/whats-new-nutrition-facts-label>

Nutrition Facts	
8 servings per container	
<b>Serving size</b>	<b>2/3 cup (55g)</b>
<b>Amount per serving</b>	
<b>Calories</b>	<b>230</b>
% Daily Value*	
<b>Total Fat</b> 8g	<b>10%</b>
Saturated Fat 1g	5%
Trans Fat 0g	
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 160mg	<b>7%</b>
<b>Total Carbohydrate</b> 37g	<b>13%</b>
Dietary Fiber 4g	14%
Total Sugars 12g	
Includes 10g Added Sugars	20%
<b>Protein</b> 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 240mg	6%

- 1 The serving size appears in large, bold font and some serving sizes were updated.
- 2 Calories are displayed in large, bold font.
- 3 Daily Values were updated.
- 4 Added sugars, vitamin D, and potassium are required on the label. Manufacturers must declare the amount in addition to percent Daily Value for vitamins and minerals.

## ACLM RESOURCE

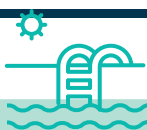
### Food As Medicine Jumpstart:

Complimentary guide to transition patients to a minimally processed, plant-based eating pattern. Includes the dietary spectrum, an example of a whole food, plant-based plate, grocery shopping guide, recipes, and meal planning template. Available in both English and Spanish on [connect.lifestylemedicine.org](https://connect.lifestylemedicine.org)



# Nutrition

## DIP YOUR TOE IN



Use a soy milk to make a fruit smoothie. Include nut butter, spinach, or chia seeds to add more plants.

Get some extra fiber by adding a serving of brown rice, quinoa, or sweet potatoes to your lunch or dinner. Making a large batch will make putting together meals simple throughout the week.

Reduce your animal protein serving size to a small handful and bulk up your fruits and vegetables for main meals.

Try snacking on crunchy carrot sticks, an apple, or sweet pineapple chunks.

## WADE INTO THE SHALLOW END



Make every day as simple as 1, 2, 3 by adding 1 plant food at breakfast or for a snack, 2 at lunch, and 3 at dinner.

Choose one day per week where you stick to all plant-based foods. Consider buying a large container of old-fashioned oats to make a quick breakfast. Add some oats to a can of black beans for a veggie burger. A large bag of carrots can be used as a snack, roasted on a sheet pan, or blended into a soup to create new flavors and textures.

## DIVE ALL THE WAY IN



Look for vegetarian options when you eat out at restaurants to try new flavors and foods before you buy.

Engage your family or a friend in a commitment to starting a plant-based lifestyle. Create an accountability plan, such as committing to contribute to holidays and events with a plant-based item for everyone to share.

Take a deep dive into your pantry and freezer. Get rid of all highly processed foods and animal products (meat, eggs, dairy-products, fish, poultry).

Commit to a plant-based meal plan for 2 weeks. Create your own or search through some plant-based resources on food blogs or Pinterest – many come with recipes and grocery lists to get you started. Keep a daily journal on how you feel during these two weeks. Note if your digestion, focus, energy, or sleep are changed.

If you don't want to waste these items, plan one meal per week to use them up and commit to not purchasing more.

For individuals needing more flexible guidance, consider using the **American Institute of Cancer Research's New American Plate Model**, which recommends filling at least 2/3 of your plate with plant foods and up to 1/3 of your plate or daily meals with animal products, such as poultry, eggs, beef, dairy or fish.

# Physical Activity & Exercise

## Moving your body contributes to both risk reduction and survivorship outcomes of cancer.<sup>11</sup>

It is recommended to reduce or avoid long periods of inactivity (such as more than a few hours at a time unless you are sleeping) and striving to have regular physical activity bouts in your day.

In addition, meeting the physical activity guidelines for adults improves quality of life and survival for many individuals after diagnosis.<sup>12</sup>

Exercise, defined as planned, purposeful movement, can target a combination of aerobic, strength, core, mobility, balance, or recovery activities. Each of these have benefits to physical and emotional well-being. They can be done individually such as taking a walk or lifting weights, but many exercises target more than one body system.

In addition to planned exercise, there are also many benefits to staying active. Any movement of the body falls in the physical activity category. This could be everything from activities of daily living, walking the dog, taking a flight of stairs instead of the elevator, or parking your car further from the door.

Exercise has an important and well researched impact on cancer. Engaging in regular, small bouts of exercise:

- Lowers hormones, such as estrogen, and manages cancer causing growth factors<sup>13</sup>
- Prevents high blood levels of insulin, which has been linked to cancer development and progression especially in breast and colon cancer<sup>13</sup>
- Helps to reduce inflammation and improve the immune system.<sup>14-15</sup>
- Helps to prevent and manage obesity, a risk factor for 13 types of cancer, as well as decreases the risk of cancer recurrence.<sup>16</sup>

## The American College of Sports Medicine exercise guidelines are:

**150 minutes of moderate intensity or 75 minutes of vigorous intensity activity each week + 2x weekly of full body strengthening exercise.**

If you don't know where to start, here are ideas of a weekly sample of how to meet the guidelines as an adult:

### Moderate Intensity

M-W-F : Walk 30 min brisk pace

T-Th : Full body resistance exercises.

8 targeted exercises x 10 reps each for 2-3 rounds.

### Vigorous Intensity

M-W-F: Hilly or stair walk, jogging, or interval stationary bike - 15 min.

T-Th: 15 min of compound strength (multi-joint) exercises.

Ex. Squat to shoulder press 30 sec work - 30 sec recovery x 5 sets. Mimic pattern with other movements by trying to add movements that use at least two major joints.



# Physical Activity & Exercise

## Types of Exercise

**Aerobic exercise:** movement that uses large muscles of the body in a rhythmic manner for a sustained period of time, such as walking or jogging, swimming, biking, chair marching, or climbing stairs.

**Flexibility:** movement that helps to increase the range of motion of a joint. This can include stretching or joint activation exercises, as well as exercise modalities such as yoga or tai chi.

**Strength exercise:** movement that creates resistance or load to your muscles to help them to get stronger and build more skeletal muscle mass. Skeletal muscle mass helps move your body, such as getting up from a chair or carrying groceries, and is also important for your metabolism and joints.

**Balance:** movement that strengthens the muscles that help keep you upright, including your legs and core. These kinds of exercises can improve stability and help prevent falls.



While meeting exercise recommendations is an essential goal to target, it is helpful to help guide an individual where to start.

We recommend using a simple and quick assessment of a 5x chair sit to stand to determine what functional level an individual is. It's a quick snapshot of their ability, built on a well-supported sit-to-stand assessment commonly used to gauge strength and function in adults who live independently. Adopting this simplified, standardized measure allows you to seamlessly integrate a quick evaluation and recommendation into your clinical routine, taking less than a minute of your time. <sup>21</sup>

**Consider using the questions on the following chart, developed by the toolkit authors, as a starting guide.**

# Physical Activity & Exercise

## Sit to Stand Assessment

Can the individual complete the 5x sit to stand?	Unable to complete or needs significant assistance.	Minimal assistance (hands on legs), can be completed slowly.	Simple to complete without assistance or not challenging.
How much exercise should this person start with?	10 minutes total of daily exercise (can be broken up), alternate days with aerobic & strength	Complete 15-minute sessions of regular exercise at moderate intensity. Alternate aerobic with strength.	Meet exercise recommendations weekly, increase to vigorous intensity beginning with one session per week
Supervision Needed?	Ideally refer to Physical Therapy/ Occupational Therapy (PT/OT) for evaluation & recommendations.	Offer PT/OT or exercise professional if an individual has physical limitation, pain with movement or prefers supervised. Encourage self-guided if desired.	No supervision needed unless a deficit is identified. Encourage engagement in resources that fit goals or barriers such as home or community exercise, costs, etc.
Suggested recommendations	Provide chair-based strength recommendations. Include balance as foundation. Encourage walking if energy allows but prioritize resistance and Activities of Daily Living.	Full body resistance training with the addition of core, balance, or mobility workout. Goal to meet moderate intensity recommendations each week.	Encourage full body functional exercise, strive to meet recommendations, and engage in vigorous intensity. Add dedicated core workout and complementary movements, such as yoga.



# Physical Activity & Exercise

## DIP YOUR TOE IN



### Aerobic

- Take a 2-minute walk during a TV or meeting break. If you can't get up to move, do chair marches instead.
- Use the stairs instead of the elevator any chance you can. Add an extra flight of stairs at home in the morning and evening.
- Put on some music and dance for 5 minutes after you eat dinner.

### Strength

- Add 10 sit-to-stands from your bed, or countertop push-ups before or after you brush your teeth.
- Complete 20 calf raises while washing dishes or waiting for your microwave timer to go off.
- While seated, squeeze your buttock muscles for 3 seconds, release and repeat for 12 rounds. Notice your abdominal muscles help out!

### Flexibility

- Complete 10 big arm circles forward and then backwards.
- Sitting in your chair, place your right ankle on top of your opposite lower leg or knee, feel the stretch in your right hip. Hold for one minute, if possible.
- Place both arms on the top of your kitchen counter or back of a chair and step back as you try to press your head downward, through your arms.

### Balance

- Stand on one foot for 30 seconds while working in your kitchen, brushing your teeth, or waiting in line with your shopping cart. Use the counter or cart for support as needed. Don't forget to tighten your abdominal muscles!

# Physical Activity & Exercise

## WADE INTO THE SHALLOW END



### Aerobic

- Engage your family in a yard game or active video game after dinner instead of watching TV.
- Walk for 15 minutes during lunch or a break. If you don't have a consistent schedule, set a calendar reminder for yourself.
- Get a foot bike to pedal during meetings or while you are seated. Mix it up by purchasing one you can use for your upper body as well.

### Strength

- Complete a 10-minute body weight strength workout 3x per week. Make sure you add this to your calendar.
  - 30 seconds of squats - use a countertop or chair for support if needed.
  - 30 seconds countertop push-ups.
  - 30 seconds alternating step backs or reverse lunges.
  - 30 seconds of plank, elevated to the countertop or stable chair if needed.
  - 1-minute rest then repeat exercises again for a total of 2-3 rounds.



### Flexibility

- Start each day with 10-15 minutes of yoga movements. Not sure where to start? Check out YouTube for some simple beginner yoga flow ideas.

### Balance

- Try a standing tandem position where you step one foot back keeping your feet hip width apart. Hold this position for up to 30 seconds using a countertop to make it easier or dropping the back knee down to make more challenging. Switch sides!



# Physical Activity & Exercise

## DIVE ALL THE WAY IN



### Aerobic

- Include 30-minute daily walks in your routine. Try these outside, if possible.
- Commit to achieving 8-10,000 steps per day, tracking these with a health app or a device.

### Strength

- Participate in 15-20 minutes of high-intensity interval training (HIIT) such as body weight movements that include short bouts of intense movement. HIIT does not mean you have to jump, instead try movements that are full body, multi-joint and may require you to move from a standing to sitting.
- Start to increase your repetitions or weight used for one exercise each week by 10%. Track this progress in a notebook or online journal.
- Strive to mix up your strength routine each month by trying new movements or using alternative forms of resistance such as a barbell, kettlebell or different machines.

### Flexibility

Commit to stretching for 5-minutes every morning upon waking up and before bed for the next 30 days.

### Balance

Participate in a Tai Chi or yoga class in person or online.

### Tips for success in decreasing sedentary behaviors and increasing exercise:

1. Each week, pick exercises that you enjoy to include into your routine. Don't worry about meeting the guidelines to start. Work towards this.
2. Sprinkle "dips" of activity throughout your day by moving for one minute at a time.
3. Pre-determine specific times during the day to be intentionally active. Place an appointment on your calendar
4. Find an accountability partner
5. Plan an activity during a time when you are typically inactive, such as a walk or exercise video after dinner.

### ACLM RESOURCE

**Physical Activity 1-pager** (available in Korean and Spanish) [connect.lifestylemedicine.org](https://connect.lifestylemedicine.org)

**Exercise is Medicine: Moving Through Cancer**  
<https://www.exerciseismedicine.org/eim-in-action/moving-through-cancer/>

# Sleep Health

**Sleep makes up a significant portion of our lives;** about one-third of our daily hours are dedicated to this time, to rest and replenish our bodies and minds. Sleep is not just about the time spent with our head on a pillow, but also the real quality and quantity of that time.

Unlike many lifestyle strategies, intention and action do not necessarily help us achieve these goals, so it's essential to consider the suggestions here and the strategies related to the other pillars of lifestyle medicine.

**While sleep health does not have a direct relationship to a cancer diagnosis or survival,** it is still essential for our overall physical and mental health. Poor quality and quantity of sleep impacts overall mortality and increases the risk of cancer in older adults.<sup>18</sup>

Reduced sleep health can impact the restorative processes that our bodies undergo that help maintain optimal physical and mental health. These include optimizing immune cells to help fight infection, reducing our production of cortisol (our stress hormone), and helping to support DNA repair. Damaged DNA can disrupt cellular functions and increase the risk of genetic diseases, cancer, and other chronic health problems.<sup>19</sup>

For people impacted by cancer, sleep health can be associated with both physical and mental health, and can impact how well patients tolerate treatment and long-term side effects. Individuals who have had a cancer diagnosis report more difficulty with sleep than the general population.

Many cancer medications or hormonal changes have a negative impact on sleep. Anxieties such as worry, fear of recurrence, and depression can disrupt regular sleep and make unwinding more challenging. Many cancer survivors also report that they have a challenging time going back to sleep if they wake up during the night. This often occurs when our brains turn on with our to-do lists and worries.

Regardless of the reason, the strategies in this section can help to improve sleep quality and quantity. Seemingly small, consistent interventions can make powerful changes to habits, such as your sleep routine.

**A regular sleep schedule can be a challenge for many adults,** especially those that work in jobs that have non-standard start times, such as early morning, late evening, or overnight schedules. Individuals of lower socioeconomic status make up a disproportionate number of these workers, who are more susceptible to increased risk of chronic health conditions, reduced social connectedness and substance abuse disorder.<sup>20</sup>

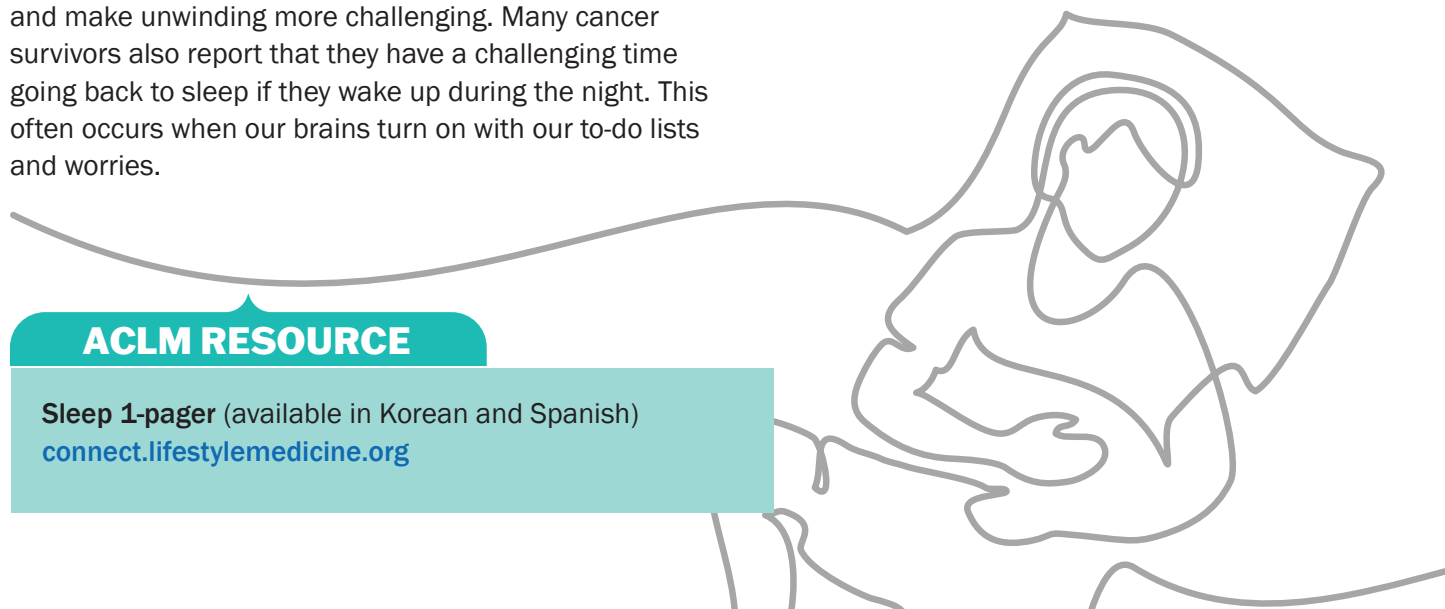
**Sleeping an average of 7-9 hours each night is recommended.**<sup>17</sup>

**Suggested quality measures might include:**

- **Falling asleep within 30 minutes of laying down in bed.**
- **Waking only 1-2 times during the night.**
- **Falling back to sleep within 20 minutes, if awoken.**
- **Getting out of bed within a few minutes of waking up.**
- **Feeling refreshed upon natural waking.**

## ACLM RESOURCE

**Sleep 1-pager** (available in Korean and Spanish)  
[connect.lifestylemedicine.org](https://connect.lifestylemedicine.org)



# Sleep Health

## DIP YOUR TOE IN



Seek out morning light (exposure to sunlight for 10 minutes within 30 minutes of waking)

Set up a dark cool room for sleep using blackout curtains, sleep mask, etc. Create a space only used for sleep or sex. While it may be tempting to use this space to nap, it's ideal to keep this space separate so naps remain short.

Avoid caffeine intake after 2pm.

Drink a glass of water upon waking up to rehydrate what our bodies lose overnight.

## WADE INTO THE SHALLOW END



When in bed, do some deep breathing exercises, use a sound/white noise machine, contemplate things you're grateful for, do a body scan meditation, etc.

Avoid all electronics in bed and 30 minutes to one hour before bedtime including phones, computers, TVs. Reading on a kindle or iPad should be done in dark mode with the screen turned to low. Remove phone from the bedroom or turn off notifications in vibration and light if the phone is needed near the bed. Many phones have a sleep mode that can quickly be turned on or off.

Consider aromatherapy and/or a warm shower or bath before bed. Try this earlier in the night before you get too tired and sleepy.

Create a wind down routine. Use strategies such as those found in the stress management section, but also look at your evening routine such as preparing your coffee maker, selecting clothes for the next day, brushing your teeth, or washing your face. These create signals to your brain that it will be time to sleep soon.

## DIVE ALL THE WAY IN



Reduce water and food intake in the evening. Being too full slows down digestion and causes more awakening during the night.

Strive to create a consistent schedule for when to go to bed and when to wake up and/or nap every day including weekends when possible. Use alarms or reminders to go to bed and wake up for these times.

Create a ritual to do whenever you're having trouble falling or staying asleep.

- Lengthen the breaths (inhale for 1, 2, 3 then exhale for 1, 2, 3, 4, 5, 6)
- Hum a mantra or rhythm
- Progressive relaxation from head to toe if the mind wanders (tighten fists then let them relax, etc.)
- Use other gentle techniques to calm the mind.

# Stress Management

**Stress is a normal part of our daily lives.** Not all stress is bad for us; in fact, some stress can be helpful for completing critical tasks or accomplishing challenging goals. On the other hand, prolonged distress or on-going negative stressors are the type of stress that can cause short- and/or long-term immune disruption, anxiety, decreased performance at work, and lead to poor mental and physical health.

How we think about stress and how we react to it makes a difference in how it impacts our self-care and our health. While some medicine or supplements may help to manage stress, there are many things that we can do to help manage stress on our own and improve our overall health.

Research has shown that people who experience chronic stress can have a weakened immune system, which contributes to other health conditions, including cancer, digestive problems, heart disease, and high blood pressure.<sup>21</sup>

**The cycle of chronic stress and worry may be improved with small changes.** Improving our ability to transform stress can strengthen our immune function, increase energy reserves, improve the health of our tissues, and create a supportive environment for healthy aging and risk reduction of cancers.

The strategies in this toolkit are helpful not only for recognizing negative stress responses but also for identifying coping mechanisms and transformative techniques that lead to improved wellbeing.

## The Role of Being in Nature

“Forest Bathing” Concept - Shinrin-yoku (means bathing in forest atmosphere):

A simple practice of being among trees and absorbing the beauty of a natural setting has been shown to have benefits of lowering blood pressure, heart rate, and stress hormones, while boosting the immune system and improving sleep and overall feelings of well-being.

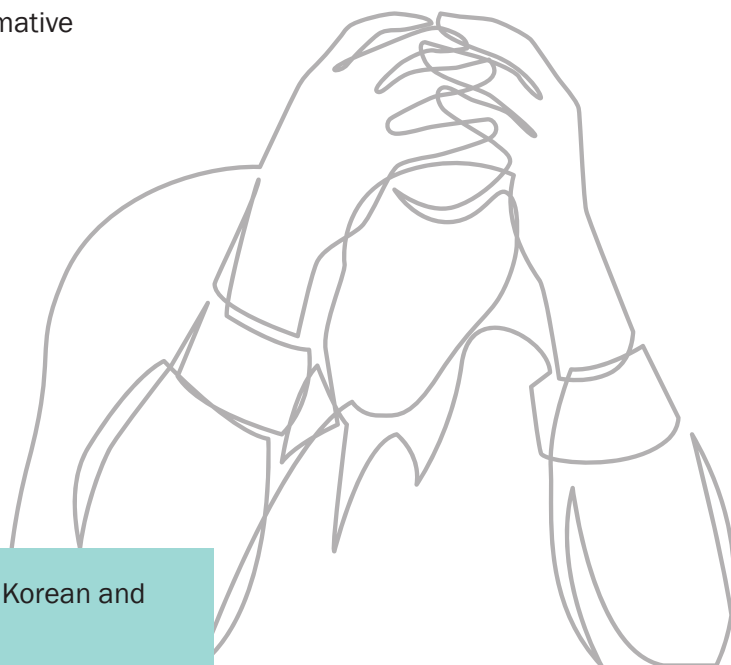
Enjoying time in nature, while doing things like hiking or gardening, will charge up your stores of Vitamin D.

Vitamin D has many important health benefits included immune support and bone health.

A Harvard study showed time in nature results in decreased respiratory and cancer mortality in women with the most greenery around their homes.<sup>22</sup>

## ACLM RESOURCE

**Stress Management 1-pager** (available in Korean and Spanish) [connect.lifestylemedicine.org](https://connect.lifestylemedicine.org)





# Stress Management

## DIP YOUR TOE IN



Eliminate sugary, caffeinated beverages after lunch and replace them with water and a piece of fruit.

Identify stressful feelings followed by an action step. Examples:

- I'm feeling overwhelmed so I'm going to tackle these three things first.
- I'm having a lot of anxiety about my cancer returning, I am going to spend 20 minutes today doing a puzzle that I enjoy.

Set and keep a specific schedule for activities such as personal, family, and work time. Minimize distractions by putting your phone in focus mode, turning it off, or putting it away.

Try a breathing practice for 2-3 minutes each day, either as part of your normal routine such as when you are drinking your cup of coffee, while showering, or even while walking into your workspace. You may try diaphragmatic breathing, the 4-7-8 breathing technique, or square breathing.

## WADE INTO THE SHALLOW END



Add something pleasurable to each day such as taking a bath, watching funny animal videos, gardening, arts and crafts, or listening to music or a podcast for at least 20 minutes.

Complete a Body Scan Meditation: scan your body at each area, starting with your toes, and be aware of how you feel as you move up your legs into your abdomen, then up your torso.

## DIVE ALL THE WAY IN



Expose yourself to sunlight or indoor light within 30 minutes of waking and throughout your day. Stay in the light for a minimum of 10 minutes if possible.

Find a regular exercise activity that is not only something you enjoy but can also shut your brain off from distraction. Following along with a workout video or participating in a class can help you stay in the moment.

Engage in authentic social connections in a space that feels positive and brings you energy. This can include staying in contact with a loved one, joining a hobby group, or volunteering.

Start a daily gratitude practice, ideally by writing your gratitude in a journal or computer document. Alternatively, list three things you are grateful for as you go to sleep each night. Re-read your list out loud from time to time to practice positive self-talk.

# Social Connections

**Having healthy relationships both with yourself and others is important** to both emotional resiliency and mental health.<sup>23</sup> In the current world, technology is accessible at our fingertips, and while the ability to connect has improved, the quality of connections and strength of relationships may not have improved.

Studies show that social isolation contributes negatively to mortality and for cancer survivors, having strong social connections has been shown to improve their overall outlook and reduce fear of recurrence.<sup>24</sup>

In a recent study from the American Cancer Society, Jingxuan Zhao (citation pending) showed people living with cancer and higher reported loneliness have an increased mortality risk.



## DIP YOUR TOE IN

Set time-limits on your phone, especially for social media applications.

In the morning, tell yourself three affirmations related to social connection (e.g., People care about me, I care about others, I can make meaningful connections with people).



## WADE INTO THE SHALLOW END

Have the entire family participate in meal preparation and sit down for at least 2 meals a week.

Reach out to a friend who you have not talked to in a while (e.g., "Hello, I was thinking about you today and wanted you to know that I hope you have a great day!" or "Hi friend, it's been a long time, would you like to grab coffee?").

Look for an in-person or virtual group that fits an area of interest such as a book club, church or support group. Look for areas of interest or new things you want to learn.



## DIVE ALL THE WAY IN

Commit to one social outing per week with family or friends, make sure to add this to your calendar.

Intentionally connect with someone in your community on a daily basis (e.g., Offer a compliment or say hello to someone at work, the store or while out on a walk)

# Avoid Risky Habits

**Knowing the good habits to include in your routine is crucial.** Equally important is understanding the bad habits you should cut down on or avoid altogether.

While we clearly understand the dangers and adverse impacts of tobacco and nicotine products, particularly their link to cancer, other risky habits warrant attention. These encompass the consumption of excessive added sugars<sup>25</sup> especially in beverages, alcohol intake and prolonged periods of sedentary behavior. It's important to acknowledge these practices as harmful and actively work towards avoiding or minimizing them.

One recent study shows a connection between higher sugar intake from sugary drinks and the likelihood of developing cancer. The study revealed that for every 10 grams per day increase in sugars from sugary drinks, there was a significant, 16% relative increase in the risk of developing cancer from all cancer sites.<sup>25</sup>

The incidence of colorectal cancer in younger patients has been an increasing concern, especially with the incidence of later stage diagnoses in patients under the standard screening age of 45 years old. Risky habits and certain risk factors are likely associated with the increasing incidence of these diagnoses, including consumption of sugar sweetened beverages<sup>26</sup> incidence of obesity, environmental exposures, smoking, poor sleep, physical inactivity, gut microbiome, and exposure to carcinogenic compounds.<sup>27</sup>

After tobacco use and excess body weight, alcohol consumption is the third most significant preventable risk factor for cancer. Approximately 6% of all cancers and 4% of all cancer-related deaths in the United States are attributed to alcohol use. Awareness regarding the cancer-causing impact of alcohol remains may be low.

Research from AICR's Continuous Update Project has found that even less than one drink per day – of any kind of alcohol – increases the risk of several common cancers, including breast, head and neck, and

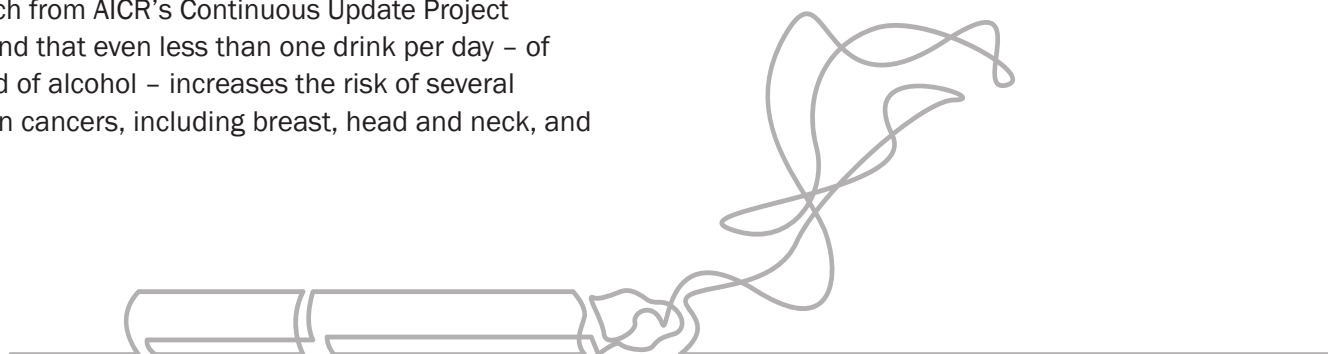
esophageal cancers. This risk applies both in primary prevention as well as reduction of recurrence and survivorship.

**Sedentary behavior is prevalent in the United States,** with approximately two thirds of Americans being physically inactive. The average adult reports over 9 hours of sedentary time each day while they are awake.<sup>28</sup>

## Highlights for Risky Habits

- **Avoid all forms of nicotine including: cigarettes, e-cigs and vaping and smokeless tobacco.**
- **Limit or preferably avoid the use of alcohol.**
- **Minimize added sugars to 25 grams per day for females and 35 grams per day for males.\***
- **Decrease prolonged sedentary time by breaking up long periods of sitting with short bouts of light activity and reducing recreational screen time to no more than 2 hours per day**

*\*per American Heart Association*



# Avoid Risky Habits

## DIP YOUR TOE IN



Reduce or eliminate sugar sweetened beverages including sodas, sweet teas, or coffee drinks. Replace these with sparkling water or unsweetened, flavored teas.

Use a reminder or alarm to add “movement snacking” throughout your day for 30 seconds to 1 minute each hour you are awake.

Reduce your weekly alcohol intake by one drink and replace it with a non-alcoholic option, flavored water, or a smoothie or protein shake.

## WADE INTO THE SHALLOW END



Review food labels for added sugars and reduce or eliminate where possible in foods such as pasta sauce, salad dressing, or flavored yogurts.

Skip alcohol during the week, saving your cocktails or beer for social events only.

Schedule 5-10-minute activity breaks into your day. Put these on a calendar and, if possible, set an alarm.

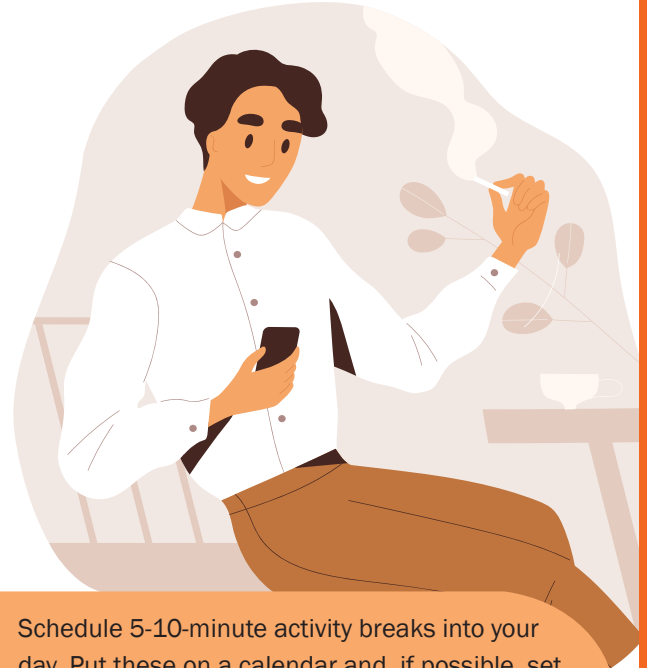
## DIVE ALL THE WAY IN



Track added sugars in your daily intake for one week, strive to consume less than 25-35 grams each day (according to the American Heart Association).

Add one new physical activity or project each week for at least one hour. This could be working in your yard, organizing a closet, or trying a dance class.

Commit to a dry month if you have been consuming alcohol on a regular basis. If you are not a regular consumer, commit to at least six months or one year.





# Movement Snack List

Each day you will want to get 8-10 movement snacks. You can choose 1 move per day or sample from the list!

When you are starting these new habits, you will want to write them into your calendar or plan for the day. Once they become automated, you may not want a written plan but if you find that you are motivated by tasks, write them down and check them off each day!

Try one of these snack ideas or do your own. Start with 10 reps of each movement and add on as desired. Because you can get these done in less than a minute, sticking to 10 reps will make them feel very achievable and doable to fit in.

## Core

- Shoulder blade squeeze
- Arms extended to the side circles forward and back
- Sit up straight – belly button pulled in and hold. Relax and repeat

## Arms

- Seated shoulder press
- Bicep curl
- Countertop push-ups
- Seated triceps extensions – arms over head, allow hands/thumbs to back of neck and extend to straight
- Front arm raises + side arm raises (seated or standing)

## Legs & Glutes

- Standing toe raises - hold onto counter or wall
- Leg Kickbacks – hold onto counter or wall
- Sit to stand
- Wall Sit – hold for count of 10.
- Seated knee lift – alternating

## Full body

- Seated or standing march or jumping jacks
- Forward bend - touch the floor, stand and reach arms fully overhead

## TIPS

- Set a timer or reminder on your phone or calendar
- “Stack” these into habits you already do such as brushing your teeth, using the restroom, bathing, or getting dressed.
- During your day add them into areas such as meals or going from one room to the next.

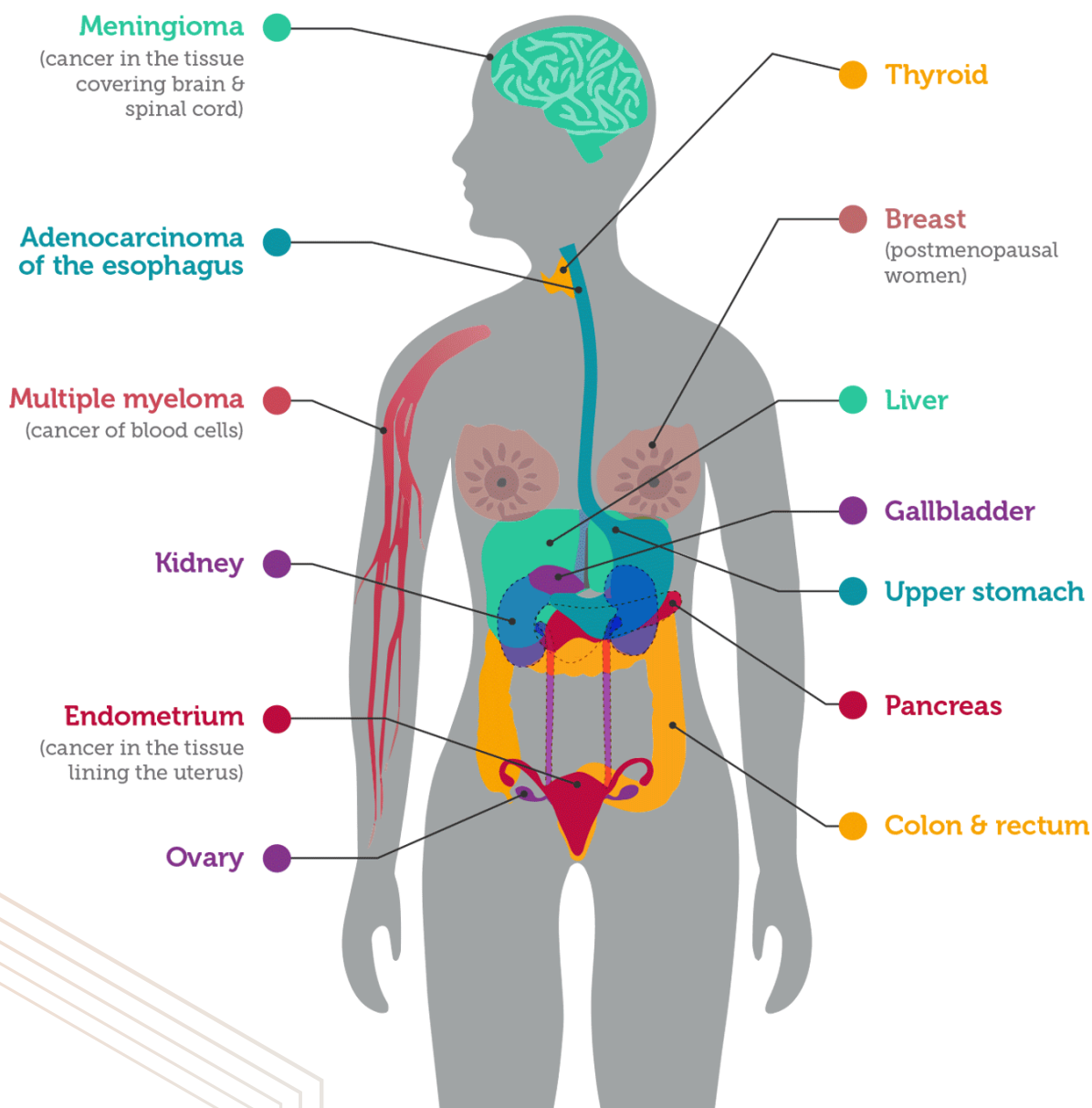


# Metabolic Health, Obesity & Cancer

Having an unhealthy weight and body composition has a well-known link to cancer from increasing risk, recurrence, and mortality in many kinds of cancer. According to the National Cancer Institute, obesity is linked to 13 types of cancer.

NATIONAL CANCER INSTITUTE

## Cancers Associated with Overweight & Obesity



[cancer.gov/obesity-fact-sheet](https://cancer.gov/obesity-fact-sheet)

Adapted from Centers for Disease Control & Prevention

# Metabolic Health, Obesity & Cancer

Beyond obesity, metabolic health is a significant risk factor not only for cancer occurrence, but quantity of life and mortality.

## Other Indications

Additional signs of poor metabolic health are non-alcoholic fatty liver disease, chronic kidney diseases, polycystic ovarian syndrome, and body composition (based on percentage of body fat). Each of these contributes to insulin resistance, where insulin doesn't clear glucose from the blood properly, while fat precipitates in liver and muscles.

## Research

According to a recent study, only 12 percent of American adults are considered metabolically healthy.<sup>30</sup> In addition to increasing chronic disease risk, declining aspects of mental health, such as decreased serotonin function and a higher risk for depression, are concerning.<sup>31</sup> It's important to reiterate that these mental health risk factors are not simply due to weight; it is often more complex than that especially as it relates to a cancer diagnosis.

In one study, researchers found that poor metabolic health increases risk for postmenopausal breast cancer, irrespective of body mass index (BMI).<sup>32</sup> The data suggested that insulin resistance was a much more likely factor, regardless of whether a woman was underweight or of normal weight. In addition, another study showed that a diagnosis of metabolic syndrome was associated with higher risk of endometrial cancer, and that metabolic syndrome appeared to increase risk regardless of whether the woman had obesity.<sup>33</sup>

The evidence in these two studies shows that the metabolic health problems associated with having overweight or obesity can increase risk for endometrial and postmenopausal breast cancers, regardless of whether a woman has overweight or obesity. Additional research in other cancer types is underway to identify if these factors associate to men and other cancer types.

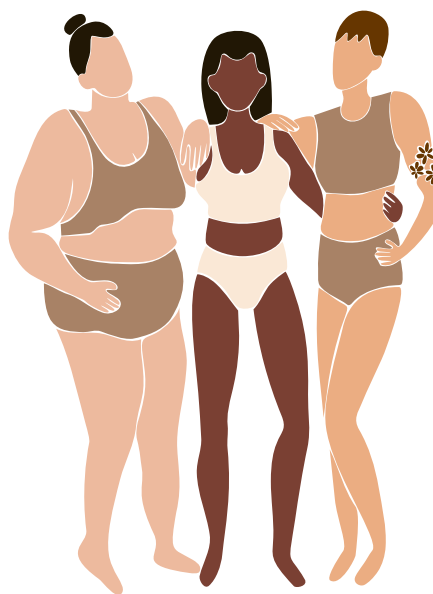
## Metabolic Syndrome

Poor metabolic health, often referred to as metabolic syndrome, is diagnosed when an individual has abnormalities in three of these five risk factors.

- Low levels of HDL
- Elevated blood sugar levels
- High blood pressure
- Excess weight in abdomen - waist circumference
- High triglycerides

## Waist Circumference

While waist circumference is sometimes used as an indicator of body composition, different body sizes and shapes make this measure inaccurate for many adults. A decrease of skeletal muscle mass and increase of body fat appears very different across adults of different heights, races, and body frames. This is why it is important to assess for all behavioral health factors that may influence muscle to fat ratio and waist circumference.



# Metabolic Health, Obesity & Cancer

## Benefits of Metabolic Health

Each of the pillars of lifestyle medicine plays a role in improving both metabolic health and body composition. In addition to disease prevention and treatment, there are many other benefits to being overall metabolically healthy.

- Good metabolic health gives you **energy**, which is used to operate every system in your body, move your muscles, and keep your cells working.
- When your metabolism works well, it also helps keep your **blood sugar levels steady**. This is important because stable blood sugar levels mean the body always has a supply of glucose. When your blood sugar levels go up and down a lot, your energy levels can go on a roller coaster, making you feel tired and often pushing you to seek caffeine or sugar.
- When your metabolic health is good, **insulin works** as it should by letting the glucose inside your cells give you energy. Because insulin is the key that helps glucose enter your cells, if that key is missing or broken, the body has to find a different, less efficient path to fuel all of the cells that need energy.
- Good metabolic health also keeps your **hormones in check**. Hormones are like messengers that tell your body what to do. When the body runs efficiently, these messengers help you have the right amount of energy. But when things are out of balance, the body might feel tired because your body isn't getting the right signals.
- Being metabolically healthy can even **improve sleep**! When things are working smoothly, it's easier to get to sleep and stay asleep, and that's important for feeling energetic during the day.





# Caregivers, Cancer & Lifestyle Medicine

## Caregivers are both personal and professional in nature.

You may be reading this as a healthcare professional, a caregiver, or you yourself may be managing a diagnosis of cancer or another chronic disease.

The work of care giving, compounded with the everyday demands of life, often leads caregivers to have less time or energy for self-care. Caregivers are less likely to follow through on their own medical appointments and often put off regular screenings and other healthy habits.

Caregivers are more likely to have chronic illnesses, such as high cholesterol and high blood pressure, and are at an increased risk of being overweight and engaging in excessive use of alcohol, tobacco, and other unhealthy behaviors, such as sleeping less or using more caffeine.<sup>34</sup>

While most caregivers know the importance of healthy habits, the demands on time, energy, and other practical resources make things more challenging.

While care giving is a role that may always be part of your life, engaging in healthy lifestyle behaviors, even starting with the dip strategies, will not only help you feel better day-to-day but engaging in these habits yourself means that you are more likely to engage in these with your patients, colleagues, and family members.



One of the greatest challenges about lifestyle medicine is being able to understand and, therefore, communicate about not only the importance, but also how to engage in a personal habit or routine of lifestyle medicine. While there are six consistent pillars of lifestyle medicine, these may look different for everyone based on preference, access, or personal circumstances.

One of the reasons that lifestyle is so powerful and engaging is that it can accommodate a very broad population and can cross many accessibility barriers.

## Communication Strategies

- **Define lifestyle medicine.** According to the American College of Lifestyle Medicine, lifestyle medicine is a medical specialty that uses therapeutic lifestyle interventions as a primary modality to treat chronic conditions including, but not limited to, cardiovascular diseases, type 2 diabetes, and obesity. Lifestyle medicine certified clinicians are trained to apply evidence-based, whole-person, prescriptive lifestyle change to treat and, when used intensively, often reverse such conditions. Applying the six pillars of lifestyle medicine—a whole food, plant-predominant eating pattern, physical activity, restorative sleep, stress management, avoidance of risky substances and positive social connections—also provides effective risk reduction for these conditions.
- **Be direct about what we know.** Correlation does not necessarily mean causation. Some of what we know about lifestyle and cancer has strong evidence, other information we don't know.
- **Ask questions.** Engage in listening conversations: repeat their words out loud asking for details from those you are talking to.

# Behavior Change

## Implementation Using Behavior Change & Motivational Interviewing

The first step is to learn more about how ready and interested your patients are to make change. For many healthcare professionals, the limited frequency of patient visits along with limited time, increasing complexity, and often pressing medical concerns leads to a limited amount of time to engage in discussing behavior change.

**Motivational Interviewing (MI)** is defined as a collaborative, person (patient)-centered form of guiding to elicit and strengthen motivation for change. MI focuses on exploring and resolving ambivalence and centers on motivational processes that facilitate change within the person. MI has evolved over the last two decades. Studies find that MI is efficacious in helping patients make behavior change.

MI is about getting your patient to proceed with a change. It begins with allowing them to commit to a change by having them verbally describe their reasons why the change is good for them. They need to have confidence that they can indeed change. It includes you and the patient establishing a plan that will work for them. (Don't forget to document the plan in the chart notes.) It needs to be a realistic plan that you believe the patient can achieve, so when you speak with them next time you can boost their confidence (applaud) in a

genuine way. Lastly, you should support their autonomy as they progress with proper affirmation and recognition, and help them when they slide.

## But how do you actually carry out this conversation?

Here is an acronym to help you remember.

### It is OARS and represents:

- Open-ended questions
- Affirmations
- Reflections
- Summaries

Two common motivational interviewing strategies for behavior change commonly used within a clinical practice are the 5 As (Ask, Advise, Assess, Assist, Arrange) and the 5 Rs (Relevance, Risks, Rewards, Roadblocks, and Repetition)

The 5 As are designed to target patients who are ready to make behavior changes. The 5 Rs are for individuals who do not appear ready but could be motivated to make behavior change based on a conversation.

Note the questions that we included to help you quickly assess and guide a patient as to where they may be at during the conversation.

## 5A

### OPTION — 01

Ask  
Advise  
Assess  
Assist  
Arrange

## 5R

### OPTION — 02

Relevance  
Risks  
Rewards  
Roadblocks  
Repetition

# 5 As Framework

	Question Objective	Simple Questions	Script
Ask	Initiate the conversation by asking one or two questions related to the topic.	<p>Are you aware that many lifestyle habit changes can help you X. (tie into clinical needs including BP, cholesterol, weight etc.)</p> <p>Would you be interested in lifestyle habit change interventions?</p> <p>Do you feel you have the motivation and resources to implement these?</p>	<p>If general feedback is yes or maybe, move forward into advice.</p> <p>If responses to 1 or 2 are NO, move to 5Rs to engage in motivation to encourage behavior change.</p>
Advise	Provide specific, clear, and health literacy appropriate advice.	<p>Did you know that eating plant-based, minimally processed foods as the basis of your nutrition along with a regular exercise program of aerobic and strength training is beneficial for your metabolic health and weight, and can reduce your risk of cancer occurrence?</p> <p>Are you familiar with how quality sleep of 7-9 hours per night can improve your mental health and help your immune system?</p>	<p>Here is an idea of some of the foods that make up a minimally processed, predominantly plant-based eating pattern. As you can see, there are many foods to choose from.</p> <p>I know that you mentioned that you were busy with school activities this time of the year; have you considered exercising at home?</p>
Assess	Verbally determine readiness to change and how significant of a change that the patient is interested in.	<p>Is attaining a healthier weight something you might want to do in the near future?</p> <p>Do you see yourself getting more exercise in the coming months?</p> <p>Do you have a desire to eat more plants?</p>	<p>Have you started to look at your food labels and notice that they included how much added sugar is in foods?</p> <p>Have you tried to have a consistent sleep schedule or nighttime or morning routine?</p>
Assist	Start to provide targeted education, counseling or materials.	<p>Did you know that you should be getting at least 35 grams of fiber per day? Do you know which foods contain fiber? How might you add more fiber to your eating plan?</p> <p>Having a support system to encourage these changes is very beneficial. Do you think your spouse or family will get on board with these changes?</p>	<p>Here is a list of the foods with the highest amounts of fiber. As you can see, they are in many categories so you have a wide variety to choose from.</p> <p>Many of these changes can be things that you do independently. If your kids still want to eat fast food frequently, start by making changes for the meals you eat alone.</p>
Arrange	Make a referral to a specific resource such as part of your health system or the community.	<p>Are you familiar with (highlight a specific system, community or online resource?)</p> <p>Have you tried a meditation app before? Many of my patients have used either X or Y</p>	<p>Here is a flier for the weight loss program that... I'm going to send over a referral so that they can call you.</p> <p>Let's download that now so you can start trying it today!</p>

# 5 Rs Framework

	Question Objective	Simple Questions & Scripting
Relevance	Identify motivational factors that would apply to the patient you are talking to.	<p>Are you familiar with the benefits of adding more plants into your diet or reducing your alcohol intake?</p> <p>Are you aware of how reducing your stress levels can improve your sleep as well as your weight?</p>
Risks	Discuss risks of not engaging in behavior change. Identify consequences of not making change.	Individuals who sleep less than 6 hours per night regularly report not only being more tired and irritable but have additional health risks including cardiovascular disease, high blood pressure, diabetes, and stroke.
Rewards	Discuss the benefits of incorporating pillars of lifestyle medicine.	I know that you do not want to take any medication for your cholesterol. Are you aware that by incorporating nutrition changes, increasing your exercise, and focusing on strong social connections you could improve your good cholesterol?
Roadblocks	Identify barriers to behavior change	How do you feel about making these changes? Can you identify in what ways you feel that you have the tools or people to help you make change? What barriers can you identify that may make this more difficult?
Repetition	Add a brief note to patient encounters, add for each visit and encourage into your workflow for all patients.	I'm going to add a note to our visit today and let's talk about this again when I see you next time, how does that sound?

References for this Lifestyle Medicine Cancer Toolkit may be viewed at:

[lifestylemedicine.org/references/cancer-toolkit](https://lifestylemedicine.org/references/cancer-toolkit)



# Conclusion

**Lifestyle medicine has been proven to be a powerful ally in the fight against cancer, not only for risk reduction but also for survivorship.** This toolkit presents a comprehensive set of strategies to address the needs of individuals impacted by cancer, whether they are caregivers, family members, or cancer survivors themselves. Despite challenges such as time constraints, financial burdens, and limited access to resources, these evidence-based approaches can bring our patients closer to health span along with lifespan.

Following these recommendations has been shown to reduce an individual's risk of cancer. In a recent paper from the WCRF/AICR, following each of the dietary recommendations significantly postponed the incidence of cancer at any site by 1.6 years.<sup>35</sup>

By adopting healthy lifestyle habits like making plant-based, minimally processed foods the basis of nutrition, performing regular physical activity and exercise, prioritizing quality sleep, managing stress effectively, fostering positive social connections, steering clear of risky substances and habits, and maintaining a healthy weight and body composition, we can significantly reduce the risk of developing various types of cancer and decrease the likelihood of recurrence.

**It's important to recognize that the body and mind possess an inherent capacity and desire to be healthy.**

With the right tools and knowledge provided by this toolkit, we can empower ourselves and others to proactively improve quality of life and overall outcomes. By bridging the gaps in education and implementing these valuable resources, we strive to create a meaningful impact on the well-being and longevity of those affected by cancer, offering a brighter and healthier future for all.









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