



Incorporating Physical Activity into Cancer Care Resource Materials

1. PAR-Q & You Questionnaire
2. Godin Leisure-Time Exercise Questionnaire
3. The Timed Up and Go (TUG) Test
4. Physical Activity Risk Stratification
5. Physical Activity Recommendation by Cancer Control Time Point and Additional Considerations
6. Types of Physical Activity by Intensity
7. National Resources for Individualized Physical Activity Plans for Cancer Survivors
8. Physical Activity Recommendation Education Form
9. General Exercise Guidelines for Cancer Survivors

PAR-Q & YOU

(A Questionnaire for People Aged 15 to 69)

Regular physical activity is fun and healthy, and increasingly more people are starting to become more active every day. Being more active is very safe for most people. However, some people should check with their doctor before they start becoming much more physically active.

If you are planning to become much more physically active than you are now, start by answering the seven questions in the box below. If you are between the ages of 15 and 69, the PAR-Q will tell you if you should check with your doctor before you start. If you are over 69 years of age, and you are not used to being very active, check with your doctor.

Common sense is your best guide when you answer these questions. Please read the questions carefully and answer each one honestly: check YES or NO.

YES	NO	
<input type="checkbox"/>	<input type="checkbox"/>	1. Has your doctor ever said that you have a heart condition <u>and</u> that you should only do physical activity recommended by a doctor?
<input type="checkbox"/>	<input type="checkbox"/>	2. Do you feel pain in your chest when you do physical activity?
<input type="checkbox"/>	<input type="checkbox"/>	3. In the past month, have you had chest pain when you were not doing physical activity?
<input type="checkbox"/>	<input type="checkbox"/>	4. Do you lose your balance because of dizziness or do you ever lose consciousness?
<input type="checkbox"/>	<input type="checkbox"/>	5. Do you have a bone or joint problem (for example, back, knee or hip) that could be made worse by a change in your physical activity?
<input type="checkbox"/>	<input type="checkbox"/>	6. Is your doctor currently prescribing drugs (for example, water pills) for your blood pressure or heart condition?
<input type="checkbox"/>	<input type="checkbox"/>	7. Do you know of <u>any other reason</u> why you should not do physical activity?

If
you
answered

YES to one or more questions

Talk with your doctor by phone or in person BEFORE you start becoming much more physically active or BEFORE you have a fitness appraisal. Tell your doctor about the PAR-Q and which questions you answered YES.

- You may be able to do any activity you want — as long as you start slowly and build up gradually. Or, you may need to restrict your activities to those which are safe for you. Talk with your doctor about the kinds of activities you wish to participate in and follow his/her advice.
- Find out which community programs are safe and helpful for you.

NO to all questions

If you answered NO honestly to all PAR-Q questions, you can be reasonably sure that you can:

- start becoming much more physically active — begin slowly and build up gradually. This is the safest and easiest way to go.
- take part in a fitness appraisal — this is an excellent way to determine your basic fitness so that you can plan the best way for you to live actively. It is also highly recommended that you have your blood pressure evaluated. If your reading is over 144/94, talk with your doctor before you start becoming much more physically active.

DELAY BECOMING MUCH MORE ACTIVE:

- if you are not feeling well because of a temporary illness such as a cold or a fever — wait until you feel better; or
- if you are or may be pregnant — talk to your doctor before you start becoming more active.

PLEASE NOTE: If your health changes so that you then answer YES to any of the above questions, tell your fitness or health professional. Ask whether you should change your physical activity plan.

Informed Use of the PAR-Q: The Canadian Society for Exercise Physiology, Health Canada, and their agents assume no liability for persons who undertake physical activity, and if in doubt after completing this questionnaire, consult your doctor prior to physical activity.

No changes permitted. You are encouraged to photocopy the PAR-Q but only if you use the entire form.

NOTE: If the PAR-Q is being given to a person before he or she participates in a physical activity program or a fitness appraisal, this section may be used for legal or administrative purposes.

"I have read, understood and completed this questionnaire. Any questions I had were answered to my full satisfaction."

NAME _____

SIGNATURE _____

DATE _____

SIGNATURE OF PARENT _____

WITNESS _____

or GUARDIAN (for participants under the age of majority)

Note: This physical activity clearance is valid for a maximum of 12 months from the date it is completed and becomes invalid if your condition changes so that you would answer YES to any of the seven questions.

Godin Leisure-Time Exercise Questionnaire

During a typical 7-Day period (a week), how many times on the average do you do the following kinds of exercise for **more than 15 minutes** during your free time (write on each line the appropriate number).

Weekly leisure activity score = (9 × Strenuous) + (5 × Moderate) + (3 × Light)

	Times per week		Totals
a) STRENUOUS EXERCISE (HEART BEATS RAPIDLY) (e.g., running, jogging, hockey, football, soccer, squash, basketball, cross country skiing, judo, roller skating, vigorous swimming, vigorous long distance bicycling)		X9	
b) MODERATE EXERCISE (NOT EXHAUSTING) (e.g., fast walking, baseball, tennis, easy bicycling, volleyball, badminton, easy swimming, alpine skiing, popular and folk dancing)		X5	
c) MILD/LIGHT EXERCISE (MINIMAL EFFORT) (e.g., yoga, archery, fishing from river bank, bowling, horseshoes, golf, snow-mobiling, easy walking)		X3	
WEEKLY LEISURE-TIME ACTIVITY SCORE			

EXAMPLE

Strenuous = 3 times/wk

Moderate = 6 times/wk

Light = 14 times/wk

Total leisure activity score = (9 × 3) + (5 × 6) + (3 × 14) = 27 + 30 + 42 = 99

Godin Scale Score	Interpretation
24 units or more	Active
14 – 23 units	Moderately Active
Less than 14 units	Insufficiently Active/Sedentary

Adapted from: Godin, G. (2011). The Godin-Shephard leisure-time physical activity questionnaire. Health & Fitness Journal of Canada, 4(1), 18-22.



Patient: _____ Date: _____ Time: _____ AM/PM

The Timed Up and Go (TUG) Test

Purpose: To assess mobility

Equipment: A stopwatch

Directions: Patients wear their regular footwear and can use a walking aid if needed. Begin by having the patient sit back in a standard arm chair and identify a line 3 meters or 10 feet away on the floor.

Instructions to the patient:

When I say **"Go,"** I want you to:

1. Stand up from the chair
2. Walk to the line on the floor at your normal pace
3. Turn
4. Walk back to the chair at your normal pace
5. Sit down again

On the word **"Go"** begin timing.

Stop timing after patient has sat back down and record.

Time: _____ **seconds**

An older adult who takes ≥ 12 seconds to complete the TUG is at high risk for falling.

Observe the patient's postural stability, gait, stride length, and sway.

Circle all that apply: Slow tentative pace Loss of balance
Short strides Little or no arm swing Steadying self on walls
Shuffling En bloc turning Not using assistive device properly

Notes:

For relevant articles, go to: www.cdc.gov/injury/STEADI



Centers for Disease
Control and Prevention
National Center for Injury
Prevention and Control

STEADI Stopping Elderly
Accidents, Deaths & Injuries



Physical Activity Risk Stratification

Degree of risk for physical activity-induced adverse events in cancer survivors is based on specific health issues. Patients with moderate or high risk for physical activity-induced adverse events should receive medical clearance and referral to trained personnel for a supervised physical activity program.

Risk Level	Risk Factors
Low risk	<ul style="list-style-type: none"> • Early-stage breast cancer survivors • High baseline level of physical activity • No significant co-morbidities
Moderate risk	<ul style="list-style-type: none"> • Multiple myeloma lytic lesions • Bone metastases • Osteoporosis/ osteopenia • Arthritis • Musculoskeletal issues • Peripheral neuropathy • Lymphedema
High risk	<ul style="list-style-type: none"> • History of lung or major abdominal surgery • Ostomy • Cardiopulmonary comorbidities • Ataxia • Severe nutritional deficiencies • Morbid obesity • Extreme fatigue not proportional to recent activity

Physical Activity Recommendation by Cancer Control Time Point

Cancer Control Time Point	Godin Baseline Activity Level	Physical Activity Recommendation
Disease prevention, prevention and detection or Post-treatment recovery	Moderately or vigorously active	<p>Current Adult Recommendations:</p> <ul style="list-style-type: none"> At least 150 minutes a week of moderate-intensity activity or 75 minutes a week of vigorous-intensity aerobic physical activity Muscle-strengthening activities of moderate or high intensity involving all major muscle groups on two or more days a week
	Sedentary	<p>Activity intensity: Light</p> <ul style="list-style-type: none"> Frequency: 2–3 days/week, aerobic and resistance exercises Duration: 5 – 10 minute episodes Goal: 20 – 30 minutes of light exercise on most days
During treatment	Moderately or vigorously active; sedentary or symptomatic	<p>Activity intensity: Light</p> <ul style="list-style-type: none"> Frequency: Start slowly during first weeks of treatment, 1–3 days per week. Adapt as needed to treatment response and side effects. Duration: 5–10 minute episodes. Fit individuals may do more than one episode per day while monitoring fatigue level and hydration. Avoid public gyms or work out sessions if neutropenic, and maintain only light exercise regimen. Goal: As tolerated, must be closely monitored and adjusted. For any progression other than light activity refer to Exercise Specialist

Additional Considerations	Cautions
Implanted VAD	<ul style="list-style-type: none"> Avoid pools and open water Avoid resistance exercise in that extremity or muscle group, contact sports, or ball sports
Lymphedema	<ul style="list-style-type: none"> Use a compression garment when exercising Start resistance training very slowly Evaluate limb response Utilize an experienced exercise specialist
Ostomy	<ul style="list-style-type: none"> Same as for implanted VAD Empty bag before exercising
Neuropathy	<ul style="list-style-type: none"> Consider balance issues Aerobic exercise might be more comfortable on a bike or in water
Osteoporosis or metastatic bone disease	<ul style="list-style-type: none"> Monitor fracture risk before initiation Consider new onset of pain an ominous sign indicating need for reevaluation

Types of Physical Activity by Intensity

Type of Physical Activity	Examples
<p>Light</p> <ul style="list-style-type: none"> • No change in breathing pattern • RPE = 1 to about 3 	<ul style="list-style-type: none"> • Slow walking • Slow bike riding • Light housework (e.g., dusting, light sweeping, dish washing) • Bowling • Light gardening • Very easy resistance exercises using assistive machines, easy bands, or body weight only; able to do >15 repetitions easily • Stretching exercise • Gentle or chair yoga
<p>Moderate Exercise</p> <ul style="list-style-type: none"> • Slight increase in breathing, can still talk easily • RPE = 3 to about 5 	<ul style="list-style-type: none"> • Brisk walking • Bike riding more rapidly or with some hills • Ball sports such as volleyball, softball, or tennis • Water aerobics • Standard Yoga • General gardening • Ballroom dancing • Resistance training with 10–12 repetitions per set
<p>Vigorous Exercise</p> <ul style="list-style-type: none"> • Can say some words, but hard to talk • RPE = around 5 to about 7 	<ul style="list-style-type: none"> • Running, jogging, race walking • Biking faster than 10 miles/hour • Dancing (aerobic or faster than ballroom) • Hiking • Running Ball Sports such as soccer or basketball • Stair climbing • Resistance exercise with more than 10–12 repetitions per set



National Resources for Individualized Physical Activity Plans for Cancer Survivors

LIVESTRONG at the YMCA

<http://www.livestrong.org/what-we-do/our-actions/programs-partnerships/livestrong-at-the-ymca/>

This is a 12-week, small group program designed for adult cancer survivors

Survivorship Training and Rehab (STAR Program®)

<http://www.oncologyrehabpartners.com/star-certifications/>

The STAR Program® Certification provides hospitals, cancer centers, and group practices with the training, protocols, and other tools needed to deliver evidence-based, best practice, cancer rehabilitation services.

American College of Sports Medicine

ProFinder® http://members.acsm.org/source/custom/Online_locator/OnlineLocator.cfm

Select "ACSM/ACS Certified Cancer Exercise Trainer" in the Certification/Registry Level drop down box to find a trainer near you.

Physical Activity Recommendation

Patient name:

Age:

Gender:

Cancer diagnosis:

Assessment	
Baseline patient physical activity level	<input type="checkbox"/> No physical activity beyond Activities of Daily Living (ADL) <input type="checkbox"/> Less than 1 time per week <input type="checkbox"/> 1-2 times per week <input type="checkbox"/> 3-4 times per week <input type="checkbox"/> 5 or more times per week
Reason(s) for medical clearance before physical activity	<input type="checkbox"/> None <input type="checkbox"/> Cardiac disease or toxicities <input type="checkbox"/> Fracture risk from bone metastases, hormonal therapies or density changes <input type="checkbox"/> Limited range of motion <input type="checkbox"/> Lymphedema <input type="checkbox"/> Musculoskeletal problems <input type="checkbox"/> Obesity <input type="checkbox"/> Peripheral neuropathy <p><i>NOTE: If the patient has any of these issues, they must receive medical clearance before beginning physical activity.</i></p>
Physical activity goal (include type, frequency, length of time)	
Kind(s) of physical activity recommended	<input type="checkbox"/> Light aerobic <input type="checkbox"/> Moderate aerobic <input type="checkbox"/> Vigorous aerobic <input type="checkbox"/> Yoga <input type="checkbox"/> Resistance training <input type="checkbox"/> Stretching exercises
Patient commitment to physical activity recommendation	<input type="checkbox"/> Does not currently want to commit to the recommended physical activity <input type="checkbox"/> Will consider attempting the recommended physical activity <input type="checkbox"/> I will definitely attempt the recommended physical activity

Reasons to stop physical activity and contact the healthcare team:

- Dizziness
- Shortness of breath
- Chest pain
- Development of new or an increase in usual pain
- New or increased swelling in limb



General Exercise Guidelines for Cancer Survivors



This handout provides cancer survivors with general guidelines for physical activity during and after cancer treatment.
© 2011 C.M. Jankowski & E.E. Matthews

Why should I exercise? Exercise may help you to

- feel better
- lift your mood and ease some worries
- sleep better
- return to enjoying everyday activities and interests sooner
- improve your physical health
- tolerate cancer treatments better
- improve overall quality of life

Is it safe?

YES! Yes!

Studies show that moderate exercise (exercise that raises your heart rate, makes you break a sweat, but not so hard that you cannot talk) is generally safe for people with cancer. *Start slow but try to go!*

How should I exercise?

Try a step-by-step approach. Think about the activities you like to do and that fit into your day.

Step 1: Pick an exercise

- Ask yourself, what kind of exercise do I enjoy, or would be willing to do?
- What kind of exercise fits into my day?

For example: “I like to walk and could do that around my neighborhood in the evening.”

Step 2: Set a short-term goal

“This week, I will walk for 10 minutes on 3 days.”

Step 3: Set a long-term goal

“Six months from now, I want to be able to take a brisk walk for 20 min, 5 days of the week.”



TIP: Consider using a pedometer to count your steps and write your daily step count on a calendar.

What if I don't feel like I can exercise on some days?

That's OK!

- ✓ Adjust your daily exercise routine
- ✓ Stay as physically active as you can
- ✓ Return to your short-term goal as soon as you are able
- ✓ Stay focused on your long-term goal

“I have chemotherapy on Monday, so I will walk for 10 min on Sunday, rest for 3 days, and try my walk again on Thursday. I will try to walk 3 times the following week”.

“I know I'm going to have good and not-so-good days during treatment but I'll do what I can to reach my six-month goal.”

TIP: If you have symptoms that concern you, consult with your health care provider.



What's a good long-term exercise goal?

The basic exercise recommendations for all adults in the U.S. include doing one of these:

- At least 150 minutes of reasonable aerobic activity/week *and* muscle-strengthening activities on 2 or more days/week, **or**
- 75 minutes of vigorous-intensity aerobic activity a week *and* muscle-strengthening activities on 2 or more days/week

TIP: You can add up exercise time in short periods throughout the day. Walking for 10 minutes morning, noon, and evening equals 30 min of walking.



For more information, see the Centers for Disease Control website
www.cdc.gov/physicalactivity

Physical Activity Log Sheet (make additional copies):

Name:

My physical activity goal is:

Tracking your weekly physical activity

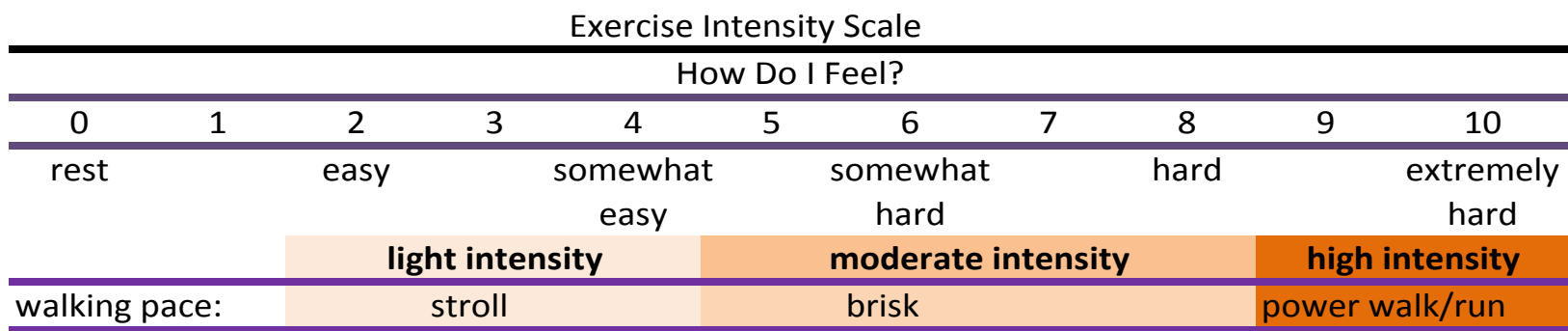
- Steps: the number of steps taken if using a pedometer (step counter)
- Physical activity: record activity and time spent moving the body for at least 10 minutes at a time
- Intensity: on a scale of 1 to 10 below, how hard did you feel you were exercising?
- Before exercise: how did I feel before exercising today?
- After exercise: how did I feel after exercising today?

DATE	Steps	Physical activity & time (min)	Intensity	Before Exercise	After Exercise
1-Jun	2000	walked 5 min in AM and PM	4-5	sluggish in AM, better in PM	better in AM, the same in PM

Did you meet your goal(s)? Yes, I met my goal(s) this week. Not yet. I'm still working towards my goal(s).

Is it time to change my physical activity goal(s)?
 Not yet; keep this plan and goal(s) for another week
 Yes, I am ready to change my goal(s)

My new physical activity goal(s)



PAR-Q & YOU

(A Questionnaire for People Aged 15 to 69)

Regular physical activity is fun and healthy, and increasingly more people are starting to become more active every day. Being more active is very safe for most people. However, some people should check with their doctor before they start becoming much more physically active.

If you are planning to become much more physically active than you are now, start by answering the seven questions in the box below. If you are between the ages of 15 and 69, the PAR-Q will tell you if you should check with your doctor before you start. If you are over 69 years of age, and you are not used to being very active, check with your doctor.

Common sense is your best guide when you answer these questions. Please read the questions carefully and answer each one honestly: check YES or NO.

YES	NO	
<input type="checkbox"/>	<input type="checkbox"/>	1. Has your doctor ever said that you have a heart condition <u>and</u> that you should only do physical activity recommended by a doctor?
<input type="checkbox"/>	<input type="checkbox"/>	2. Do you feel pain in your chest when you do physical activity?
<input type="checkbox"/>	<input type="checkbox"/>	3. In the past month, have you had chest pain when you were not doing physical activity?
<input type="checkbox"/>	<input type="checkbox"/>	4. Do you lose your balance because of dizziness or do you ever lose consciousness?
<input type="checkbox"/>	<input type="checkbox"/>	5. Do you have a bone or joint problem (for example, back, knee or hip) that could be made worse by a change in your physical activity?
<input type="checkbox"/>	<input type="checkbox"/>	6. Is your doctor currently prescribing drugs (for example, water pills) for your blood pressure or heart condition?
<input type="checkbox"/>	<input type="checkbox"/>	7. Do you know of <u>any other reason</u> why you should not do physical activity?

If
you
answered

YES to one or more questions

Talk with your doctor by phone or in person BEFORE you start becoming much more physically active or BEFORE you have a fitness appraisal. Tell your doctor about the PAR-Q and which questions you answered YES.

- You may be able to do any activity you want — as long as you start slowly and build up gradually. Or, you may need to restrict your activities to those which are safe for you. Talk with your doctor about the kinds of activities you wish to participate in and follow his/her advice.
- Find out which community programs are safe and helpful for you.

NO to all questions

If you answered NO honestly to all PAR-Q questions, you can be reasonably sure that you can:

- start becoming much more physically active — begin slowly and build up gradually. This is the safest and easiest way to go.
- take part in a fitness appraisal — this is an excellent way to determine your basic fitness so that you can plan the best way for you to live actively. It is also highly recommended that you have your blood pressure evaluated. If your reading is over 144/94, talk with your doctor before you start becoming much more physically active.

DELAY BECOMING MUCH MORE ACTIVE:

- if you are not feeling well because of a temporary illness such as a cold or a fever — wait until you feel better; or
- if you are or may be pregnant — talk to your doctor before you start becoming more active.

PLEASE NOTE: If your health changes so that you then answer YES to any of the above questions, tell your fitness or health professional. Ask whether you should change your physical activity plan.

Informed Use of the PAR-Q: The Canadian Society for Exercise Physiology, Health Canada, and their agents assume no liability for persons who undertake physical activity, and if in doubt after completing this questionnaire, consult your doctor prior to physical activity.

No changes permitted. You are encouraged to photocopy the PAR-Q but only if you use the entire form.

NOTE: If the PAR-Q is being given to a person before he or she participates in a physical activity program or a fitness appraisal, this section may be used for legal or administrative purposes.

"I have read, understood and completed this questionnaire. Any questions I had were answered to my full satisfaction."

NAME _____

SIGNATURE _____

DATE _____

SIGNATURE OF PARENT _____

WITNESS _____

or GUARDIAN (for participants under the age of majority)

Note: This physical activity clearance is valid for a maximum of 12 months from the date it is completed and becomes invalid if your condition changes so that you would answer YES to any of the seven questions.

Godin Leisure-Time Exercise Questionnaire

During a typical 7-Day period (a week), how many times on the average do you do the following kinds of exercise for **more than 15 minutes** during your free time (write on each line the appropriate number).

Weekly leisure activity score = (9 × Strenuous) + (5 × Moderate) + (3 × Light)

	Times per week		Totals
a) STRENUOUS EXERCISE (HEART BEATS RAPIDLY) (e.g., running, jogging, hockey, football, soccer, squash, basketball, cross country skiing, judo, roller skating, vigorous swimming, vigorous long distance bicycling)		X9	
b) MODERATE EXERCISE (NOT EXHAUSTING) (e.g., fast walking, baseball, tennis, easy bicycling, volleyball, badminton, easy swimming, alpine skiing, popular and folk dancing)		X5	
c) MILD/LIGHT EXERCISE (MINIMAL EFFORT) (e.g., yoga, archery, fishing from river bank, bowling, horseshoes, golf, snow-mobiling, easy walking)		X3	
WEEKLY LEISURE-TIME ACTIVITY SCORE			

EXAMPLE

Strenuous = 3 times/wk

Moderate = 6 times/wk

Light = 14 times/wk

Total leisure activity score = (9 × 3) + (5 × 6) + (3 × 14) = 27 + 30 + 42 = 99

Godin Scale Score	Interpretation
24 units or more	Active
14 – 23 units	Moderately Active
Less than 14 units	Insufficiently Active/Sedentary

Adapted from: Godin, G. (2011). *The Godin-Shephard leisure-time physical activity questionnaire*. *Health & Fitness Journal of Canada*, 4(1), 18-22.



Patient: _____ Date: _____ Time: _____ AM/PM

The Timed Up and Go (TUG) Test

Purpose: To assess mobility

Equipment: A stopwatch

Directions: Patients wear their regular footwear and can use a walking aid if needed. Begin by having the patient sit back in a standard arm chair and identify a line 3 meters or 10 feet away on the floor.

Instructions to the patient:

When I say **"Go,"** I want you to:

1. Stand up from the chair
2. Walk to the line on the floor at your normal pace
3. Turn
4. Walk back to the chair at your normal pace
5. Sit down again

On the word **"Go"** begin timing.

Stop timing after patient has sat back down and record.

Time: _____ **seconds**

An older adult who takes ≥ 12 seconds to complete the TUG is at high risk for falling.

Observe the patient's postural stability, gait, stride length, and sway.

Circle all that apply: Slow tentative pace Loss of balance
Short strides Little or no arm swing Steadying self on walls
Shuffling En bloc turning Not using assistive device properly

Notes:

For relevant articles, go to: www.cdc.gov/injury/STEADI



Centers for Disease
Control and Prevention
National Center for Injury
Prevention and Control

STEADI Stopping Elderly
Accidents, Deaths & Injuries



Physical Activity Risk Stratification

Degree of risk for physical activity-induced adverse events in cancer survivors is based on specific health issues. Patients with moderate or high risk for physical activity-induced adverse events should receive medical clearance and referral to trained personnel for a supervised physical activity program.

Risk Level	Risk Factors
Low risk	<ul style="list-style-type: none"> • Early-stage breast cancer survivors • High baseline level of physical activity • No significant co-morbidities
Moderate risk	<ul style="list-style-type: none"> • Multiple myeloma lytic lesions • Bone metastases • Osteoporosis/ osteopenia • Arthritis • Musculoskeletal issues • Peripheral neuropathy • Lymphedema
High risk	<ul style="list-style-type: none"> • History of lung or major abdominal surgery • Ostomy • Cardiopulmonary comorbidities • Ataxia • Severe nutritional deficiencies • Morbid obesity • Extreme fatigue not proportional to recent activity

Physical Activity Recommendation by Cancer Control Time Point

Cancer Control Time Point	Godin Baseline Activity Level	Physical Activity Recommendation
Disease prevention, prevention and detection or Post-treatment recovery	Moderately or vigorously active	<p>Current Adult Recommendations:</p> <ul style="list-style-type: none"> At least 150 minutes a week of moderate-intensity activity or 75 minutes a week of vigorous-intensity aerobic physical activity Muscle-strengthening activities of moderate or high intensity involving all major muscle groups on two or more days a week
	Sedentary	<p>Activity intensity: Light</p> <ul style="list-style-type: none"> Frequency: 2–3 days/week, aerobic and resistance exercises Duration: 5 – 10 minute episodes Goal: 20 – 30 minutes of light exercise on most days
During treatment	Moderately or vigorously active; sedentary or symptomatic	<p>Activity intensity: Light</p> <ul style="list-style-type: none"> Frequency: Start slowly during first weeks of treatment, 1–3 days per week. Adapt as needed to treatment response and side effects. Duration: 5–10 minute episodes. Fit individuals may do more than one episode per day while monitoring fatigue level and hydration. Avoid public gyms or work out sessions if neutropenic, and maintain only light exercise regimen. Goal: As tolerated, must be closely monitored and adjusted. For any progression other than light activity refer to Exercise Specialist

Additional Considerations	Cautions
Implanted VAD	<ul style="list-style-type: none"> Avoid pools and open water Avoid resistance exercise in that extremity or muscle group, contact sports, or ball sports
Lymphedema	<ul style="list-style-type: none"> Use a compression garment when exercising Start resistance training very slowly Evaluate limb response Utilize an experienced exercise specialist
Ostomy	<ul style="list-style-type: none"> Same as for implanted VAD Empty bag before exercising
Neuropathy	<ul style="list-style-type: none"> Consider balance issues Aerobic exercise might be more comfortable on a bike or in water
Osteoporosis or metastatic bone disease	<ul style="list-style-type: none"> Monitor fracture risk before initiation Consider new onset of pain an ominous sign indicating need for reevaluation

Types of Physical Activity by Intensity

Type of Physical Activity	Examples
<p>Light</p> <ul style="list-style-type: none"> • No change in breathing pattern • RPE = 1 to about 3 	<ul style="list-style-type: none"> • Slow walking • Slow bike riding • Light housework (e.g., dusting, light sweeping, dish washing) • Bowling • Light gardening • Very easy resistance exercises using assistive machines, easy bands, or body weight only; able to do >15 repetitions easily • Stretching exercise • Gentle or chair yoga
<p>Moderate Exercise</p> <ul style="list-style-type: none"> • Slight increase in breathing, can still talk easily • RPE = 3 to about 5 	<ul style="list-style-type: none"> • Brisk walking • Bike riding more rapidly or with some hills • Ball sports such as volleyball, softball, or tennis • Water aerobics • Standard Yoga • General gardening • Ballroom dancing • Resistance training with 10–12 repetitions per set
<p>Vigorous Exercise</p> <ul style="list-style-type: none"> • Can say some words, but hard to talk • RPE = around 5 to about 7 	<ul style="list-style-type: none"> • Running, jogging, race walking • Biking faster than 10 miles/hour • Dancing (aerobic or faster than ballroom) • Hiking • Running Ball Sports such as soccer or basketball • Stair climbing • Resistance exercise with more than 10–12 repetitions per set



National Resources for Individualized Physical Activity Plans for Cancer Survivors

LIVESTRONG at the YMCA

<http://www.livestrong.org/what-we-do/our-actions/programs-partnerships/livestrong-at-the-ymca/>

This is a 12-week, small group program designed for adult cancer survivors

Survivorship Training and Rehab (STAR Program®)

<http://www.oncologyrehabpartners.com/star-certifications/>

The STAR Program® Certification provides hospitals, cancer centers, and group practices with the training, protocols, and other tools needed to deliver evidence-based, best practice, cancer rehabilitation services.

American College of Sports Medicine

ProFinder® http://members.acsm.org/source/custom/Online_locator/OnlineLocator.cfm

Select "ACSM/ACS Certified Cancer Exercise Trainer" in the Certification/Registry Level drop down box to find a trainer near you.

Physical Activity Recommendation

Patient name:

Age:

Gender:

Cancer diagnosis:

Assessment	
Baseline patient physical activity level	<input type="checkbox"/> No physical activity beyond Activities of Daily Living (ADL) <input type="checkbox"/> Less than 1 time per week <input type="checkbox"/> 1-2 times per week <input type="checkbox"/> 3-4 times per week <input type="checkbox"/> 5 or more times per week
Reason(s) for medical clearance before physical activity	<input type="checkbox"/> None <input type="checkbox"/> Cardiac disease or toxicities <input type="checkbox"/> Fracture risk from bone metastases, hormonal therapies or density changes <input type="checkbox"/> Limited range of motion <input type="checkbox"/> Lymphedema <input type="checkbox"/> Musculoskeletal problems <input type="checkbox"/> Obesity <input type="checkbox"/> Peripheral neuropathy <i>NOTE: If the patient has any of these issues, they must receive medical clearance before beginning physical activity.</i>
Physical activity goal (include type, frequency, length of time)	
Kind(s) of physical activity recommended	<input type="checkbox"/> Light aerobic <input type="checkbox"/> Moderate aerobic <input type="checkbox"/> Vigorous aerobic <input type="checkbox"/> Yoga <input type="checkbox"/> Resistance training <input type="checkbox"/> Stretching exercises
Patient commitment to physical activity recommendation	<input type="checkbox"/> Does not currently want to commit to the recommended physical activity <input type="checkbox"/> Will consider attempting the recommended physical activity <input type="checkbox"/> I will definitely attempt the recommended physical activity

Reasons to stop physical activity and contact the healthcare team:

- Dizziness
- Shortness of breath
- Chest pain
- Development of new or an increase in usual pain
- New or increased swelling in limb



General Exercise Guidelines for Cancer Survivors



This handout provides cancer survivors with general guidelines for physical activity during and after cancer treatment.
© 2011 C.M. Jankowski & E.E. Matthews

Why should I exercise? Exercise may help you to

- feel better
- lift your mood and ease some worries
- sleep better
- return to enjoying everyday activities and interests sooner
- improve your physical health
- tolerate cancer treatments better
- improve overall quality of life

Is it safe?

YES! Yes!

Studies show that moderate exercise (exercise that raises your heart rate, makes you break a sweat, but not so hard that you cannot talk) is generally safe for people with cancer. *Start slow but try to go!*

How should I exercise?

Try a step-by-step approach. Think about the activities you like to do and that fit into your day.

Step 1: Pick an exercise

- Ask yourself, what kind of exercise do I enjoy, or would be willing to do?
- What kind of exercise fits into my day?

For example: “I like to walk and could do that around my neighborhood in the evening.”

Step 2: Set a short-term goal

“This week, I will walk for 10 minutes on 3 days.”

Step 3: Set a long-term goal

“Six months from now, I want to be able to take a brisk walk for 20 min, 5 days of the week.”



TIP: Consider using a pedometer to count your steps and write your daily step count on a calendar.

What if I don't feel like I can exercise on some days?

That's OK!

- ✓ Adjust your daily exercise routine
- ✓ Stay as physically active as you can
- ✓ Return to your short-term goal as soon as you are able
- ✓ Stay focused on your long-term goal

“I have chemotherapy on Monday, so I will walk for 10 min on Sunday, rest for 3 days, and try my walk again on Thursday. I will try to walk 3 times the following week”.

“I know I'm going to have good and not-so-good days during treatment but I'll do what I can to reach my six-month goal.”

TIP: If you have symptoms that concern you, consult with your health care provider.



What's a good long-term exercise goal?

The basic exercise recommendations for all adults in the U.S. include doing one of these:

- At least 150 minutes of reasonable aerobic activity/week *and* muscle-strengthening activities on 2 or more days/week, **or**
- 75 minutes of vigorous-intensity aerobic activity a week *and* muscle-strengthening activities on 2 or more days/week

TIP: You can add up exercise time in short periods throughout the day. Walking for 10 minutes morning, noon, and evening equals 30 min of walking.



For more information, see the Centers for Disease Control website
www.cdc.gov/physicalactivity

Physical Activity Log Sheet (make additional copies):

Name:

My physical activity goal is:

Tracking your weekly physical activity

- Steps: the number of steps taken if using a pedometer (step counter)
- Physical activity: record activity and time spent moving the body for at least 10 minutes at a time
- Intensity: on a scale of 1 to 10 below, how hard did you feel you were exercising?
- Before exercise: how did I feel before exercising today?
- After exercise: how did I feel after exercising today?

DATE	Steps	Physical activity & time (min)	Intensity	Before Exercise	After Exercise
1-Jun	2000	walked 5 min in AM and PM	4-5	sluggish in AM, better in PM	better in AM, the same in PM

Did you meet your goal(s)? Yes, I met my goal(s) this week. Not yet. I'm still working towards my goal(s).

Is it time to change my physical activity goal(s)?
 Not yet; keep this plan and goal(s) for another week
 Yes, I am ready to change my goal(s)

My new physical activity goal(s)

Exercise Intensity Scale

