# Physical Activity (PA) - Adult





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PT = physical therapy



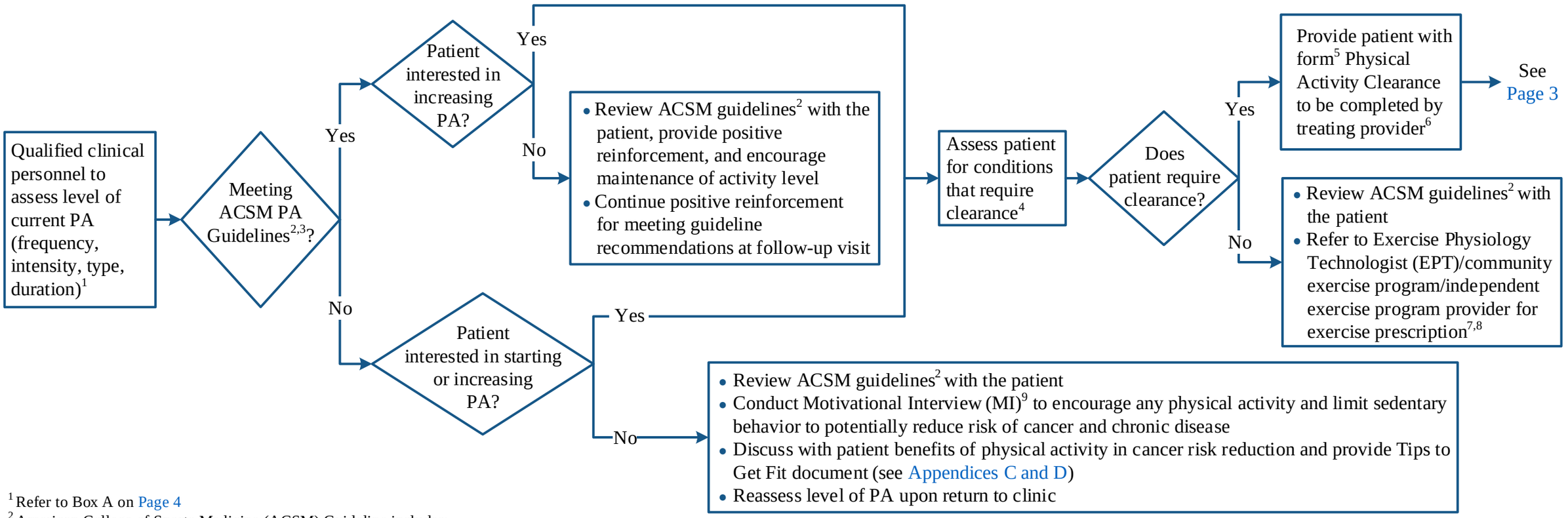
Department of Clinical Effectiveness V3
Approved by the Executive Committee of the Medical Staff on 03/26/2019

# Physical Activity (PA) - Adult





## INITIAL ASSESSMENT




[1] Refer to Box A on Page 4
[2] American College of Sports Medicine (ACSM) Guideline includes:
- Weekly activity of at least 150 minutes of moderate-intensity activity or 75 minutes of vigorous-intensity activity or equivalent combination
- Two or more weekly sessions of strength training that include major muscle groups

[3] In addition perform nutrition assessment based on the Nutrition - Adult algorithm
[4] See Appendix A Conditions that Require Medical Clearance and Appendix B Conditions that Require PT Supervised Activity
[5] See Clearance form/Waiver on Page 8. See Forms on Demand at http://onbasefod/
[6] If clearance form has not been received within 4 weeks, follow-up with patient as needed and/or reassess upon return to clinic
[7] Adjust exercise prescription as needed if health status and/or exercise tolerance change
[8] Refer to Box B on Page 4
[9] If MI is not conducted, encourage and counsel patient on importance of meeting ACSM guidelines



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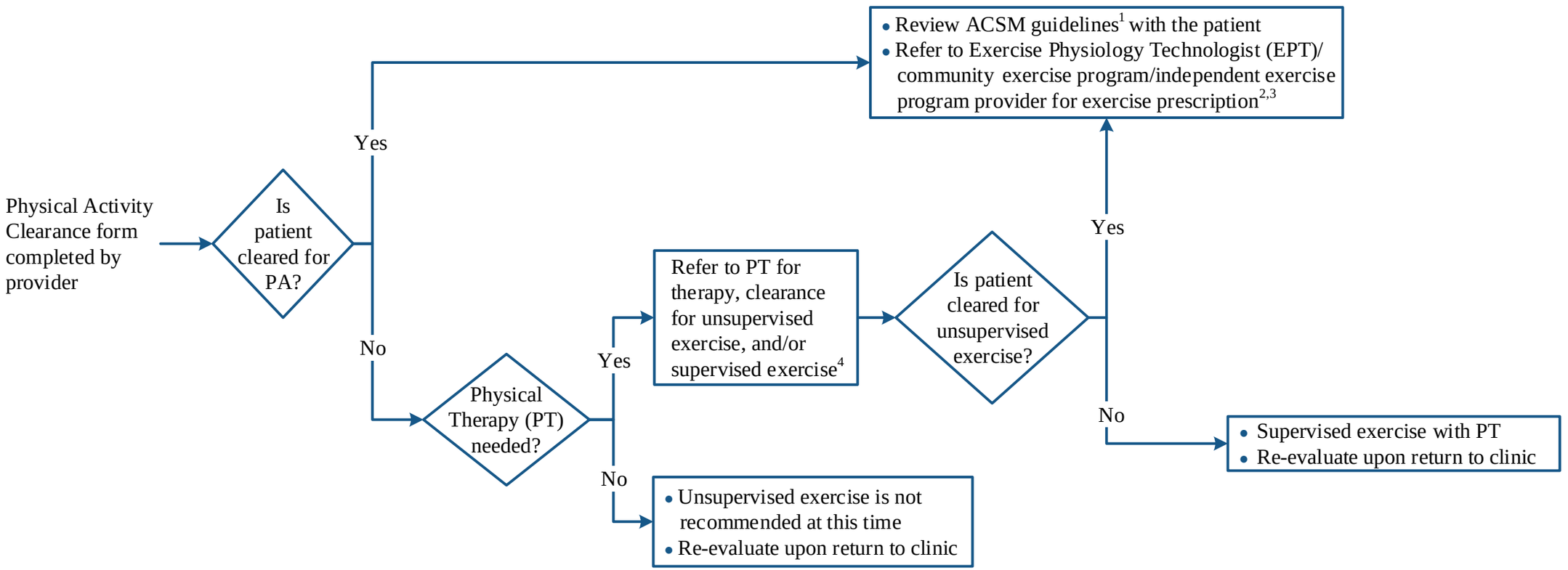
# Physical Activity (PA) - Adult





## INITIAL ASSESSMENT - continued




[1] American College of Sports Medicine (ACSM) Guideline includes:
- Weekly activity of at least 150 minutes of moderate-intensity activity or 75 minutes of vigorous-intensity activity or equivalent combination
- Two or more weekly sessions of strength training that include major muscle groups

[2] Adjust exercise prescription as needed if health status and/or exercise tolerance change

[3] Refer to Box B on Page 4

[4] See Appendix B Conditions that Require PT Supervised Activity

# Physical Activity (PA) - Adult





## ACTIVITY/EXERCISE PRESCRIPTIONS

Inactivity is detrimental to health; therefore regular physical activity should be promoted for reduction of cancer risk[1] as well as other chronic diseases. If the ACSM Physical Activity guidelines[2] are unable to be met then recommend any form of activity beyond activities of daily living (ADL), even if the only opportunity is to replace sitting with standing.

### A. Assessment of Current Activity Level

Begin with an understanding of the patient's current level of activity

Assess level of current activity:
Frequency (F)
Intensity (I)
Duration (D)
Type (T)

- Discuss patient's rate of perceived exertion (RPE) and/or self-evaluation of exercise tolerance; see Page 5
- Consider upcoming, planned medical interventions (surgeries, chemotherapy and/or radiation therapy) when developing an exercise prescription. Re-evaluate status upon completion of medical interventions.

[1] Refer to Appendix D Tips to Get Fit

[2] ACSM = American College of Sports Medicine Guideline includes:

- Weekly activity of at least 150 minutes of moderate-intensity activity or 75 minutes of vigorous-intensity activity or equivalent combination
- Two or more weekly sessions of strength training that include major muscle groups

If meeting guideline, provide positive reinforcement, encouragement to maintain activity level, and continued reinforcement of guideline recommendations at follow-up visit.

### B. Progression of Levels of Activity

The goal of exercise progression is to move from current level of activity to the next level of activity. Consider variation or additional activity when progressing. Progression is encouraged once participant is comfortable performing FIDT. Progression should occur by adding increments of time to the F or D, then increasing I (*e.g.*, incline, resistance, etc.), and/or T change of activity (*e.g.*, walking to jogging). Adjust exercise prescription as needed if health status and/or exercise tolerance change.

| Level of Activity | Aerobic | Resistance (large muscle groups) | Comments |
|---|---|---|---|
| Low | **F**: 1-5 days/week<br>**I**: 1-6 RPE<br>**D**: 1-75 minutes/week<br>**T**: Patient preferred, enjoyable, realistic activity | **F**: 1-2 days/week<br>**I**: 1-2 sets of 6-10 repetitions<br>**D**: 4-8 different exercises<br>**T:** Rest: 2-3 minutes between sets; 48 hours between workouts consisting of same muscle groups | Regardless of physical activity level, sedentary behavior is still detrimental to health. Therefore, it is recommended that sedentary time be limited and preferably replaced with any movement and/or standing when possible. |
| Moderate/ ACSM Guidelines[2] | **F**: 3-5 days/week<br>**I**: 5-8 RPE<br>**D**: 75-150 minutes/week<br>**T**: Patient preferred, enjoyable, realistic activity | **F:** 2-4 days/week<br>**I:** 2-3 sets of 10-15 repetitions<br>**D:** 8-10 different exercises<br>**T:** Rest: 2-3 minutes between sets; 48 hours between workouts consisting of same muscle groups | |
| High | **F:** 5-7 days/week<br>**I:** 7-8 RPE continuous exercise and/or a combination of 9-10 RPE intervals<br>**D**:150-300 minutes/week<br>**T**: Patient preferred, enjoyable, realistic activity | **F**: 2-4 days/week<br>**I:** 2-3 sets of 10-15 repetitions<br>**D:** 8-10 different exercises<br>**T:** Rest: 2-3 minutes between sets; 48 hours between workouts consisting of same muscle groups | |

*Continued on Next Page*

# Physical Activity (PA) - Adult





## ACTIVITY/EXERCISE PRESCRIPTIONS - continued

### Rate of Perceived Exertion (RPE) Scale

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Resting | Light Intensity | | | | Moderate Intensity | | Vigorous Intensity | | As hard as it can be | |

The rate of perceived exertion (RPE) scale reflects the interaction between the mind and body to rate one's perception of effort, strain, discomfort, and/or fatigue experienced during both aerobic and resistance training. One's perception of physical exertion is a subjective assessment that incorporates information from the internal and external environment of the body.

Through experience/practice of monitoring how the body feels, it will become easier to know when to adjust the exercise intensity. For example, a walker who wants to engage in moderately-intense activity would aim for a RPE of 5-6. If the walker describes muscle fatigue and breathing as "light" (1-4 on the RPE scale) they would want to increase the intensity. On the other hand, if the walker felt the exertion was "vigorous" or "as hard as can be" (7-8, 9-10 on the RPE) they would need to slow down the movements to achieve the moderate-intensity range.

### Changes in Exercise Tolerance

If exercise elicits symptoms of intolerance, as listed below, then adjust FIDT to reduce/alleviate symptoms without promoting sedentary activity. If symptoms of intolerance persist, reduce activity level and seek Physical Activity Clearance.
(See Appendices A and B)

| | |
|---|---|
| Performance | • Decreased performance (strength, power output, muscle endurance, cardiovascular endurance)<br>• Increased recovery requirements<br>• Decreased motor coordination |
| Physiology | • New onset of symptoms of cardiovascular and/or pulmonary disease, metabolic disease, or renal disease<br>• Unexplained change in resting heart rate, blood pressure, and respiration patterns<br>• Increased HR during submaximal work<br>• Chronic fatigue<br>• Sleep and eating disorders<br>• Menstrual disruptions<br>• Headaches, gastrointestinal distress<br>• Chronic or extreme muscle soreness or injury<br>• New or increased joint aches and pains |
| Psychological | • New onset of symptoms of depression and apathy, decreased self-esteem, decreased concentration in response to exercise |
| Immunology | • Increased occurrence of illness<br>• Decreased rate of healing<br>• Impaired immune function (neutrophils, lymphocytes, mitogen responses, eosinophils) |

# Physical Activity (PA) - Adult





## APPENDIX A: Conditions that Require Medical Clearance

If the patient reports any of the following, provide the patient with Physical Activity Clearance form to be competed by their PCP

**Cardiovascular or pulmonary disease may include:**

1. Chest discomfort centered under the breastbone and/or slightly to the left characterized by a sensation of heavy pressure, squeezing, or fullness (note: not all CVD causes chest discomfort)
2. Pain that begins in the chest and spreads to the shoulders, between the shoulder blades, arms, elbows, back, neck, jaw or abdomen
3. Rapid or irregular pulse accompanied by dizziness and shortness of breath
4. Feeling short of breath at rest or with minimal exertion
5. Dizziness, lightheadedness, or loss of consciousness
6. Unusual and excessive fatigue often accompanied by nausea and/or lack of appetite
7. Extreme or unexplained weakness
8. Profuse sweating with no physical exertion
9. Swelling (accumulation of fluid) especially in the feet, ankles, legs, or abdomen
10. Intermittent claudication
11. Persistent cough, bloody cough or wheezing
12. Intense anxiety; sense of impending doom

**Metabolic disease:**

1. Uncontrolled diabetes (signs and symptoms can include increased thirst and urination, blurred vision, numbness/tingling in the feet, non-healing wounds, fruity smell to the breath)

**Renal disease:**

1. Nausea and vomiting
2. Passing only small amounts of urine
3. Swelling, particularly of the ankles, and puffiness around the eyes
4. Unpleasant taste in the mouth and urine-like odor to the breath
5. Persistent fatigue or shortness of breath
6. Loss of appetite
7. Increasingly higher blood pressure
8. Muscle cramps, especially in the legs
9. Pale skin
10. Excessively dry, itchy skin

## APPENDIX B: Conditions that Require PT Supervised Activity

- Recent decrease in physical abilities, including falling or needing to move with assistance such as a walker, cane or wheelchair
- Low or unstable platelet counts, within the past month
- Bone, joint or soft tissue problems and/or injury in the last month that are made worse by increased physical activity
- Post-surgical activity restrictions or side effects that limit physical activity
- Presence of acute and/or long-term side effects from cancer or cancer treatments that limit day-to-day activity or ability to exercise
- Unmanaged lymphedema
- Physician restrictions

# Physical Activity (PA) - Adult





## APPENDIX C: Benefits of Physical Activity in Cancer Risk Reduction

- Physical activity helps your body work better and reduces your chance of getting certain diseases, including some cancers
- Research suggests that physical activity may lower your chance of getting the following cancers:
  - Colon
  - Breast
  - Endometrial
- Even if your physical activity does not result in weight loss, just moving your body can lower your chance of getting cancer
- Physical activity can however, help you lose fat and maintain a healthy weight. Extra body fat has been shown to increase your chance of getting the following cancers:
  - Esophageal
  - Pancreatic
  - Colon
  - Rectal
  - Breast (postmenopausal)
  - Endometrial
  - Kidney
- Physical activity can help lower stress, increase energy levels and boost your immune system
- Physical activity reduces your chance of having other health problems. Examples are:
  - Heart disease
  - High blood pressure
  - Diabetes

## APPENDIX D: Tips To Get Fit

Staying active can help you maintain a healthy weight and lower your risk for cancer and other diseases. Build up your activity level and lower your cancer risk. Being inactive can increase your risk for colon, postmenopausal breast and endometrial cancers. It also may increase your chances for lung or pancreatic cancers.

**Sit Less**

- Sitting too much may cause you to gain body fat

How to Start

- Get up and move for a minute or two every hour while you're awake

**Boost Your Heart Rate**

- Do 150 minutes of moderate activity each week. Moderate activities, like brisk walking, dancing or gardening speed up your heart and make you feel a little out of breath.

**or**

- Do 75 minutes of vigorous activity each week. Running, playing basketball or swimming laps are vigorous, and make you breathe harder so it's hard to speak.

How to Start

- Take a brisk walk for 30 minutes, five times a week
- Swim laps for 25 minutes, three times a week

**Get Strong**

- Do muscle strengthening exercises at least twice a week to maintain a healthy weight. Strength training can include exercises with free weights, weight machines, resistance bands or your own body weight.

How to Start

- Choose from squats, lunges, leg raises, push-ups, bicep curls, tricep dips and planks
- Always rest your muscles for 48 hours after strength training

Disclaimer: *This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson's specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care. This algorithm should not be used to treat pregnant women.*

## Clearance Form/Waiver[1]

****SAMPLE****
**(for internal use only)**

**Waiver for Participation in Physical Activity**

Patient
ACCT# Print Date
DOB FC SEX Location
MDA #

I, _____, understand that I am voluntarily receiving physical activity counsel and participating in an exercise program (the "Activities") as prescribed by The University of Texas M. D. Anderson Cancer Center ("MD Anderson"). Accordingly, I hereby fully agree to the following:

1. I understand that it is my decision to consult or not with my primary care provider prior to my participation in the Activities as a precaution to determine whether participation in the Activities is safe for me.

2. I agree to assume full responsibility for any risks, injuries, or damages, of any kind, which may occur as a result of my participation in the Activities.

3. ***Waiver and Release of Liability:*** *I knowingly and voluntarily waive any and all negligence and/or strict liability claims arising from or relating to my participation in the Activities, and I agree to release from liability and hold harmless MD Anderson, and The University of Texas System and their Regents, agents, officers, employees, and representatives for any accident, injury, illness, death, loss or damage to my person or property, arising from or relating to, directly or indirectly, my participation in the Activities.*

I verify that I have read and understood this form, or have had this form read to me, and that any questions or concerns I may have had regarding this form have been fully resolved. I certify by signing below that I understand and agree with the contents of this consent and waiver form.

Is this *Waiver* being translated to the Patient/Other legally responsible party? ☐ Yes ☐ No
This information and contents of this form have been translated or read in the following language (If applicable): _____

This form has been translated to the patient/other legally responsible person by:
Signature: _____

Signature of Patient or Legally Authorized Representative: _____
Printed Name: _____ Date/Time: _____
Legally Authorized Representative's Authority *(check all that apply)*:
☐ Parent ☐ Guardian ☐ Other**(specify)*: _____

**Waiver for Participation in Physical Activity**
**Page 1 of 1 -** File Under: General Consent
INS999554 (11/11/2015)

****SAMPLE****
**(for internal use only)**

**Primary Care Provider Physical Activity Clearance**

Patient
ACCT# Print Date
DOB FC SEX Location
MDA #

**The following is to be completed by the treating Primary Care Provider ("Provider"):**

Based on a current health status review, I, _____, hereby give medical clearance for _____ to participate in physical activity at the following level:

☐ Progress as tolerated without limitations
☐ Progress as tolerated with limitations:
Specify Limitations: _____
☐ Consider referring to PT/OT for assessment of *physical* limitations* or supervised activity

*Consider referral to PT/OT if the patient has:

- Recent decrease in physical abilities, including falling or needing to move with assistance such as a walker, cane or wheelchair.
- Low or unstable platelet counts, within the past month.
- Bone, joint or soft tissue problems and/or injury in the last month that are made worse by increased physical activity.
- Post-surgical activity restrictions or side effects that limit physical activity.
- Presence of acute and/or long-term side effects from cancer, cancer treatments, *or any other chronic* disease that limit day to day activity or ability to exercise.
- Unmanaged Lymphedema.
- Provider restrictions.

If applicable, Participant will be re-evaluated on *(date)*: _____

_____ _____
Provider Signature/Credentials/ID# Date/Time

_____ _____
Provider Printed Name Office Phone Number

_____
Provider Office Address

**Primary Care Provider Physical Activity Clearance**
**Page 1 of 1 -** File Under: General Consent
INS999555 (10/19/2015)

[1] See Forms on Demand at http://onbasefod/

## SUGGESTED READINGS

American College of Sports Medicine., & Irwin, M. L. (2012). *ACSM's guide to exercise and cancer survivorship*. Champaign, IL: Human Kinetics.

Jonas, S., & Phillips, E. M. (2009). *ACSM's exercise is medicine: A clinician's guide to exercise prescription*. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.

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Schmitz, K. H., Courneya, K. S., Matthews, C., Demark-Wahnefried, W., Galvão, D. A., Pinto, B. M., … Schneider, C. M. (2010). American college of sports medicine roundtable on exercise guidelines for cancer survivors. *Medicine and Science in Sports and Exercise, 42*(7), 1409-1426.

## DEVELOPMENT CREDITS

This screening algorithm is based on majority expert opinion of the Physical Activity work group at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following:

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