

Outline for PT Annual Exam:

Population	Why
Community-dwelling older adults (age ≥ 65) with history of 2 or more falls	Older adults are often seen in PT due to the results from a fall. Not only directly relating to a fall, these adults will often come to PT initially for another various ailment, but will inadvertently admit they fall often. It is estimated that around 30% of people over age 65 will fall each year, with the biggest predictor of future falls being history of falls. ^{1,2} In 2014, falls in older adults were directly responsible for about 27,000 deaths and over \$31 billion in Medicare costs in 2015. ¹ Falls in this population are clearly common, costly, and devastating. PT's are often the first providers to see these patients, and can be a vital resource to screen, recommend, and refer them appropriately, to mitigate their falls/injury risk.

Annual Exam: Subjective

Subjective Questioning	Information Gathered	Reasoning
Demographic Information	<p>Date of birth:</p> <p>Sex:</p> <p>Ethnicity/Race:</p> <p>Current Living Situation: (home, apartment, etc.)</p> <p>Do you have to go up and down stairs to enter your home?</p> <ul style="list-style-type: none"> - If yes, how many stairs/flights? Do they have railings? <p>Do you live alone?</p> <ul style="list-style-type: none"> - If yes, does anyone come to assist you around the house, and how often? - If no, who lives with you? <p>Do you use an assistive device such as a cane or walker?</p>	<p>Collect basic background information for documentation purposes.³</p> <p>Living situation is important so the PT can make more appropriate recommendations (such as installing railings) and to make interventions more specific (ex. is stair training crucial for this patient?)</p> <p>It is also important to know if the patient lives alone. Should the PT recommend something such as a Life Alert? Is family/caregiver education warranted? Does the patient currently receive help, or are they in need of in-home assistance?</p> <p>If the patient uses an assistive device, proper fit and mechanics should be</p>

	<ul style="list-style-type: none"> - If yes, in what situations do you use it? 	<p>ensured. The patient may need to upgrade their device (switch from a cane to a walker for improved safety), or may need to use the device at all times, rather than just in the community.</p>
Falls History	<p>Have you fallen in the past 12 months?</p> <ul style="list-style-type: none"> - If yes, how many times? What were the circumstances or reasoning behind the fall? <p>Any bouts of dizziness or fainting?</p>	<p>With this population, the answer here is “yes”. PT’s should seek to gain further insight into the circumstances surrounding falls, to tease out environmental or situational factors that may have contributed. Further questioning is needed by the PT on this topic.</p> <p>History of falls is one of the greatest predictors for future falls.¹</p>
Past Medical History	<p>Please state and describe if you have been diagnosed with any of the following:</p> <p>Arthritis (location):</p> <p>Bone fractures (cause and location):</p> <p>Cancer (type and remission status):</p> <p>Diabetes (type 1 or 2):</p> <p>Depression:</p> <p>Heart problems (heart attack, heart disease, congestive heart failure, A-fib, etc.):</p>	<p>APTA Checkup Template referenced to generate some ideas.³</p> <p>Lower extremity OA, heart disease, and depression have been shown to increase risk of falling¹, hence their specific inclusion.</p> <p>The specific diagnoses included represent ones that either correlate with an increased falls risk, or may affect course of treatment.</p>

	<p>Hypertension:</p> <p>Lung problems (shortness of breath, COPD, etc.):</p> <p>Osteoporosis:</p> <p>Stroke:</p> <p>Traumatic brain injury (date of occurrence):</p> <p>Major Surgeries (please list type and date):</p> <p>Other Diagnoses:</p>	<p>It is important to give the patient an area where they can mention anything that the checklist may have missed.</p>
Medications	<p>Please list all prescription medications currently being taken:</p>	<p>Screening for potential “polypharmacy”, as well as adverse drug interactions.</p> <p>Medications that are sedatives, or affect gait and balance, are associated with increased falls risk.¹ Meds that can cause dizziness or blood pressure fluctuations should also be monitored.</p> <p>Regarding polypharmacy, taking 4 or more drugs has been linked to increased number of falls, recurrent falls, and falls leading to injury.⁴</p>
Physical Activity	<p>What are your current levels of physical activity?</p> <ul style="list-style-type: none"> - Days per week you engage in moderate or vigorous exercise: 	<p>Older adults who fall tend to be less active than those who do not fall.⁵ This inactivity can lead to a circular cycle of immobility,</p>

	<ul style="list-style-type: none"> - Minutes/day spent performing moderate or vigorous exercise: - Days per week you engage in aerobic exercise: - Days per week you engage in resistance exercise (such as weight lifting): - Please list exercises frequently performed: 	<p>increased weakness, and inability to prevent falls.</p> <p>Additionally, this data collected can help the PT develop realistic activity goals for the patient, and tailor them specifically to the individual's wants and needs to improve adherence.</p>
Nutrition status	Do you have any concerns about getting enough food to eat, or your ability to cook for yourself?	Malnutrition is associated with increased falls risk. ⁵
Sleep status	<p>How many hours of sleep do you get on average?</p> <p>Do you feel a lack of sleep is interfering with your physical function?</p>	Poor sleep quality, and sleeping 5 or less hours per night are associated with an increased risk of falls. ⁶
Pain	<p>Do you frequently have pain that interferes with your daily life?</p> <ul style="list-style-type: none"> - If yes, describe the location, and please rank the pain from 0-10 (0 = no pain, 10 = worst pain possible) <p>Do you currently have any pain? (location and rank)</p>	General pain when walking can lead to balance difficulties and increased falls risk. ⁵

Vision	Do you have any concerns about your vision? Do you think poor vision could be contributing to your falls?	Numerous visual impairments are associated with increased falls risk. ⁵
Urinary	Do you frequently (2+) have to get out of bed at night to urinate? Do you ever have difficulty holding your urine?	Nocturia and incontinence are associated with increased risk of falling. ¹
Depression Screening	Using the PHQ-27 ("Appendix A", additional PDF uploaded)	Depression is linked with an increased risk of falls in older adults. ¹
Other	Please list any other health conditions or concerns you may have:	Important to allow space for the patient to communicate any additional concerns.

Annual Exam: Objective

Question/test	What testing	Positive finding	Clinical reasoning (Evidence if indicated)
Height/Weight	Can be used for BMI if warranted	BMI > 30 is obese. BMI <18.5 is underweight	As mentioned above, malnutrition is associated with increased falls risk. ⁵ Obesity is obviously linked with a host of other health risks, such as heart disease and sedentary lifestyle, which can contribute to falls. ⁸
Vitals	Resting HR, RR, and BP	Variable: use good clinical reasoning	General red flag screening.

Sensation	Light-touch sensation in bilateral lower limbs, especially feet. (L2 – S1 dermatomes)	Absent or decreased sensation of one or both limbs	Poor lower extremity sensation is associated with increased falls risk. ⁵
MMT	Strength of all lower extremity musculature. May test upper extremity if warranted	No specific grade of MMT, subjective weakness as determined by PT	Muscle weakness is a significant factor in falls risk. ^{5,9} Specifically, hip abductors, knee extensors, knee flexors, and ankle dorsiflexors should be tested, as weakness in these muscle groups are significantly related to falling. ⁹
5 Times Sit to Stand	Functional strength, falls risk	>12 seconds ¹⁰	Measures functional lower extremity strength, weakness increases falls risk ⁵
TUG	Mobility, balance, gait, falls risk	For community-dwelling adults, > 13.5 seconds = increased falls risk ¹¹	The TUG is a good predictor of falls risk, and is practical and efficient for clinical use. ¹ Can track functional improvements over time.
Functional Reach Test	Balance, falls risk, ability to reach outside base of support	<10in = abnormal, <7in = high falls risk and possible ADL limitation ¹	A predictor of falls and practical for clinical use. ¹
6 min walk test	Exercise capacity, gait quality/speed	Below 572M for males and 538M for females, age 60-69. ¹² Lower with increased age, or if using an AD	Especially useful for community-dwelling adults. Decreased endurance is correlated with increased falls risk. ⁵ Importance is that the MCID is 50M to track significant changes over time ¹²
*Berg and *Tinetti	Balance, gait, falls risk	*	*

*Suitable alternative tests, however, more time-consuming and may not be practical for clinical implementation during a 1-hour annual exam.⁵ Use at clinicians discretion.

Resources/referrals:

Test item	Resource/referral	Reasoning
Physical activity (subjective) <ul style="list-style-type: none"> - For a patient who reports that they are mostly sedentary, or are not aware of/meeting the physical activity recommendations 	“Appendix B” ¹³ (PDF version will be uploaded as well)	This is a handy fact sheet that can be given to any patient in print-out form for quick referencing. Not only does it describe the guidelines for activity type and duration, it also reviews scientific evidence of the benefits of physical activity. Making patients aware of the recommendations and benefits is crucial, since PT’s know the power of exercise, as well as how inactivity is directly related to poor health outcomes, all-cause mortality, and falls risk. ⁵
Nutrition (subjective) <ul style="list-style-type: none"> - Patient answers “yes” to the nutrition section of the subjective questionnaire above 	A referral to a registered dietician is warranted	It has been shown that nutritional intervention is a valuable piece of a multi-factorial fall risk reduction program for community-dwelling older adults. ¹⁴ Improving a person’s nutrition habits may help reduce factors related to falls risk, ⁵ and it has been shown that referral to a registered dietician is effective in improving nutritious food behavior. ¹⁴
TUG/5 time sit to stand (objective) <ul style="list-style-type: none"> - For a patient who performs below cutoff level for either the TUG or 5x STS, indicating increased falls risk 	This patient can be directed toward a local Geri-Fit program (offered at numerous locations, often at the local YMCA)	Geri-Fit is an evidence-based progressive resistance program shown to improve strength, balance, and reduce falls risk. ¹⁵ It is also recommended by the National Council on Aging as an evidence-based physical activity program for older adults. ¹⁶

Bibliography:

1. Smith EM, Shah AA. Screening for geriatric syndromes: falls, urinary/fecal incontinence, and osteoporosis. *Clin Geriatr Med* 2018;34(1):55-67. doi:10.1016/j.cger.2017.08.002.
2. Talarska D, Strugała M, Szewczyzak M, et al. Is independence of older adults safe considering the risk of falls? *BMC Geriatr.* 2017;17(1):66. doi:10.1186/s12877-017-0461-0.
3. APTA. Annual Checkup by a PT - Adult Template. Available at: <https://www.apta.org/annualcheckup/>. Accessed September 10, 2019.
4. Zia A, Kamaruzzaman SB, Tan MP. Polypharmacy and falls in older people: Balancing evidence-based medicine against falls risk. *Postgrad. Med.* 2015;127(3):330-337. doi:10.1080/00325481.2014.996112.
5. Todd C, Skelton D. What are the main risk factors for falls amongst older people and what are the most effective interventions to prevent these falls? *WHO Regional Office for Europe* 2004.
6. Stone KL, Blackwell TL, Ancoli-Israel S, et al. Sleep disturbances and risk of falls in older community-dwelling men: the outcomes of Sleep Disorders in Older Men (MrOS Sleep) Study. *J. Am. Geriatr. Soc.* 2014;62(2):299-305. doi:10.1111/jgs.12649.
7. Patient Health Questionnaire-2 (PHQ-2) - Mental Disorders Screening - National HIV Curriculum. Available at: <https://www.hiv.uw.edu/page/mental-health-screening/phq-2>. Accessed September 11, 2019.
8. Assessing Your Weight and Health Risk. Available at: https://www.nhlbi.nih.gov/health/educational/lose_wt/risk.htm. Accessed September 11, 2019.
9. MacRae PC, Lacourse M, Moldavon R. Physical Performance Measures That Predict~ailer Status in Community-Dwelling Older Adults . *JOSPT* 1992;16(3). Available at: <https://www.jospt.org/doi/pdf/10.2519/jospt.1992.16.3.123>. Accessed September 11, 2019.
10. Five Times Sit to Stand Test | RehabMeasures Database. Available at: <https://www.sralab.org/rehabilitation-measures/five-times-sit-stand-test>. Accessed September 11, 2019.
11. Timed Up and Go | RehabMeasures Database. Available at: <https://www.sralab.org/rehabilitation-measures/timed-and-go>. Accessed September 11, 2019.
12. 6 Minute Walk Test | RehabMeasures Database. Available at: <https://www.sralab.org/rehabilitation-measures/6-minute-walk-test>. Accessed September 11, 2019.
13. At-A-Glance: A Fact Sheet for Professionals - health.gov. Available at: <https://health.gov/paguidelines/2008/resources/factsheetprof.aspx>. Accessed September 11, 2019.
14. Yates SM, Dunnagan TA. Evaluating the effectiveness of a home-based fall risk reduction program for rural community-dwelling older adults. *J. Gerontol. A, Biol. Sci. Med. Sci.* 2001;56(4):M226-30. doi:10.1093/gerona/56.4.m226.

15. Geri-Fit: Strength Training Workouts that Work! Available at: <https://www.gerifit.com/>. Accessed September 11, 2019.
16. NCOA: Exercise Programs That Promote Senior Fitness. Available at: <https://www.ncoa.org/center-for-healthy-aging/basics-of-evidence-based-programs/physical-activity-programs-for-older-adults/>. Accessed September 11, 2019.
17. Utility C. The Patient Health Questionnaire-2 (PHQ-2) - Overview. 1999. Available at: http://www.cqaimh.org/pdf/tool_phq2.pdf. Accessed September 11, 2019.

Appendix:

17 Appendix A: http://www.cqaimh.org/pdf/tool_phq2.pdf

- See uploaded PDF

13 Appendix B: <https://health.gov/paguidelines/2008/resources/factsheetprof.aspx>

- See uploaded PDF