

JOURNAL OF GERIATRIC EMERGENCY MEDICINE

April 17, 2020

Volume 1, Issue 4, Supplement 3



Preservation of Function in Older Adults Who Are in the Emergency Department During COVID-19

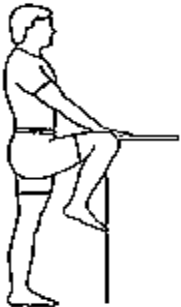

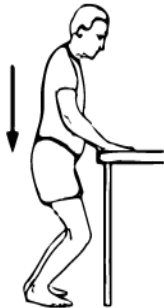

Suzanne Ryer, PT, MPT, GCS, CEEAA; Pamela Martin, RN, MSN, FNP-BC, APRN GS-C; Aaron J Malsch RN MSN GCNS-BC

1. Functional status is an independent predictor of morbidity and mortality in older ED patients and physical function can be worsened by immobility, especially during extended ED stays.^{1,2}
 - a. Immobility can lead to loss of muscle mass, deconditioning, and weakness.
 - b. Decreased physical function can contribute to inpatient complications such as falls, delirium, increased length of stay, and higher rates of discharge to skilled nursing facilities.
2. Many of the risk factors for functional decline³, physical and mental, can be exacerbated by the response to COVID-19, such as low frequency of social contacts, low physical activity, depression, poor self-perceived health, cognitive impairment, and comorbidity.
3. Baseline functional status is an important part of obtaining a history, which may include home setting, caregiver support, and use of assistive or adaptive equipment.
4. Patient premorbid functional status has implications for health interventions, outcomes, and recovery beyond the ED.
 - a. Use common assessment tools such as the Katz ADLs, ISAR⁵, and TRST.⁵
 - b. Evaluate IADLs to ensure that patient will be able to perform these items especially if patient is going home independently. Key activities are the management of medications, meals, transportation, finances, housekeeping and communication.
5. Unless contraindicated, maximize and facilitate mobility at the bedside despite limitations and confinement of social distancing:
 - a. ambulate in room
 - b. use bedside commode
 - c. sit on side of bed with feet on floor
 - d. sit in chair for meals
6. The combination of aerobic and strength exercises is most effective in prevention of functional decline associated with disuse and immobility.⁴
7. Any activity is better than none, but patients with extended ED lengths of stay should be encouraged to perform exercises and mobility. Prescribe exercises for those boarding in the ED, as well as for those who will be discharged. See table below to select the appropriate program for your patient.

	Standing	Seated	Supine
Indications	<ul style="list-style-type: none">Steady ambulationNo restrictions to activity	<ul style="list-style-type: none">Balance problemsDifficulty standingAble to sit unsupported in chair	<ul style="list-style-type: none">Bedbound or non-ambulatoryPresents via cart/ambulance
Contraindications	<ul style="list-style-type: none">Medically unstable for activityHigh fall risk	<ul style="list-style-type: none">Medically unstable for activityBedrest order	<ul style="list-style-type: none">Medically unstable for activityUnresponsive/not alert




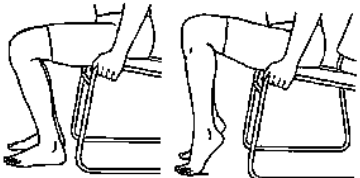
Standing Exercises in the ED for Preservation of Function

- Sit up in a chair or at the edge of bed to eat meals.
- Walk in the room (with help as needed) every 1-2 hours at a comfortable pace.
- Use hand support on a stable surface like bed rail or countertop for safety.
- Perform the circuit of exercises every 2-3 hours to increase activity and maximize function. Take rests as needed.
- If you become lightheaded, short of breath or feel pain do not continue.

	<p>1. Standing at counter or holding a stable surface. March on the spot for one minute quickly. Rest and do it again for another minute.</p>
	<p>2. Stand and sit down from the chair using your arms only if needed. Repeat 8-10 times.</p>
	<p>3. Stand with hands on counter or bed rail. Bend your knees as if about to sit in a chair. Repeat 8-10 times.</p>
	<p>4. Stand with hands on counter or bed rail. Raise up on your toes and hold for 2-3 seconds. Repeat 8-10 times.</p>




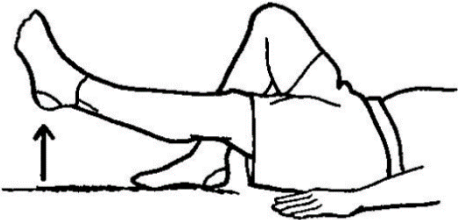
Sitting Exercises in the ED for Preservation of Function

- Sit up in a chair or at the edge of bed to eat meals.
- Walk in room with help.
- Perform the circuit of exercises every 2-3 hours to increase activity and maximize function. Take rests as needed.
- If you become lightheaded, short of breath or feel pain do not continue.

	<p>1. Seated in the chair alternate lifting knees for one minute quickly. Rest and do it again for a minute.</p>
	<p>2. Push up with your arms and legs from the chair as if about to stand up. Hold for 2-3 seconds. Repeat 8-10 times.</p>
	<p>3. Sit with feet flat on floor and straighten one leg and hold for 2-3 seconds. Return to ground and perform with other leg. Repeat 8-10 times.</p>
	<p>4. Sit with feet flat on floor and lift heels up and hold for 2-3 seconds. Return to ground. Repeat 8-10 times.</p>

Bed Exercises in the ED for Preservation of Function

- Sit up at edge of bed or raise head of bed throughout the day to improve breathing and position.
- Perform the circuit of exercises every 2-3 hours to increase activity and maximize function. Take rests as needed.
- If you become lightheaded, short of breath or feel pain do not continue.

	<ol style="list-style-type: none">1. Alternate sliding foot up towards buttocks bending the knee for one minute quickly. Rest and do it again for another minute.
	<ol style="list-style-type: none">2. Tighten abdominals and lift buttocks up in the air. Hold for 2-3 seconds and return to bed. Repeat 8-10 times.
	<ol style="list-style-type: none">3. Pull foot up and then point toes down as far as possible. Repeat 8-10 times.
	<ol style="list-style-type: none">4. Slowly lift leg and lower leg just off the bed keeping the thigh muscles tight. Repeat 8-10 times.

References

1. Gill TM, Williams CS, Tinetti ME. The combined effects of baseline vulnerability and acute hospital events on the development of functional dependence among community-living older persons. *J Gerontol A Biol Sci Med Sci* 1999;54A:377-383.
2. Hastings ,S. M., Sloane, R, Morey, M.C., Pavon, J.M., &Hoenig, H. (2014). Assisted Early Mobility for Hospitalized Older Veterans: Preliminary Data from the STRIDE Program. *J Am Geriatri Soc*, 62 (11), 2180-2184
3. Stuck, A. E., Walthert, J. M., Nikolaus, T., Büla, C. J., Hohmann, C., & Beck, J. C. (1999). Risk factors for functional status decline in community-living elderly people: a systematic literature review. *Social science & medicine*, 48(4), 445-469.
4. Valenzuela, P. L., Morales, J. S., Pareja-Galeano, H., Izquierdo, M., Emanuele, E., de la Villa, P., & Lucia, A. (2018). Physical strategies to prevent disuse-induced functional decline in the elderly. *Ageing research reviews*, 47, 80-88.
5. Carpenter, C. R., Shelton, E., Fowler, S., Suffoletto, B., Platts-Mills, T. F., Rothman, R. E., & Hogan, T. M. (2015). Risk factors and screening instruments to predict adverse outcomes for undifferentiated older emergency department patients: a systematic review and meta-analysis. *Academic Emergency Medicine*, 22(1), 1-21.

*For author affiliations and disclaimers, please see: GEDC website: <https://gedcollaborative.com/disclaimer-copyright/>