

ORTHOSTATIC PROTEINURIA - COLLECTION INSTRUCTIONS

Orthostatic proteinuria is defined as the absence of proteinuria when the patient is resting or supine and its appearance during upright posture while the patient is ambulatory. Total 24-hour protein excretion is typically 500-1500 mg/24 hr.

Quantitative Assessment involves collecting an approximately 7-9 hour urine while the patient is resting and a 15-17 hour urine while the patient is ambulatory and obtaining the protein excretions for each collection.

Collection Instructions:

1. Lab provides two large urine containers (typically used for 24-hr urine collections). Label one container "Resting". Label other container "Upright".

2. Starting in the morning (or usual wake cycle), have the patient empty bladder completely and discard.

Collect all subsequent urine throughout the day and early evening hours into the jug labeled "Upright". Just before going to bed, empty bladder completely, collecting all urine into the "Upright" jug.

During sleeping hours, collect all urine into the jug labeled "Resting". Upon arising, empty bladder completely, again transferring all voided urine into the jug labeled "Resting". Rise time should ideally be the same as that on the prior day for a complete 24-hour period.

Store urine containers in a cool area and bring to lab for processing within one day.

Lab will report the protein excretion and the volume for each collection. Collection start and stop times are optional and not required by the Lab.

Interpretation: The following criteria are necessary for diagnosis of orthostatic proteinuria:

Resting excretion is minimal (<50-100 mg) for an approx. 8 hr resting/collection interval.

Upright excretion is significantly higher than resting (80-100% of total protein).

Total urinary protein (Upright + Resting) is typically <1500 mg/24 hr.

Qualitative assessment as a same-day point-of-care test (lab not required):

Patient voids at bedtime and discards urine.

When patient awakes or shortly after waking, obtain urine specimen and transfer a portion to a container marked "Resting".

Patient should perform normal activities for next 2-3 hours. Then obtain second urine specimen and label as "Upright".

Test both specimens using dipstick for protein. If "Resting" specimen is free of protein and "Upright" specimen is positive, then test is positive for orthostatic proteinuria. If both specimens have protein, orthostatic proteinuria is unlikely and further evaluation is necessary.

REFERENCES:

1. Schrier RW and Gottschalk CW (eds), Diseases of the Kidney, Vol 1, Little, Brown, and Co., Boston, 1997, pages 340-1. Univ. of Iowa Family Practice Handbook, www.vh.org/Providers/ClinRef/FPHandbook/Chapter11/11-11.html