



Laboratory Medicine Bulletin

Confirmatory testing for primary aldosteronism via seated saline suppression test (SSST)

April 16, 2019

Background:

The seated saline suppression test (SSST) is now the preferred form of the saline suppression test due to a higher test sensitivity for primary aldosteronism compared to the traditional recumbent saline suppression test (RSST).¹

SSST protocol:

Aside from the posture (seated vs recumbent), the protocol for the SSST is otherwise identical to the RSST.

Test result interpretation:

The optimal diagnostic threshold for the SSST and RSST are different, as shown in Table 1.

Protocol	Threshold (pmol/L)	Sensitivity (%)*	Specificity (%)*
SSST	162	87 (83 – 88)	94 (76 – 96)
SSST	73	100	65
RSST	106	38 (37 – 41)	94 (77 – 96)
RSST	No threshold is 100% sensitive		

*Data is abstracted from reference¹

Recommendation:

Change the standard saline suppression test protocol for your patients from supine posture to seated posture.

After Sept 1, 2019, the St Paul's Hospital laboratory will provide interpretative comments under the assumption that a SSST protocol was used to generate a saline suppression test sample. Prior to that date, we will provide interpretative comments that describe both of the optimal thresholds for the respective saline suppression test protocols.

Question?

Please do not hesitate to contact us if you have any questions or concerns via the hospital switch board (604) 682 2344.

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References:

1. Stowasser M, Ahmed AH, Cowley D, Wolley M, Guo Z, McWhinney BC, Ungerer JP, Gordon RD. Comparison of seated with recumbent saline suppression testing for the diagnosis of primary aldosteronism. The Journal of Clinical Endocrinology & Metabolism. 2018 Sep 18;103(11):4113-24.