

PLASMA RENIN ACTIVITY
(RIA)

ng/mL/hr

Interpretation

POSTURE	REFERENCE RANGE OF PRA IN ng/mL/hr
Upright	1.90-6.00
Supine	0.50-1.90

Note: 1. Drugs like Contraceptive pills, Antihypertensives, Diuretics & Vasodilators can affect renin levels.

2. Physiological variables that affect the test are time of collection, posture of patient, sodium intake and 24 hour urine sodium excretion

3. In evaluating hypertensive patients, simultaneous measurements of 24 hr urinary sodium & creatinine and serum potassium, sodium & creatinine are recommended

Comments

The Renin-Angiotensin-Aldosterone System (RAAS) plays a paramount role in water homeostasis and electrolyte balance, and in the regulation of arterial pressure. Measurement of Plasma renin and Aldosterone is therefore considered a marker of the RAAS activity.

Uses

- To investigate Primary hyperaldosteronism
- To assess Renal artery stenosis
- To assess mineralocorticoid therapy and patient compliance

Increased Levels

<i>With consequent Secondary Aldosteronism</i>	<i>Without consequent Secondary Aldosteronism</i>
<ul style="list-style-type: none"> • HYPERTENSIVE STATES Malignant / Severe hypertension, unilateral renal disease with hypertension, high renin forms of hypertension, renal parenchymal disease, renin secreting tumors, oral contraceptive induced hypertension & Pheochromocytoma 	<ul style="list-style-type: none"> • Adrenocortical insufficiency & potassium depletion state
<ul style="list-style-type: none"> • EDEMATOUS NORMOTENSIVE STATES Cirrhosis, Hepatitis, Nephrosis & Congestive heart failure 	-
<ul style="list-style-type: none"> • HYPOKALEMIC NORMOTENSIVE STATES 	-

Bartter's syndrome, Alimentary disorders with electrolyte loss & Nephropathies with sodium or potassium wastage	
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Decreased Levels

<i>With Adrenocortical disease</i>	<i>Without Adrenocortical disease</i>
<p>HYPERTENSIVE STATES : Primary aldosteronism due to Adrenal adenoma, pseudoprimary or idiopathic aldosteronism, glucocorticoid suppressible aldosteronism, adrenal carcinoma with mineralocorticoid excess & adrenal enzyme defects</p>	<ul style="list-style-type: none"> ○ HYPERTENSIVE STATES: Low renin essential hypertension, Liddle's syndrome, licorice or mineralocorticoid ingestion, certain patients with renal parenchymal diseases ○ NORMOTENSIVE STATES: Renal parenchymal diseases, autonomic disorders with postural hypertension, uni-nephrectomy, drug induced adrenergic blockade & hyperkalemia

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