TEST: DEHYDROEPIANDROSTERONE SULFATE

PRINCIPLE:
Dehydroepiandrosterone sulfate (DHEA-S) is a steroid synthesized primarily by the adrenal gland. In those tissues containing sulfatase activity, DHEA-S can be converted to free steroid DHEA. Subsequently, DHEA and/or DHEA-S may be partially metabolized into active androgens and estrogens. Serum and plasma DHEA-S levels are found to be the highest of all steroids. DHEA-S levels decrease with age in both men and women after maximum levels are reached around the third decade of life. The half-life for DHEA-S is approximately 8 to 10 hours as compared to the 30 to 60 minute half-lives of other androgens. The long half-life of serum DHEA-S coupled with the limited diurnal variation make DHEA-S a convenient marker for the assessment of adrenal production. DHEA-S may be used in the differential diagnosis of Cushing's syndrome. DHEA-S may also be used to evaluate adrenocortical diseases, such as congenital adrenal hyperplasia and adrenal tumors. In hirsute female patients, increased DHEA-S levels have been associated with virilizing adrenal tumors. Patients with polycystic ovary syndrome have often demonstrated elevated levels of DHEA-S, suggesting an adrenal androgen contribution to the defect in this disorder.

SPECIMEN REQUIREMENTS:
2ml collected in a serum separator tube (gel barrier). Separate serum from cells ASAP or within 2 hours of collection by centrifugation. Stability after separation from cells: Ambient: 24 Hours; Refrigerated: 1 week; Frozen: 1 year (avoid repeated freeze/thaw cycles).

REJECTION CRITERIA: Plasma or other body fluids. Gross hemolysis

METHOD: Enhanced Chemiluminescence

REFERENCES:
1. Meikle AW, Daynes RA, Araneo BA. Adrenal androgen secretion and biologic effects. Endocrinol Metab Clin North Am. 1991 Jun; 20 (2): 381-400.
2. Helzlsouer KJ, Gordon GB, Alberg AJ, Bush TL, Comstock GW. Relationship of prediagnostic serum levels of dehydroepiandrosterone and dehydroepiandrosterone sulfate to the risk of developing premenopausal breast cancer. Cancer Res. 1992 Jan 1; 52 (1): 1-4.

Normal Range:

Age	Male (mcg/dL)	Female (mcg/dL)
<1 Month	≤316	15-261
1-6 Months	≤58	≤74
7-11 Months	≤26	≤26
1-3 Years	≤15	≤22
4-6 Years	≤27	≤34
7-9 Years	≤91	≤92
10-13 Years	≤138	≤148
14-17 Years	38-340	37-307
18-21 Years	24-537	51-321
22-30 Years	85-690	18-391
31-40 Years	106-464	23-266
41-50 Years	70-495	19-231
51-60 Years	38-313	8-188
61-70 Years	24-244	12-133
≥71 Years	5-253	7-177

Turnaround Time: 3 business days