

ANDROGEN VALUES IN PREMENOPAUSAL WOMEN WITHOUT SEXUAL DYSFUNCTION

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Introduction: A recent population study suggests that 43% of women, aged 18-59, have female sexual dysfunction (FSD), and 32% of these have decreased libido. The role of androgens in female sexual function is uncertain. Androgen values are hampered by imprecise assays and the lack of a control range defining specific levels at specific ages in those without sexual dysfunction. The few control populations in the literature were not screened for sexual function. We wished to establish a control range of androgens in women age 20-49 years without sexual dysfunction.

Methods: Healthy premenopausal women (n=60) were recruited and screened for sexual dysfunction by interview and modified FSQ where principle component analysis revealed 4 domains in 15 questions: desire, central arousal, peripheral arousal and orgasm. No medications or oral contraceptives were used. Bloods were drawn (AM), at days 8-15 of the menstrual cycle.

Results: MEAN HORMONE LEVELS (\pm SE) IN NORMAL CONTROLS(n=60)

AGE:	20-29 (n=17)	30-39 (n=23)	40-49 (n=20)
DHEA-S (ug/dL)	195.6 (\pm 18.7)	154.9 (\pm 15.9)	140.4 (\pm 15.7)
Range (Mean \pm SE)	176.9 – 214.3	139.0 – 170.8	124.7 – 156.1
SHBG (nmol/L)	51.1 (\pm 7.5)	48.5 (\pm 3.9)	52.7 (\pm 5.7)
Range (Mean \pm SE)	43.6 – 58.6	44.6 – 52.4	47.0 – 58.4
Total testosterone (ng/dL)	51.5 (\pm 6.0)	33.7 (\pm 6.1)	32.8 (\pm 5.8)
Range (Mean \pm SE)	45.5 – 57.5	27.6 – 39.8	27.0 – 38.6
Analog free testosterone (pg/ml)	1.51 (\pm 0.12)	1.10 (\pm 0.08)	1.02 (\pm 0.12)
Range (Mean \pm SE)	1.39 – 1.63	1.02 – 1.18	0.90 – 1.14
Free Androgen Index (FAI)	4.34 (\pm 0.62)	2.5 (\pm 0.46)	2.46 (\pm 0.48)
Range (Mean \pm SE)	3.72 – 4.96	2.04 - 2.96	1.98 – 2.94

SHBG did not change with age (p=.67). Significant negative correlation was seen between age and: DHEA-S (r = -.35; p=.009); Total T (r = -.30; p=.02); analog free T (r = -.46; p<.001); FAI (r = -.35; p=.006).

Conclusions: A range of androgens in premenopausal women (ages 20-49) without sexual dysfunction is presented. The levels are higher than previously published due to the elimination of women with low testosterone and FSD. SHBG does not decrease with age in this population and thus the FAI truly reflects a decrease in testosterone. Most of the decrease in androgens occurs at an earlier age than previously thought. Further research in androgen insufficiency in women is needed. A larger population needs to be tested.