

Impact of age, body weight and metabolic risk factors on steroid reference intervals in men

Marco Mezzullo, Guido Di Dalmazi^D, Alessia Fazzini, Margherita Baccini, Andrea Repaci, Alessandra Gambineri, Valentina Vicennati, Carla Pelusi, Uberto Pagotto and Flaminia Fanelli

Unit of Endocrinology and Prevention and Care of Diabetes, Center for Applied Biomedical Research, Department of Medical and Surgical Sciences, University of Bologna, S.Orsola Policlinic, Bologna, Italy

Correspondence
should be addressed
to F Fanelli
Email
flaminia.fanelli2@unibo.it

The journal and the authors apologise for errors in the above article published in the May 2020 issue (vol 182 Iss 5 pp 459–471) of the *European Journal of Endocrinology*. The legend to Figure 2 has an error describing the lower and upper limits calculated in the reference and dysmetabolic sub-cohorts. The correct legend is published below.

Figure 2 Steroid lower and upper limits per year of age in reference and dysmetabolic sub-cohorts. Green lines and dots: lower and upper limits calculated in the reference sub-cohorts. Black lines and white dots: lower and upper limits calculated in the dysmetabolic sub-cohorts. * $P < 0.05$.

Further a number of errors have been found in **Table 3** and the correct table is published in full here.

Table 3 Lower (LRL) and upper (URL) reference limits of age-dependent steroid hormones. Data are reported as the mean – 1.96 × s.d. and mean + 1.96 × s.d. of hormone distribution for LRL and URL, respectively, as calculated at every 5 years of adult age.

	Age (years)									
	20	25	30	35	40	45	50	55	60	65
17OHP5										
LRL	5.1 (41–6.3)	4.8 (3.9–5.8)	4.4 (3.6–5.2)	4.0 (3.4–4.6)	3.6 (3.0–4.0)	3.2 (2.7–3.4)	2.8 (2.3–3.0)	2.4 (1.8–2.7)	2.1 (1.4–2.4)	1.8 (1.1–2.2)
URL	46.4 (35.1–68.6)	42.4 (32.6–59.4)	38.1 (30.0–50.1)	33.5 (27.1–41.6)	33.5 (27.1–41.6)	33.5 (27.1–41.6)	33.5 (27.1–41.6)	33.5 (27.1–41.6)	33.5 (27.1–41.6)	33.5 (27.1–41.6)
DHEA										
LRL	9.9 (8.4–11.4)	9.2 (8.3–10.2)	8.4 (7.7–9.1)	7.5 (6.8–8.1)	6.5 (5.9–7.0)	5.6 (5.0–6.1)	4.7 (4.1–5.2)	3.8 (3.3–4.3)	3.1 (2.5–3.6)	2.4 (1.9–3.0)
URL	70.8 (58.9–87.4)	64.0 (56.0–74.1)	57.3 (51.6–64.1)	50.4 (46.1–55.4)	43.7 (40.3–47.8)	37.2 (34.3–40.9)	31.0 (28.5–34.5)	25.5 (23.1–28.7)	20.5 (18.3–23.5)	16.2 (14.1–18.9)
17OHP4										
LRL	1.50 (1.13–1.71)	1.46 (1.12–1.65)	1.43 (1.11–1.60)	1.40 (1.11–1.55)	1.39 (1.12–1.52)	1.38 (1.13–1.51)	1.39 (1.15–1.54)	1.41 (1.15–1.61)	1.45 (1.15–1.74)	1.50 (1.15–1.92)
URL	7.36 (6.57–8.05)	7.17 (6.45–7.77)	6.95 (6.33–7.47)	6.72 (6.16–7.17)	6.47 (5.96–6.86)	6.19 (5.73–6.61)	5.90 (5.42–6.39)	5.58 (5.05–6.21)	5.23 (4.61–6.02)	4.87 (4.11–5.84)
Cort. (B)										
LRL	3.5 (2.8–5.0)	3.3 (2.8–4.7)	3.1 (2.7–4.3)	3.0 (2.6–4.0)	2.8 (2.5–3.6)	2.6 (2.4–3.4)	2.4 (2.1–3.2)	2.2 (1.8–3.2)	2.0 (1.4–3.3)	1.9 (1.1–3.4)
URL	53.0 (46.0–77.3)	50.9 (44.7–72.6)	48.4 (43.1–67.3)	45.4 (41.3–61.6)	42.1 (39.0–55.3)	38.6 (36.4–49.2)	34.8 (33.4–43.9)	30.9 (29.5–39.6)	27.0 (25.0–36.4)	23.1 (20.4–33.5)
11S										
LRL	0.24 (0.19–0.31)	0.24 (0.19–0.30)	0.24 (0.20–0.29)	0.24 (0.21–0.28)	0.24 (0.21–0.28)	0.25 (0.21–0.28)	0.25 (0.21–0.28)	0.25 (0.21–0.30)	0.26 (0.20–0.32)	0.26 (0.19–0.34)
URL	3.65 (3.15–4.40)	3.55 (3.12–4.21)	3.45 (3.08–4.02)	3.34 (3.02–3.83)	3.23 (2.94–3.63)	3.11 (2.83–3.49)	2.99 (2.70–3.40)	2.87 (2.55–3.34)	2.74 (2.36–3.28)	2.61 (2.17–3.24)
Cortisol										
LRL	152 (111–182)	154 (119–180)	156 (126–177)	158 (134–176)	160 (141–176)	162 (144–177)	165 (145–181)	167 (143–186)	169 (140–192)	171 (137–198)
URL	598 (564–645)	584 (554–624)	569 (544–603)	555 (533–584)	541 (521–566)	527 (508–550)	513 (494–538)	499 (477–527)	485 (459–516)	471 (441–506)
A4										
LRL	1.20 (1.08–1.30)	1.15 (1.04–1.24)	1.10 (1.00–1.18)	1.06 (0.97–1.12)	1.02 (0.94–1.08)	0.99 (0.91–1.05)	0.96 (0.89–1.03)	0.94 (0.86–1.02)	0.93 (0.83–1.02)	0.92 (0.80–1.04)
URL	5.13 (4.58–5.85)	4.85 (4.39–5.45)	4.57 (4.19–5.05)	4.30 (3.99–4.67)	4.02 (3.78–4.31)	3.75 (3.55–3.97)	3.48 (3.30–3.69)	3.21 (3.00–3.47)	2.95 (2.68–3.26)	2.69 (2.37–3.07)

A4, androstenedione; Cort. (B), cortisosterone; 11S, 11-deoxycortisol; 17OHP5, 17-hydroxy pregnenolone; 17OHP4, 17-hydroxy progesterone.