

Online supplement Table 2: Log transformed testosterone and SHBG concentrations of lean (BMI<25 kg/m²), overweight (BMI 25-29.9 kg/m²) and obese (BMI ≥30 kg/m²) non-DM men and DM men. Values in brackets are hormone concentrations after reverse log transformation in nmol/L.

Testosterone concentrations and prevalence of subnormal FT in DM and non-DM columns were adjusted to the mean age, BMI and SHBG concentration of the whole population. Testosterone concentrations and prevalence of subnormal FT in the lean, overweight and obese columns were adjusted only for age and SHBG.

*p<0.05 vs obese men in the same group (DM or non-DM)

	% of men with subnormal FT	log FT (nmol/L)	Log Total T (nmol/L)	Log BT (nmol/L)	Log SHBG (nmol/l)
All men	35%	1.74±0.16 (0.189±0.005)	2.53±0.17 (11.9±0.05)	1.96±0.21 (3.14±0.06)	1.72±0.21 (52.1±1.6)
non-DM	33%	1.74±0.16 (0.192±0.005)	2.54±0.16 (12.1±0.005)	1.97±0.20 (3.27±0.06)	1.72±0.21 (52.1±1.6)
DM	45%	1.71±0.18 (0.177±0.005)	2.51±0.18 (11.3±0.005)	1.93±0.23 (2.94±0.06)	1.72±0.23 (52.1±1.7)
p vs non-DM	<0.001	<0.001	<0.001	<0.001	0.98
lean non-DM	26%*	1.77±0.17* (0.203±0.005)	2.56±0.16* (12.7±0.05)	1.98±0.22* (3.35±0.06)	1.80±0.21* (63.2±1.6)
lean DM	44%	1.73±0.20* (0.186±0.006)	2.54±0.18* (12.0±0.05)	1.92±0.23 (2.87±0.06)	1.83±0.17* (68.2±1.5)
p vs non-DM	0.02	0.15	0.25	0.03	0.34
overweight non-DM	29%*	1.76±0.17* (0.200±0.005)	2.56±0.16* (12.5±0.05)	1.99±0.20* (3.39±0.06)	1.73±0.19* (53.7±1.5)
overweight DM	44%	1.72±0.19* (0.182±0.005)	2.52±0.17* (11.4±0.05)	1.94±0.25* (3.02±0.06)	1.70±0.22 (50.1±1.7)
p vs non-DM	<0.001	0.014	0.001	0.002	0.09
obese non-DM	40%	1.72±0.16 (0.180±0.005)	2.52±0.16 (11.4±0.05)	1.93±0.20 (2.95±0.06)	1.67±0.20 (46.2±1.6)
obese DM	50%	1.68±0.16 (0.165±0.005)	2.49±0.17 (10.6±0.05)	1.90±0.21 (2.76±0.06)	1.67±0.22 (46.9±1.7)
p vs non-DM	0.005	0.012	0.004	0.04	0.74

Online supplement Table 3: Comparison of demographic parameters and hormone concentrations of men with subnormal or normal T concentrations. Please note that the mean SHBG concentration of men with subnormal FT is higher than that of normal FT. On the contrary, the mean SHBG concentration of men with normal total T is higher than that of men with subnormal total T.

*p<0.05 vs men with normal T concentrations

	Men with subnormal FT	Men with normal FT	Men with subnormal total T	Men with normal total T	Men with subnormal FT and total T	Men with normal FT and total T
n	653	1196	646	1203	401	951
Age(years)	65.7 ± 10.8*	58.3 ± 8.9	61.7±10.5*	60.5±10.1	64.2±10.6*	58.4±8.9
BMI (kg/m ²)	30.3 ± 6.1*	29.3 ± 5.3	31.7±6*	28.6±5	31.6±6.4*	28.7±5.1
Total T ng/dl	290.1 ± 111.8*	411.3 ±143.7	234.4± 50.2*	440.4± 127.6	219.2±53.8*	450.5±130.1
Total T nmol/l	12.7± 4.9*	18±6.3	10.3±2.2*	19.3±5.6	9.6±2.4*	19.8±5.7
SHBG nmol/l	64.2 ±33.7*	55.2 ± 27.1	41.7± 19.1*	67.2± 30.9	48.0±20.7*	61.2±26.9
FT pg/ml	38.5 ± 8.8*	68.8 ± 18.0	45.6± 14.9*	64.8± 21	36.5±9.5*	70.9±19.1
FT nmol/l	0.169±0.039*	0.302±0.079	0.2±0.065*	0.284±0.092	0.16±0.041*	0.311±0.084
BT ng/dl	64.8 ± 24.9*	120.7 ± 47.9	81.5± 35*	111.4± 52.3	63.8±26.6*	123.3±51.5
BT nmol/l	2.84±1.09*	5.29±2.1	3.57±1.54*	4.89±2.29	2.8±0.92*	5.41±2.26
Prevalence of subnormal FT			62%*	21%		
Prevalence of subnormal total T	61%*	39%				