



Androgen levels and sexual activity in young men (n=773), 20-29 years of age, a population based study.

Odense Androgen Study

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Aim

- To evaluate associations between androgen levels and sexual activity in young men.

Material and methods

773 Danish men, aged 20–29 years, underwent clinical and biochemical examination: Total testosterone (TT), bio-available testosterone (BioT), DHT levels and questionnaires (sexual function). Odense Androgen Study is a population-based cohort study and the included men matched the county population of Funen.

Results

Partner status (tables 1 and 2)

391/773 (50.6 %) were living with a partner. 141/773 (18.2 %) were living alone and had a sexual partner and 241/773 (31.2 %) were singles without a sexual partner. 28/773 (3.6 %) had no sexual debut.

Time since last coitus and testosterone levels

TT, BioT and DHT levels were negatively associated with time since last coitus ($r = -0.12$; $r = -0.10$ and $r = -0.12$, respectively; $p < 0.001$).

Frequency of coitus and testosterone levels (table 3)

414 men reported lower frequency of coitus than desired. 204/414 had a partner and 99/204 criticized low libido of their partner. These 99 men had their last coitus 5 days ago (1-28) (median (10-90 percentiles)). The number of days since last coitus was 6 days (1-60) in the remaining complainers (105/204), who were content with their partners ($p < 0.001$ vs. men unsatisfied with partners). The 99 men compared to the 105 men had significantly lower TT, BioT and DHT 19.1 vs. 21.7 nmol/l; 11.2 vs. 12.3 nmol/l and 1.55 vs. 1.71 nmol/l, respectively ($p < 0.01$).

TABLE 1: Characteristics of the participants according to partner status.

	Living with sexual partner n = 391	Living alone with sexual partner	
		Yes n = 141	No n = 241
Age (years) ***	26.0 ± 2.4	23.7 ± 2.7	23.8 ± 2.7
Waist (cm) **	90.3 ± 10.1	88.1 ± 8.9	88.2 ± 68.5
Total testosterone (nmol/l) *	20.7 ± 6.0	21.5 ± 6.7	22.3 ± 7.0
BioT (nmol/l) ***	11.8 ± 3.0	12.6 ± 3.3	13.3 ± 3.7
DHT (nmol/l)	1.70 ± 0.57	1.76 ± 0.63	1.75 ± 0.69
Time since last coitus (days) ***	34.0 (1-20)	5.3 (1-14)	676.9 (7-4383)

Mean and SD, except for time since last coitus mean and 10 & 90 percentiles.

Kruskal Wallis test between the groups:

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Conclusion

- 3.6 % of men aged 20-29 years had no sexual debut.
- Androgen levels were negatively associated with time since last coitus.
- Men with complaints concerning partner's too low libido had fewer days since last coitus but had lower androgen levels compared to men without complaints about their partner's libido.

TABLE 2: Characteristics of the participants according to sexual debut.

	Sexual debut	
	Yes n = 745	No n = 28
Age ***	25.0 ± 2.8	22.8 ± 2.7
Waist (NS)	89.2 ± 9.9	90.7 ± 11.4
Total testosterone (nmol/l) *	21.5 ± 6.5	19.0 ± 3.9
BioT (nmol/l)	12.4 ± 3.4	11.9 ± 2.1
DHT (nmol/l) *	1.70 ± 0.62	1.43 ± 0.45
Time since last coitus (days)	73.1 (1-150)	--

Mean and SD. Mann Whitney test between groups:

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

TABLE 3: Testosterone levels in men with lower frequency of coitus than wanted, n=204/414.

	Criticism of partner's low libido		p between groups
	Yes n = 99	No n = 105	
Total testosterone (nmol/l)	19.1 ± 5.2	21.7 ± 5.7	$p < 0.01$
BioT (nmol/l)	11.2 ± 2.8	12.3 ± 2.9	$p < 0.01$
DHT (nmol/l)	1.55 ± 0.46	1.71 ± 0.56	$p < 0.01$

Mean and SD.