

Reference range for penile length in Chinese men and their relationship with somatometric parameters: a prospective cohort analysis and establishment of a nomogram

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Prospective study (IRB approved)
Time period: Jan 2018 to Dec 2019

Inclusion criteria:
Age >17
Chinese ethnicity
Undergo SA or GA procedures

565 men were eligible.
Mean age 66.6 years.

Recording of somatometric parameters:

- Age
- Height
- Weight and BMI
- Index finger length
- Middle finger length
- Hand width
- Shoe size

Standardised & validated penile dimension measurements at room temperature

Flaccid pendulous length

Flaccid penile length from tip of glans to base of pendulous penis.

Pubic arch penile length

Tip of glans to lower edge of pubic bone

Flaccid circumference

The longest linear distance around the edge of penis

Stretched flaccid length

Pubic bone to tip of the glans under gentle extension of penis

	Flaccid pendulous length	Pubic arch penile length	Stretched flaccid length	Flaccid circumference
Weight	-0.42 (P=0.380)	-0.01 (P=0.822)	-0.01 (P=0.828)	0.37 (P<0.001)
Height	0.05 (P=0.295)	0.04 (P=0.435)	0.06 (P=0.223)	0.18 (P<0.001)
BMI	-0.07 (P=0.125)	-0.04 (P=0.400)	0.05 (P=0.308)	0.34 (P<0.001)
Middle finger	0.08 (P=0.088)	0.04 (P=0.398)	0.06 (P=0.212)	0.03 (P=0.587)
Ring finger	0.08 (P=0.083)	0.01 (P=0.747)	0.04 (P=0.393)	-0.01 (P=0.923)
Hand width	-0.05 (P=0.309)	-0.10 (P=0.046)	-0.09 (P=0.072)	0.10 (P=0.050)
Shoe size	-0.01 (P=0.855)	-0.01 (P=0.917)	0.02 (P=0.656)	0.25 (P<0.001)
Prostate size on TRUS (n=168)	0.87 (P=0.263)	0.10 (P=0.210)	0.17 (P=0.029)	0.143 (P=0.068)

	Age (years)	BMI	Flaccid pendulous length (cm)	Pubic arch penile length (cm)	Stretched flaccid length (cm)	Flaccid circumference (cm)
Mean	66.6	24.3	9.4	11.1	12.8	7.8
SD	14.0	3.9	1.7	1.8	1.9	1.0
Minimum	19.0	15.47	3.5	4.8	5.6	5.0
Maximum	100.0	39.93	14.5	18.0	19.0	11.0

True micropenis = 7.9cm (2.5SD<mean)



Conclusions

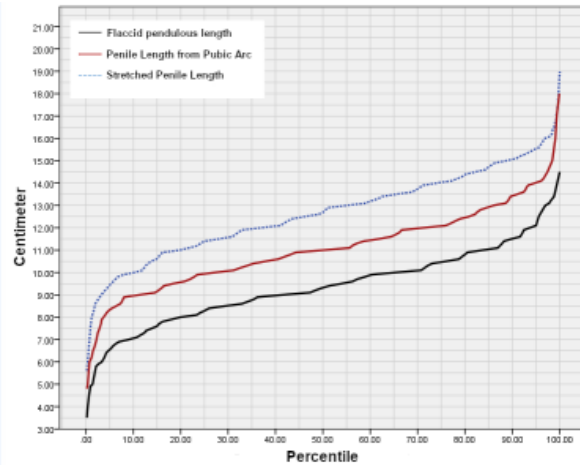


Figure 1: Combined nomogram of flaccid pendulous length, pubic arch penile length, and stretched flaccid length.

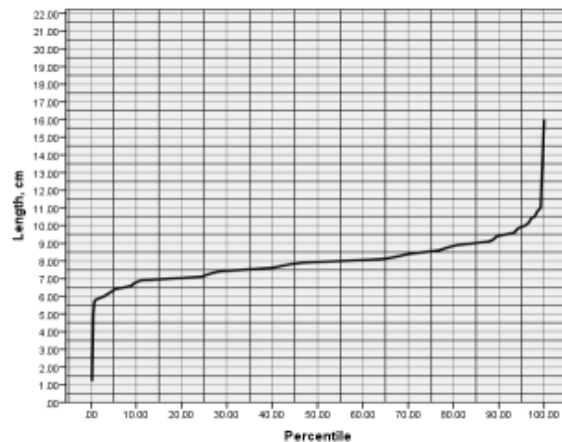


Figure 2: Nomogram of flaccid circumference measurement.

- Reference penile dimension measurements and nomograms for Chinese men established
- Flaccid circumference was positively correlated with BMI ($r=0.34$), weight ($r=0.37$), height ($r=0.18$) and feet size ($r=0.25$).
- Obese men ($BMI \geq 25$) had significantly shorter flaccid pendulous length but longer flaccid circumference than non-obese men, stretched flaccid lengths were similar. Weight loss should be recommended for those concerned.