

## SUPPLEMENTARY MATERIAL

**Supplementary Table 1.** Demographic, medication use and anthropometric data of transgender women, cisgender women and cisgender men

	Age (years)	Age at start of hormone therapy (years)	Time of hormone therapy until the initiation of the study (years)	Oestrogen (mg/day)	Irregular oestrogen use in the past year	Cyproterone acetate (mg/day)	Gonadectomy/ time (years)	Weight (kg)	Height (m)	BMI (kg/m <sup>2</sup> )
Non gonadectomized transgender women										
1	27	18	8	Oestradiol valerate (2)	No	Yes (50)	No	75	1.72	25.4
2	28	14	14	Conjugated oestrogen (1.25)	No	Yes (50)	No	75.35	1.74	24.8
3	28	14	14	Conjugated oestrogen (0.625)	No	Yes (50)	No	80.1	1.74	26.4
4	29	23	6	Oestradiol valerate (2)	No	Yes (50)	No	69.2	1.72	23.4
5	30	25	5	Oestradiol valerate (1)	No	Yes (50)	No	86.7	1.86	25.1
6	30	21	9	Conjugated oestrogen (0.625)	Yes *	Yes (50)	No	99.5	1.81	30.4
7	33	18	15	Conjugated oestrogen (0.625)	Yes**	Yes (50)	No	83.3	1.82	25.2
8	38	17	21	17β oestradiol gel (0.5)	No	Yes (50)	No	89.1	1.84	26.3
9	38	14	24	17 β oestradiol (1.5) gel	Yes *	Yes (50)	No	67.5	1.70	23.4

10	41	12	30	Oestradiol valerate (2)	No	Yes (50)	No	56.8	1.68	20.1
11	44	35	9	Conjugated oestrogen (0.625)	No	Yes (50)	No	83.5	1.74	27.6
Gonadectomized transgender women										
12	30	16	14	Conjugated oestrogen (1.25)	No	No	Yes (0.25)	71.2	1.79	22.2
13	34	18	16	Oestradiol valerate (2)	No	No	Yes (3.00)	83	1.70	28.7
14	38	16	22	17 $\beta$ oestradiol gel (1.0)	No	No	Yes (5.75)	66.5	1.70	23.0
15	39	14	24	Conjugated oestrogen (1.25)	No	No	Yes (9.00)	84.4	1.78	26.6
Cisgender women										
1	27	–	–				No	56.5	1.63	21.3
2	32	–	–	Ethinylestradiol (0.035)	–	Yes (2)	No	76.1	1.60	29.7
3	33	–	–	Ethinylestradiol (0.030)	–	No	No (Drospirenone 3)	55.4	1.69	19.4
4	33	–	–	–	–	–	No	62.4	1.60	24.4
5	34	–	–	–	–	–	No	51.8	1.61	20.0
6	35	–	–	–	–	–	No	52.00	1.60	20.3
7	36	–	–	–	–	–	No	55.4	1.62	21.1
8	37	–	–	–	–	–	No	60.4	1.69	21.2
9	37	–	–	–	–	–	No	54.7	1.68	19.4
10	38	–	–	Ethinylestradiol (0.035)	–	Yes (2)	No	62.6	1.68	22.2
11	38	–	–	–	–	–	No	56.9	1.58	22.8
12	41	–	–	–	–	–	No	81.6	1.57	33.1

13	43	-	-	-	-	-	No	64.2	1.64	23.7
Cisgender men										
1	29	-	-	-	-	-	No	69.1	1.70	23.9
2	30	-	-	-	-	-	No	86.1	1.86	24.9
3	34	-	-	-	-	-	No	92	1.70	31.8
4	34	-	-	-	-	-	No	86	1.86	24.9
5	36	-	-	-	-	-	No	71.9	1.72	24.3
6	36	-	-	-	-	-	No	81.7	1.72	27.6
7	37	-	-	-	-	-	No	77.1	1.70	26.7
8	39	-	-	-	-	-	No	94.4	1.81	28.8
9	39	-	-	-	-	-	No	74.1	1.75	24.2
10	41	-	-	-	-	-	No	93	1.71	31.8
11	41	-	-	-	-	-	No	85.1	1.75	27.8
12	41	-	-	-	-	-	No	80.7	1.74	26.7
13	41	-	-	-	-	-	No	74.1	1.75	24.2
14	42	-	-	-	-	-	No	73.4	1.81	22.5

Mg: milligram; kg: kilogram; m: metro; m2: metre squared; \*Irregular use of oestrogen for less than 2 months in the past year; \*\* Irregular use of oestrogen for more than 2 months in the past year .No subject was treated with puberty blockers. Usually, the beginning of cross-sex hormonal treatment was not supervised in these people.

**Supplementary Table 2.** Comparative analysis of age, body mass index, VO2 Peak and mean strength among the nongonadectomized and gonadectomized transgender woman groups.

	Nongonadectomized TW (11)	Gonadectomized TW (4)	P
Age (years)	30.0 (range 27.0-44.0)	36.0 (range 30.0-39.0)	NS
BMI (kg/m <sup>2</sup> )	25.2 (range 20.1-30.4)	24.8 (range 22.2-28.7)	NS
VO2 Peak (L/min)	2511.0 (range 1942.0-3508.0)	2622.0 (range 2171.0-2737.0)	NS
Mean strength (kg)	34.0 (range 28.3-42.6)	35.5 (range 27.3-4)	NS

TW: transgender women; BMI: body mass index; kg/m<sup>2</sup>: kilogram per square metre; VO2: oxygen consumption; L/min: litre per minute; kg: kilogram; ns: non-significant.

**Supplementary Table 3.** IPAQ recommended classification of level of physical activity

**Very active:** an individual who meets the following recommendations: vigorous:  $\geq$  five days/week and  $\geq$  30 minutes per session and/or, moderate:  $\geq$  three days/week and  $\geq$  20 minutes per session + moderate and/or, walk:  $\geq$  five days/week and  $\geq$  30 minutes per session.

**Active:** an individual who meets the following recommendations: vigorous:  $\geq$  three days/week and  $\geq$  20 minutes per session and/or, moderate or walk:  $\geq$  five days/week and  $\geq$  30 minutes per session and/or, any added activity:  $\geq$  five days/week and  $\geq$  150 minutes/week (walk + moderate + vigorous).

**Insufficiently active:** an individual who is engaged in physical activity but not enough to be classified as active because the recommendations of frequency or duration are not met. This classification is obtained by adding the frequency and duration of different types of activities (walk + moderate + vigorous). This group was divided into two subgroups according to compliance or noncompliance with some of the recommendation criteria.

- **Insufficiently active A:** an individual who meets at least one of the recommendation criteria regarding the frequency or duration of activity: frequency: five days/week or duration: 150 minutes/week.
- **Insufficiently active B:** an individual who has not met any of the recommendation criteria regarding the frequency or duration of activity.

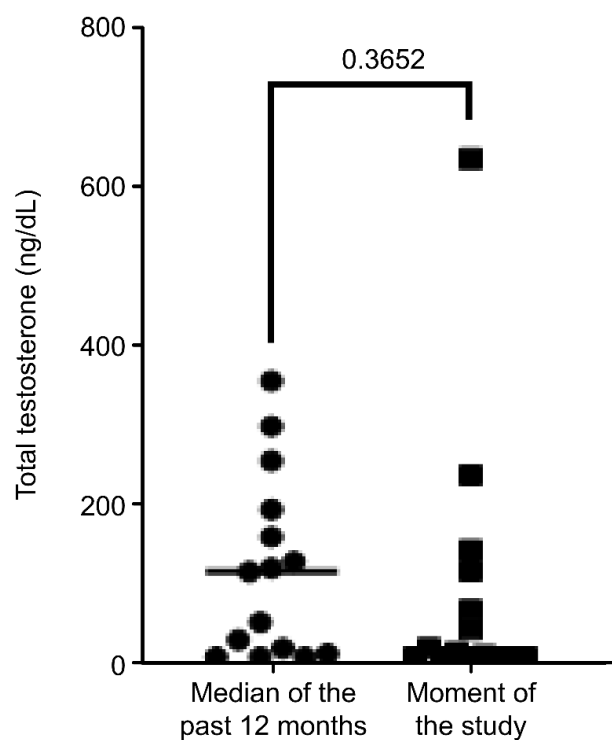
**Sedentary:** an individual who has not engaged in any physical activity for at least ten uninterrupted minutes in one week

Adapted from Santos RD 2006 and Marega M 2006. Intervenção motivacional aplicada ao combate do sedentarismo na população submetida à revisão continuada da saúde do Centro de Medicina Preventiva do Hospital Israelita Albert Einstein. [Resumo] [Apresentado no International Congress on Physical Activity and Public Health; 2006. São Paulo, Brasil].

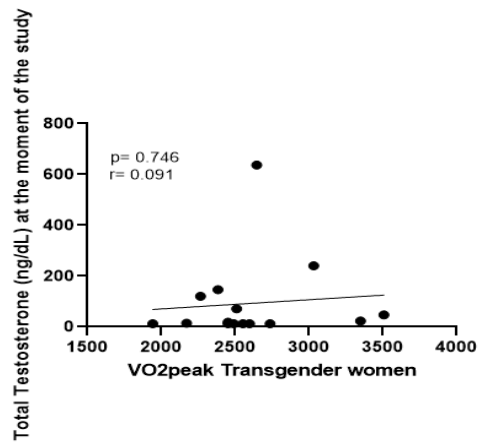
**Supplementary Table 4.** Descriptive table of the physical activity levels of transgender women, cisgender women and cisgender men

	Transgender women (15)	Cisgender women (13)	Cisgender men (14)
Very active	2	7	4
Active	8	4	7
Insufficiently active	3	2	1
A			
Insufficiently active	2	0	0
B			
Sedentary	0	0	2

Comparison among groups: Transgender women vs. cisgender women  $p=0.3452$ ;  
 Transgender women vs. Cisgender men  $p=0.6560$ ; Cisgender women vs. Cisgender men  
 $p=0.0774$ .



**Supplementary Figure 1:** Comparison of testosterone levels in transgender women at the time of the study and the median of the past 12 months.  
 ng/dL: nanograms per deciliter



**Supplementary Figure 2:** Correlation between total testosterone and VO2 peak of transgender women at the time of the study.  
ng/dL: nanograms per deciliter