

ANTROPOMETRÍA - BÁSICO

ANTROPOMETRÍA

ANTROPO --- METRÍA

- Griego «Anthropos» ----- Hombre
- «metría» ----- Medición

Es la Medición del Cuerpo Humano.

CINE --- ANTROPO --- METRÍA

Es la Medición del Cuerpo Humano en función al Movimiento*.

*. Ross & Marfell-Jones, 1991

CINEANTROPOMETRIA

CINE – ANTROPO - METRIA

La medición del ser humano en función al movimiento. *

Especificaciones El estudio y evaluación del individuo:

- TAMAÑO
- FORMA
- PROPORCIÓN
- COMPOSICIÓN
- MADURACIÓN

*. Ross & Marfell-Jones, 1991

APLICACIONES

Salud

% graso y muscular. elevado, bajo



APLICACIONES

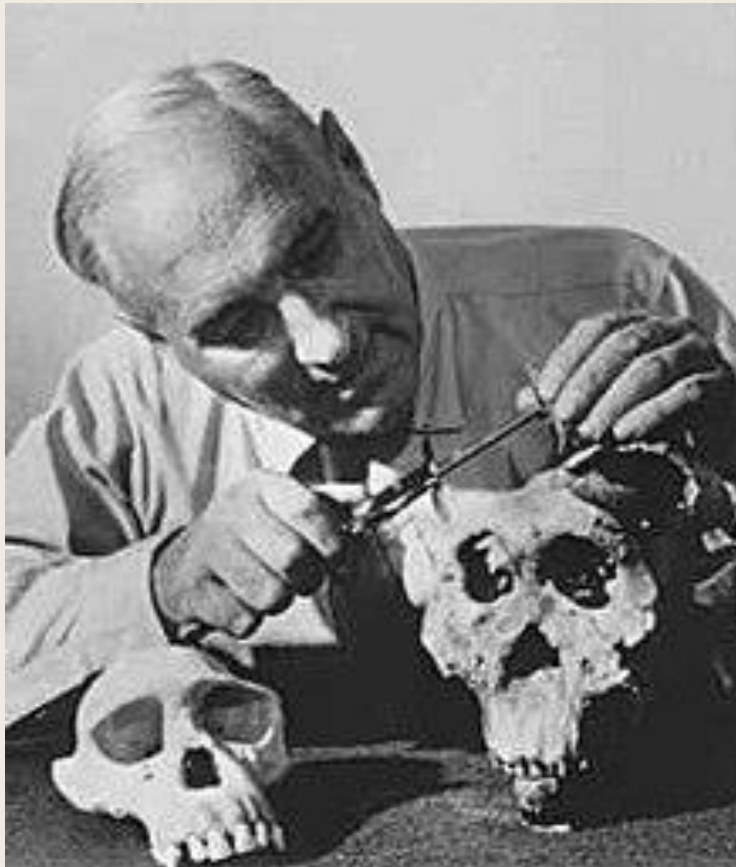
Deporte: Rendimiento



APLICACIONES

ANTROPOLOGÍA

Estudiar efectos de medio ambiente sobre cuerpo



APLICACIONES

GERONTOLOGÍA

Control de la masa muscular



APLICACIONES

Crecimiento y desarrollo

Estadíos madurativos, cambios con la edad



ASPECTOS GENÉTICOS Y PLÁSTICOS



Estructura ósea:

- Diámetros
- longitudes

Aspectos plásticos:

- Perímetros (músculo)
- Pliegues (adiposo)

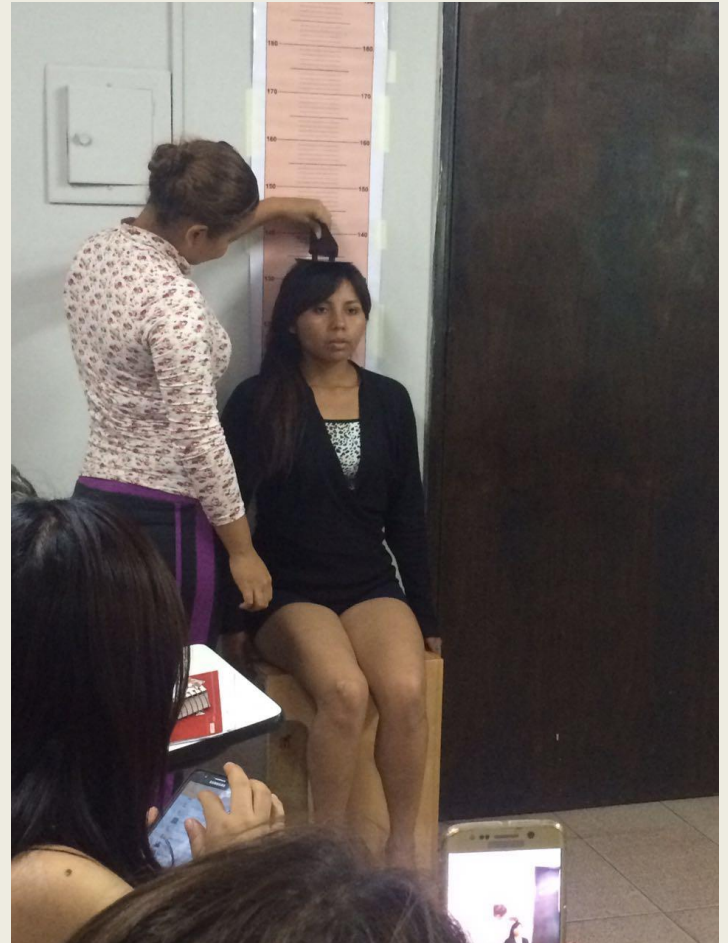
ISAK --- MAS DE 40 VARIABLES



NIVEL 1

BÁSICAS

- ☐ Masa corporal (Peso)
- ☐ Talla (Estatura)
- ☐ Talla sentado/a
- ☐ Envergadura



NIVEL 1

DIÁMETROS

- ☐ Humeral
- ☐ Femoral
- ☐ Muñeca
- ☐ Tobillo



NIVEL 1

PERÍMETROS

- Brazo relajado
- Brazo flexionado
- Antebrazo máximo
- Cintura mínima
- Cadera máximo
- Muslo medio
- Pantorrilla máximo



NIVEL 1

PLIEGUES

- ☐ Triceps
- ☐ Subescapular
- ☐ Bíceps
- ☐ Cresta ilíaca
- ☐ Supraespinal
- ☐ Abdominal
- ☐ Muslo medial
- ☐ Pantorrilla



ALGORITMO DE APLICACIÓN

Relevamiento de datos



Procesamiento, clasificación,
comparación o correlación



Análisis



Toma de decisiones



REFERENCIAS

- Normativas

Argoref, Canref, Nhanes, Sap

- Prototípicas

Aquatic sports 1991, URBA Rugby,

- Metafóricas

(Phantom)

REFERENCIAS NORMATIVAS

ARGOREF

Tabla 4: Datos antropométricos Femenino

		ESTADÍSTICAS						PERCENTILES							
		n	prom.	est. d.	mdna	max	min	5%	15%	25%	50%	75%	85%	95%	IC 95%
EDAD años		90	26.0	2.3	26.3	30.0	19.1	22.7	23.4	23.8	26.3	27.8	28.8	29.3	25.5 26.5
MASA CORP. Kg		90	56.6	9.2	54.2	94.4	41.8	47.3	48.9	49.8	54.2	61.4	63.0	75.0	54.7 58.5
S Y LONGITUDES ENTARIAS (cm)	TALLA	90	161.1	6.7	160.2	177.0	147.1	150.9	154.9	156.2	160.2	166.0	167.7	173.0	159.7 162.5
	T. SENT	90	85.8	3.3	85.7	95.4	80.0	80.5	81.9	83.8	85.7	87.3	88.8	91.1	85.1 86.4
	ENVERG	39	164.6	8.9	163.5	180.2	143.3	151.0	156.6	158.5	163.5	171.4	173.5	178.8	161.8 167.3
	ACR-RAD	90	30.8	1.8	30.9	34.6	26.8	27.7	28.8	29.4	30.9	32.1	32.7	33.2	30.4 31.1
	RAD-EST	90	23.7	1.6	23.8	30.0	20.9	21.2	21.8	22.8	23.8	24.8	25.1	26.0	23.4 24.1
	M. EST-DAC	90	18.4	1.0	18.2	21.2	16.5	17.0	17.4	17.6	18.2	18.9	19.3	20.1	18.2 18.6
	ILIOESPIN.	90	88.6	5.3	88.0	98.4	71.7	79.3	83.9	85.2	88.0	92.4	94.7	97.5	87.5 89.7

CHILEREF

 Anexo 8- 5. Datos antropométricos Chileref femeninos (Santiago, Chile), 2007

SEXO	FEMENINO														
GETARIO N	18-25 X	74 M	de	25-30 X	30 M	de	30-35 X	18 M	de	35-40 X	16 M	de	40-50 X	15 M	de
EDAD (años)	20.4	19.9	1.7	27.6	27.9	1.6	32.0	31.7	1.4	37.7	38.3	1.5	44.8	45.1	2.8
PESO (kg)	58.5	58.3	8.5	57.9	56.0	7.4	59.9	58.9	6.8	60.0	57.4	9.3	62.9	61.0	12.8
TALLA (cm)	161.5	160.7	6.3	160.8	160.4	6.2	159.5	160.8	4.6	161.5	162.8	6.8	160.0	159.0	9.0
HÚMERO (cm)	6.0	6.0	0.5	5.9	6.0	0.6	5.9	5.9	0.4	5.9	5.8	0.3	6.0	6.0	0.6
FÉMUR (cm)	8.8	8.8	0.5	8.6	8.7	0.8	8.6	8.7	0.6	8.4	8.6	0.6	8.5	8.6	0.6
BRAZO RELAJADO (cm)	27.3	27.2	2.6	27.0	26.8	2.8	27.8	27.4	2.8	28.3	27.9	2.5	28.0	28.0	2.8
BRAZO FLEXIÓN (cm)	27.8	28.0	2.5	27.6	27.4	2.8	28.5	27.9	2.5	29.2	29.0	2.4	28.1	28.5	2.8
CINTURA MIN (cm)	71.2	70.4	5.9	70.8	72.1	5.3	74.3	75.0	6.5	75.6	73.1	8.8	77.8	76.2	9.5
CADERAS (cm)	96.1	96.5	6.1	95.1	94.8	5.8	97.2	95.2	6.8	96.2	95.0	7.1	96.2	94.6	5.6
PANTORRILLA (cm)	34.4	34.8	3.3	34.6	34.6	2.4	33.9	33.8	3.0	34.2	34.6	2.2	34.5	34.2	2.7
TRÍCEPS (mm)	16.6	17.0	4.9	16.0	16.0	4.3	16.9	16.8	5.4	17.4	16.0	5.2	15.7	15.3	5.3
SUBESCAPULAR (mm)	12.4	12.0	5.3	13.2	13.0	5.0	16.0	15.9	5.8	14.4	12.5	6.6	16.8	16.0	6.3
BÍCEPS (mm)	7.4	7.0	3.2	6.2	6.0	2.6	7.8	6.6	4.9	6.0	5.3	2.3	7.0	6.0	3.4
CRESTA ILIACA (mm)	22.9	23.5	7.4	19.4	19.0	7.9	21.2	23.0	5.2	17.7	17.3	6.8	22.2	19.5	11.2
SUPRAESPINAL (mm)	14.3	14.0	6.0	12.9	13.2	5.2	17.1	16.6	7.5	12.7	12.8	5.5	13.1	11.0	7.2
ABDOMINAL (mm)	21.0	20.6	7.3	19.5	20.0	5.8	20.7	21.8	5.3	19.5	20.4	6.6	21.4	20.5	11.5
MUSLO ANTERIOR (mm)	21.7	21.0	6.7	22.1	19.9	7.9	21.0	20.9	6.0	20.3	17.6	6.4	18.0	18.0	4.3
PANTORR. MED (mm)	13.1	13.0	4.4	14.6	14.0	5.3	13.4	14.0	3.8	12.2	10.4	6.0	12.1	11.0	5.3
IMC kg/m2	22.45	22.64	3.04	22.37	21.80	2.35	23.50	23.43	2.01	22.98	22.00	2.88	24.43	23.77	3.30
SUMA 6PLIEGUES (mm)	99.1	99.6	28.3	98.3	101.3	24.8	105.0	107.8	27.8	96.4	90.9	24.7	97.1	90.5	27.8
ENDOMORFO	4.52	4.80	1.42	4.44	4.51	1.12	5.15	5.28	1.57	4.62	4.36	1.34	4.78	5.12	1.52
MESOMORFO	4.04	3.96	1.28	3.74	3.94	1.71	4.05	3.96	0.88	3.90	3.47	0.98	4.15	4.04	1.44
ECTOMORFO	2.12	1.95	1.81	2.00	2.03	1.02	1.43	1.23	0.73	1.85	2.03	1.09	1.31	1.17	0.97
%GR DURNIN & W	30.16	31.07	4.87	29.01	29.54	4.47	30.78	32.23	4.64	29.17	28.56	4.62	30.48	31.66	5.64
KG GRASA	18.16	18.17	4.19	16.98	17.40	4.16	18.65	18.47	4.46	17.84	15.84	5.42	19.42	19.88	6.49
KG MASA MAGRA	41.62	41.52	4.53	40.92	40.08	4.28	41.25	41.05	3.31	42.19	42.22	4.31	43.44	43.55	7.67

REFERENCIAS PROTOTÍPICAS

Table I. Descriptive anthropometry of URBA players by position (mean $\pm$ s).

	Prop (n = 22)	Hooker (n = 10)	Second row (n = 16)	Back row (n = 22)	Scrum half (n = 12)	Fly half (n = 13)	Centre (n = 18)	Wing (n = 13)	Fullback (n = 7)	T (n = 10)
Basics										
Age (years)	24.5 $\pm$ 4.1	25.2 $\pm$ 3.2	23.9 $\pm$ 2.8	24.6 $\pm$ 3.6	24.2 $\pm$ 3.1	23.3 $\pm$ 3.5	25.2 $\pm$ 4.0	23.7 $\pm$ 3.9	24.2 $\pm$ 3.3	24.3 $\pm$ 3.5
Body mass (kg)	105.0 $\pm$ 10.0	94.6 $\pm$ 5.4	101.6 $\pm$ 8.2	90.4 $\pm$ 9.4	73.1 $\pm$ 5.7	81.5 $\pm$ 7.2	84.0 $\pm$ 7.1	78.2 $\pm$ 10.2	80.7 $\pm$ 4.6	89.5 $\pm$ 10.1
Stature (cm)	179.2 $\pm$ 3.2	173.7 $\pm$ 4.2	189.3 $\pm$ 4.4	181.8 $\pm$ 6.1	167.3 $\pm$ 3.9	177.4 $\pm$ 5.8	178.2 $\pm$ 4.5	175.9 $\pm$ 6.9	180.7 $\pm$ 4.4	178.8 $\pm$ 5.5
Sitting height (cm)	95.6 $\pm$ 2.5	93.1 $\pm$ 1.6	99.1 $\pm$ 2.5	96.1 $\pm$ 3.9	90.9 $\pm$ 2.3	95.0 $\pm$ 3.0	93.7 $\pm$ 2.8	93.4 $\pm$ 3.5	96.8 $\pm$ 2.3	95.0 $\pm$ 2.5
Breadths (cm)										
Biacromiale	42.5 $\pm$ 1.7	42.5 $\pm$ 1.9	43.1 $\pm$ 2.1	41.9 $\pm$ 2.0	38.4 $\pm$ 2.7	40.8 $\pm$ 2.3	41.8 $\pm$ 1.4	40.9 $\pm$ 2.1	40.7 $\pm$ 2.0	41.6 $\pm$ 2.1
Transverse chest	33.8 $\pm$ 1.5	32.1 $\pm$ 1.7	32.0 $\pm$ 1.5	31.4 $\pm$ 2.3	28.6 $\pm$ 1.3	30.6 $\pm$ 1.9	30.6 $\pm$ 1.4	29.9 $\pm$ 1.3	29.7 $\pm$ 1.1	31.2 $\pm$ 1.5
Antero-post. chest	24.2 $\pm$ 1.6	22.6 $\pm$ 2.1	22.3 $\pm$ 1.8	21.3 $\pm$ 1.5	20.2 $\pm$ 1.9	20.7 $\pm$ 1.3	20.8 $\pm$ 1.3	20.7 $\pm$ 2.3	19.5 $\pm$ 1.7	21.6 $\pm$ 1.8
Bi-cristale	31.0 $\pm$ 1.6	29.5 $\pm$ 2.0	30.9 $\pm$ 1.7	30.2 $\pm$ 1.9	26.9 $\pm$ 1.3	29.0 $\pm$ 1.7	29.2 $\pm$ 1.2	28.4 $\pm$ 1.0	28.9 $\pm$ 1.5	29.5 $\pm$ 1.6
Humerus	7.6 $\pm$ 0.4	7.4 $\pm$ 0.3	7.7 $\pm$ 0.5	7.5 $\pm$ 0.5	7.0 $\pm$ 0.3	7.2 $\pm$ 0.4	7.4 $\pm$ 0.3	7.2 $\pm$ 0.3	7.3 $\pm$ 0.2	7.4 $\pm$ 0.3
Fémur	10.9 $\pm$ 0.6	10.7 $\pm$ 0.3	10.9 $\pm$ 0.5	10.4 $\pm$ 0.5	9.8 $\pm$ 0.4	10.2 $\pm$ 0.4	10.2 $\pm$ 1.6	10.1 $\pm$ 0.5	10.2 $\pm$ 0.5	10.4 $\pm$ 0.6
Girths (cm)										
Head	58.8 $\pm$ 1.2	58.0 $\pm$ 1.4	58.9 $\pm$ 1.4	58.3 $\pm$ 1.7	56.5 $\pm$ 1.5	57.6 $\pm$ 1.6	57.6 $\pm$ 0.9	57.2 $\pm$ 1.4	57.3 $\pm$ 1.4	58.0 $\pm$ 1.5
Arm, relaxed	38.2 $\pm$ 1.8	36.8 $\pm$ 1.4	36.0 $\pm$ 2.5	34.2 $\pm$ 2.2	32.1 $\pm$ 1.7	33.1 $\pm$ 2.1	33.6 $\pm$ 1.6	32.3 $\pm$ 2.3	33.1 $\pm$ 1.3	34.6 $\pm$ 1.8
Arm, flexed	40.3 $\pm$ 1.9	38.7 $\pm$ 1.6	38.6 $\pm$ 2.7	36.9 $\pm$ 2.2	34.3 $\pm$ 2.0	35.5 $\pm$ 2.0	36.5 $\pm$ 1.6	35.3 $\pm$ 1.9	35.1 $\pm$ 1.0	37.1 $\pm$ 1.9
Forearm	31.5 $\pm$ 1.3	30.1 $\pm$ 1.3	31.0 $\pm$ 1.8	29.6 $\pm$ 1.3	27.8 $\pm$ 1.0	28.5 $\pm$ 1.2	29.6 $\pm$ 1.3	28.7 $\pm$ 1.4	28.5 $\pm$ 0.7	29.7 $\pm$ 1.3
Chest	113.8 $\pm$ 5.6	109.1 $\pm$ 4.2	109.0 $\pm$ 5.0	105.3 $\pm$ 4.7	97.5 $\pm$ 5.7	101.8 $\pm$ 4.6	102.4 $\pm$ 2.5	99.0 $\pm$ 5.6	101.3 $\pm$ 3.2	105.2 $\pm$ 5.7
Waist (min)	97.9 $\pm$ 6.3	92.9 $\pm$ 5.0	90.4 $\pm$ 5.8	87.1 $\pm$ 4.4	81.0 $\pm$ 4.2	84.0 $\pm$ 5.0	85.4 $\pm$ 3.8	80.4 $\pm$ 5.8	82.9 $\pm$ 2.8	87.8 $\pm$ 6.3
Upper thigh	68.2 $\pm$ 3.4	65.1 $\pm$ 3.8	65.1 $\pm$ 3.2	62.5 $\pm$ 3.8	57.9 $\pm$ 2.9	61.1 $\pm$ 3.1	60.8 $\pm$ 3.1	58.7 $\pm$ 3.6	59.6 $\pm$ 2.0	62.6 $\pm$ 3.4
Mid-thigh	63.3 $\pm$ 3.8	60.6 $\pm$ 3.2	59.7 $\pm$ 3.1	57.9 $\pm$ 3.8	54.9 $\pm$ 3.0	56.8 $\pm$ 3.3	55.9 $\pm$ 3.0	54.9 $\pm$ 3.4	54.8 $\pm$ 1.4	58.2 $\pm$ 3.8
Calf (max)	43.1 $\pm$ 2.5	41.3 $\pm$ 1.8	41.9 $\pm$ 2.1	40.0 $\pm$ 2.7	37.1 $\pm$ 1.5	38.4 $\pm$ 2.1	39.0 $\pm$ 1.9	38.3 $\pm$ 2.3	37.7 $\pm$ 2.2	40.0 $\pm$ 2.5
Skinfolds (mm)										
Triceps	15.4 $\pm$ 5.2	13.7 $\pm$ 3.6	12.3 $\pm$ 4.1	12.2 $\pm$ 5.3	8.9 $\pm$ 3.5	11.0 $\pm$ 3.2	9.3 $\pm$ 3.5	8.4 $\pm$ 3.1	9.2 $\pm$ 4.7	11.5 $\pm$ 5.2
Subscapulare	18.9 $\pm$ 5.7	15.5 $\pm$ 4.6	12.6 $\pm$ 4.9	11.5 $\pm$ 4.1	9.5 $\pm$ 1.9	11.3 $\pm$ 2.8	10.4 $\pm$ 2.5	9.4 $\pm$ 2.0	8.8 $\pm$ 2.0	12.5 $\pm$ 5.7
Supraspinale	18.0 $\pm$ 5.2	13.1 $\pm$ 4.2	10.8 $\pm$ 5.2	10.1 $\pm$ 3.5	7.9 $\pm$ 3.6	9.1 $\pm$ 3.2	8.2 $\pm$ 2.7	6.3 $\pm$ 1.7	6.7 $\pm$ 1.6	10.6 $\pm$ 5.2
Abdominale	31.4 $\pm$ 7.0	27.5 $\pm$ 7.1	21.6 $\pm$ 10.2	18.5 $\pm$ 6.6	14.9 $\pm$ 6.5	18.6 $\pm$ 7.4	18.7 $\pm$ 7.8	12.7 $\pm$ 5.5	14.4 $\pm$ 7.3	20.6 $\pm$ 7.0
Front thigh	17.6 $\pm$ 6.4	14.7 $\pm$ 3.0	14.2 $\pm$ 4.5	14.4 $\pm$ 7.5	13.6 $\pm$ 4.6	13.5 $\pm$ 3.8	10.8 $\pm$ 2.9	10.8 $\pm$ 4.3	12.6 $\pm$ 4.7	13.8 $\pm$ 6.4
Medial calf	12.8 $\pm$ 3.9	12.5 $\pm$ 2.6	12.1 $\pm$ 4.8	9.8 $\pm$ 3.3	8.4 $\pm$ 3.0	10.0 $\pm$ 3.1	7.6 $\pm$ 2.7	6.7 $\pm$ 2.2	7.2 $\pm$ 3.1	9.9 $\pm$ 3.9

METAFÓRICAS

Phantom

*Describe valores de score-Z
según un modelo de referencia
unisexual metafórico (el
Phantom)*

$170,18 \pm 6,29$

$64,58 \pm 8,60$

*No es una referencia
normativa*

