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PROFESSIONAL MEDICAL PRODUCTS

FAT 2 SKINFOLD CALIPER - aluminium

User manual



ATTENTION: *The operators must carefully read and completely understand the present manual before using the product.*

REF 27349

Gima S.p.A.
Via Marconi, 1
20060 Gessate (MI) - Italy
Made in Pakistan

M-27349-M-Rev.0.05.17

For the measurement of subcutaneous tissue and the conversion of this measurement to percentage of body fat

INTRODUCTION

The Skinfold Caliper is used to measure the thickness of “skinfolds”.
Measurements are taken at selected sites. The resultant skinfold thickness is then translated by meansof skinfold tables to a percentage of body fat.

SKINFOLD MEASUREMENT PROCEDURES

Locate and measure each skinfold with care. Results may vary if measurements are not consistently taken at the exact location with the same skinfold “pinch” and caliper pressure.
For each skinfold location use the same measurement procedure.

a. Take skinfold measurement directly on the skin, not through clothing.
b. Pick-up and hold skinfold with one hand, use other hand to measure the skinfold thickness with Skinfold Caliper.
c. Take three measurements at each skinfold site. The final skinfold thickness at that skinfold site is the average of these three readings.
d. With a grease pencil, mark the measurement point on the skinfold site.
e. Pick-up skifold with the thumb and forefinger of your left hand.
f. Apply the skinfold caliper to the site so that the grease pencil mark on the skinfold side is halfway between the caliper jaws.
g. Release your right thumb from the caliper lever so that the tips of the caliper jaw can exert their full force on the skinfold.
h. Read the skinfold measurements (in millimeters) directly from the caliper dial.
I. Read the measurement two more times. Atotal of three measurements at each site is required for accurate results.
j. The skinfold reading for the site is the average of the three readings.
k. Average skinfold reading = (R1 + R2 + R3) / 3

PERCENTAGE OF BODY FAT FROM SKINFOLD MEASUREMENTS

After the skinfold measurements have been taken, these measurements can be translated to BODY FAT CONTENT AS A PERCENTAGE OF BODY WEIGHT. These percentage figures vary with age and sex.

ADULT TABLES

To find the equivalent fat content, as a percentage of body weight, for adult males and females:

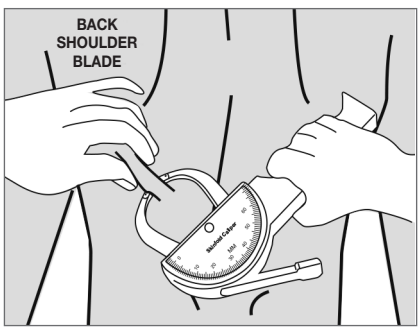
1. Add the four (4) average skinfold readings (biceps, triceps, subscapular and suprailiac)
2. Use the appropriate percentage of body weight table (male or female).
   Find your body fat as a percentage of body weight at the intersection of the appropriate AGE BRACKET column and SUM OF SKINFOLD row.

PERCENTAGE OF BODY FAT - MALES / FEMALES

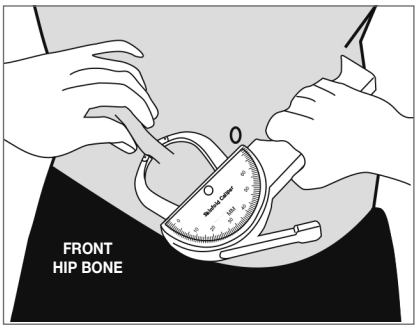
sum of 4 average skinfolds mm	AGES			
	17-29 males / females	30-39 males / females	40-49 males / females	50+ males / females
15	4.8 / 10.5	- / -	- / -	- / -
20	8.1 / 14.1	12.2 / 17.0	12.2 / 19.8	12.6 / 21.4
25	10.5 / 16.8	14.2 / 19.4	15.0 / 22.2	15.6 / 24.0
30	12.9 / 19.5	16.2 / 21.8	17.7 / 24.5	18.6 / 26.0
35	14.7 / 21.5	17.7 / 23.7	19.6 / 26.4	20.8 / 28.5
40	16.4 / 23.4	19.2 / 25.5	21.4 / 28.2	22.9 / 30.3
45	17.7 / 25.0	20.4 / 26.9	23.0 / 29.6	24.7 / 31.9
50	19.0 / 26.5	21.5 / 28.2	24.6 / 31.0	26.5 / 33.4
55	20.1 / 27.8	22.5 / 29.4	25.9 / 32.1	27.9 / 34.6
60	21.2 / 29.1	23.5 / 30.6	27.1 / 33.2	29.2 / 35.7
65	22.2 / 30.2	24.3 / 31.6	28.2 / 34.1	30.4 / 36.7
70	23.1 / 31.2	25.1 / 32.5	29.3 / 35.0	31.6 / 37.7
75	24.0 / 32.2	25.9 / 33.4	30.3 / 35.9	32.7 / 38.7
80	24.8 / 33.1	26.6 / 34.3	31.2 / 36.7	33.8 / 39.6
85	25.5 / 34.0	27.2 / 35.1	32.1 / 37.5	24.8 / 40.4
90	26.2 / 34.8	27.8 / 35.8	33.0 / 38.3	25.8 / 41.2
95	26.9 / 35.6	28.4 / 36.5	33.7 / 39.0	36.6 / 41.9
100	27.6 / 36.4	29.0 / 37.2	34.4 / 39.7	37.4 / 42.6
105	28.2 / 37.1	29.6 / 37.9	35.1 / 40.4	38.2 / 43.3
110	28.8 / 37.8	30.1 / 38.6	25.8 / 41.0	39.0 / 43.9
115	29.4 / 38.4	30.6 / 39.1	36.4 / 41.5	39.7 / 44.5
120	30.0 / 39.0	31.1 / 39.6	37.0 / 42.0	40.4 / 45.1
125	30.5 / 39.6	31.5 /40.1	37.6 / 42.5	41.1 / 45.7
130	31.0 / 40.2	31.9 / 40.6	38.2 / 43.0	41.8 / 46.2
135	31.5 / 40.8	32.3 / 41.1	38.7 / 43.5	42.5 / 46.7
140	32.0 / 41.3	32.7 / 41.6	39.2 / 44.0	43.0 / 47.2
145	32.5 / 41.8	33.1 / 42.1	39.7 / 44.5	43.6 / 47.7
150	32.9 / 42.3	33.5 / 42.6	40.2 / 45.0	44.1 / 48.2
155	33.3 / 42.8	33.9 / 43.1	40.7 / 45.5	44.6 / 48.7
160	33.7 / 43.3	34.3 / 43.6	41.2 / 45.8	45.1 / 49.2
165	34.1 / 43.7	34.6 / 44.0	41.6 / 46.2	45.6 / 49.6
170	34.5 / 44.1	34.8 / 44.4	42.0 / 46.6	46.1 / 50.0
175	34.9 / -	- / 44.8	- / 47.0	- / 50.4
180	35.3 / -	- / 45.2	- / 47.4	- / 50.8
185	35.6 / -	- / 45.6	- / 47.8	- / 51.2
190	35.9 / -	- / 45.9	- / 48.2	- / 51.6
195	- / -	- / 46.2	- / 48.5	- / 52.0
200	- / -	- / 46.5	- / 48.8	- / 52.4
205	- / -	- / -	- / 49.1	- / 52.7
210	- / -	- / -	- / 49.4	- / 53.0

SUBSCAPULAR

Below the tip of the inferior angle of the scapular, at an angle of 45 degrees to vertical (back, just under the shoulder blade).
Mark the point just under the shoulder blade halfway between the spine and side. When taking the measurement, the skinfold caliper should be orientated at 45 degrees.



SUPRAILIAC
Above the iliac crest in mid-axillary line (about one inch above the hip bone at an angle of 45 degrees to vertical).
Mark the point about one inch above the hip bone.
When taking the measurement, the skinfold caliper should be orientated at 45 degrees.



CHILD TABLES

The American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD) suggests that national percentage norms are the best reference for skinfold measurements and body fat content in children under 17 years of age. AAHPERD suggests that the ideal is the 50th percentile: those below the 25th percentile should be encouraged to reduce the amount of body fat, while those above the 90th percentile should not be encouraged to lose body fat.
To find the appropriate percentile for boys and girls:
1. Add the two (2) average skinfold readings (triceps and subscapular)
2. Find your PERCENTILE by reading down the appropriate age column until you intersect with the skinfold reading.

Then read the percentile by looking to the left in that row.
See Boys/Girls Percentile Table below.

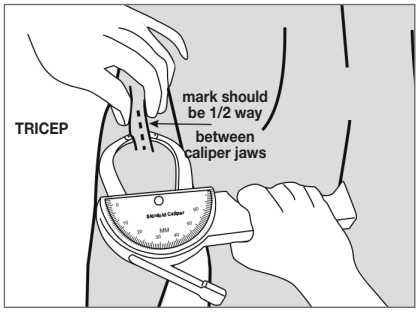
BODY FAT AND SKINFOLD PERCENTILE TABLE BOYS/GIRLS

Percentile	AGE											
	6	7	8	9	10	11	12	13	14	15	16	17
	1st number - average of triceps and subscapular reading for BOYS / 2nd number - average of triceps and subscapular reading for GIRLS											
99	7/8	7/8	7/8	7/9	7/9	8/8	7/9	7/10	7/10	8/11	8/11	8/12
90	9/10	9/11	9/11	10/12	10/12	10/12	10/13	9/15	10/13	10/16	10/16	10/16
85	10/11	10/12	10/12	10/12	11/13	11/13	10/13	10/14	10/16	11/17	11/18	11/18
80	10/12	10/12	10/12	11/13	11/13	12/14	11/14	11/15	11/17	11/18	11/19	11/19
75	11/12	11/12	11/13	11/14	12/14	12/15	11/15	12/16	11/18	12/20	12/20	12/20
70	11/12	11/13	11/14	12/15	12/15	12/16	12/16	12/17	12/19	12/21	12/21	13/22
65	11/1 3	11/13	12/14	12/15	13/16	13/16	13/17	12/18	12/20	13/22	13/22	13/22
60	12/13	12/14	12/15	13/16	13/17	14/17	13/17	13/19	13/21	13/23	13/23	14/24
55	12/14	12/15	13/16	13/16	14/18	15/18	14/19	14/20	13/22	14/24	14/24	14/26
50	12/14	12/15	13/16	14/17	14/18	16/19	15/19	15/20	14/24	14/25	14/25	15/27
45	13/15	13/16	14/17	14/18	15/20	16/20	15/21	16/22	14/25	15/26	15/27	16/28
40	13/15	13/16	14/18	15/19	16/20	17/21	16/22	17/23	15/26	16/28	16/29	16/30
35	13/16	14/17	15/19	16/20	17/22	19/22	17/24	18/25	16/27	18/29	14/30	17/32
30	13/16	14/18	16/20	17/22	18/24	20/23	19/25	19/27	18/30	18/32	18/32	19/34
25	14/17	15/19	17/21	18/24	19/25	22/25	21/27	22/30	20/32	20/34	20/34	21/36
20	14/18	16/20	18/23	20/26	21/28	24/28	24/31	25/33	23/35	22/37	22/37	24/40
15	16/19	17/22	19/25	23/29	24/31	28/31	27/35	29/39	27/39	25/42	24/42	26/42
10	18/22	18/25	21/30	26/34	28/35	33/36	33/40	36/43	31/42	30/48	29/46	30/46
5	20/26	24/28	28/36	34/40	33/41	38/42	44/48	46/51	37/52	40/56	37/57	38/58

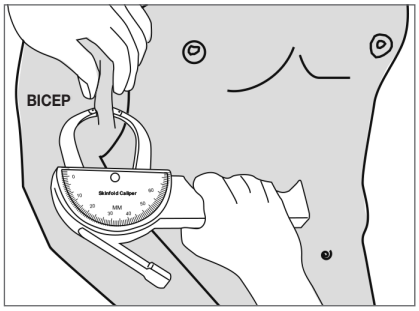
*** To find the appropriate percentile for boys and girls:** Add the two (2) average skinfold readings (triceps and subscapular, i.e. 11/14). Find your PERCENTILE by reading down the appropriate age column until you intersect with the skinfold reading. Then read the percentile by looking to the left in that row. (example: age 9, average skinfold readings 11/14, percentile would be 75).

SKINFOLD MEASUREMENT LOCATIONS

TRICEPS
Between the tip of the olecranon process of the ulna (elbow) and the acromium of the scapula (shoulder). Mark the point on the back of the arm halfway between the tip of the elbow and the shoulder mark should be 1/2 way between caliper jaws.



BICEP
Mid point on the muscle (generally this will be opposite the nipple).
Mark the point halfway between the FLEXED bicep muscle. When taking the measurement, the muscle (arm) should be RELAXED and in a perpendicular position.



INDICATION OF USE & PRECAUTIONS

Those devices are designed for professional use by qualified operators with necessary skills. The use of the product involves direct contact with patient's skin; always wear protective gloves, do not use on dull skin, handle carefully to avoid accidental abrasion. Clean and sterilize before each use; use neutral non-aggressive disinfectant solution (PH7), do not use solutions containing chloride ions or high alcohol content. This product is intended to provide easy-to-read indicative measurements. Class I Medical Device.