

## HOW TO USE THE METACAL® BODY FAT CALIPER TO MEASURE BODY FAT

We hope that you enjoy your MetaCal® body fat caliper. MetaCal® calipers are designed for individuals and trainers alike. Its simplicity allows you to take a simple 3-site test to help determine body fat. You may use the enclosed chart to get your body fat % or use the TONUS® Body Mass Calculator from Sequoia Fitness Products USA for more detailed results. Note: If you are obese and have difficulty grabbing a skinfold, it is recommended to use the Navy tape measure method available on [www.sequoiafitness.com/navy.html](http://www.sequoiafitness.com/navy.html).

If you are familiar with body fat testing, there are only 4 simple steps:

- 1) Pinch your skinfold on the right side of your body with your left hand
- 2) Use the caliper with your right hand, with your thumb on the PRESS ↑ button
- 3) Align the arrows on the caliper arms and read the mm marking on the caliper
- 4) Measure 3 sites and check the chart where age and mm (sum of 3 tests) meet

### STEP-BY-STEP INSTRUCTIONS

1. First, get familiar with the MetaCal:
  - a. Hold it in your right hand
  - b. Place your thumb on the left side of the MetaCal®, next to PRESS ↑
  - c. Squeeze the arms together until the tips touch one another
  - d. Align the two arrows together – the unit will read 0 mm
2. Note that all skinfold measurements are taken on the right side of the body, and standing upright and relaxed. You will be taking a skinfold measurement at each of 3 sites – different for men and women – as described below.
3. Place the caliper in your right hand.
4. With your fingers about 2-3 inches apart, gently grasp the first skinfold with the thumb and index finger of your left hand. Then pull the skinfold away from your body.
5. With your right hand, place caliper tips over the skinfold 1 cm (about 1/2 inch) away from thumb and finger, perpendicular to the skinfold. The caliper heads should be halfway between crest (outermost part) and base of fold (closest to the body).
6. Gently begin to apply caliper pressure. Keep the fold elevated, and maintain the pinch with your thumb and index finger - align the arrows on the caliper arms and let the caliper reading stabilize for a second or 2.
7. Read and record the measurement to the nearest mm, if possible.
8. Repeat the procedure for the remaining 2 skinfold sites.

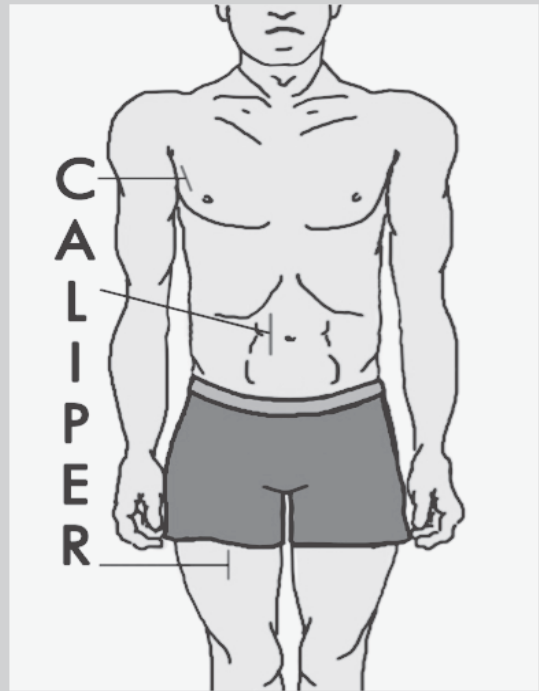
**Note: it is good practice to repeat the procedure for each site. If the second reading is more than 1-2 mm apart from your first reading, take a third measurement. Record the average score of the closest 2 values.**
9. Add all 3 measurements together (one from each site).
10. Look at the measurement chart and find where your age and the sum of the 3 readings meet – that is your body fat %.

## LOCATIONS FOR CALIPER MEASUREMENTS – MALES

**Chest:** Take the measurement on a **DIAGONAL** skinfold taken halfway between the nipple and the front of the underarm. The measure site is across an imaginary line drawn from your nipple to your armpit

**Abdomen:** Take the measurement on a **VERTICAL** skinfold taken 2 cm (about 3/4 of an inch) to the right of the navel (belly button).

**Thigh:** Take the measurement on a **VERTICAL** skinfold taken in the middle of the thigh, halfway between the top of the thigh and your knee cap.

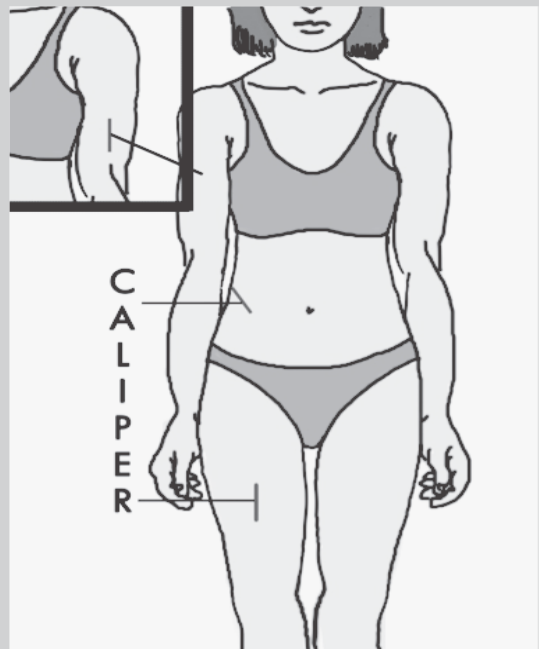


## LOCATIONS FOR CALIPER MEASUREMENTS - FEMALES

**Suprailiac:** Take the measurement on a **DIAGONAL** skinfold just above the front, forward part of your hip bone.

**Thigh:** Take the measurement on a **VERTICAL** skinfold taken in the middle of the thigh, halfway between the crease of your groin and the top of your knee cap.

**Triceps:** Take the measurement on a **VERTICAL** skinfold taken on the back of the upper arm, (on the triceps muscle), halfway between the shoulder and elbow



# MALE

## AGE

**SUM OF 3 SITES (MM)**

	18-20	21-23	24-26	27-29	30-32	33-35	36-38	39-41	42-44	45-47	48-50	51-53	54-56	57-59	60-62	63-65
6-8	0.5	1	1	1	2	2	2	3	3	3	4	4	4	5	5	5
9-11	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6
12-14	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7
15-17	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	8
18-20	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9
21-23	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10
24-26	6	7	7	7	8	8	8	9	9	9	10	10	10	11	11	11
27-29	7	8	8	8	9	9	9	10	10	10	11	11	11	12	12	12
30-32	8	8	9	9	9	10	10	10	11	11	11	12	12	12	13	13
33-35	9	9	10	10	10	11	11	11	12	12	12	13	13	13	14	14
36-38	10	10	11	11	11	12	12	12	13	13	13	14	14	14	15	15
39-41	11	11	12	12	12	13	13	13	14	14	14	15	15	15	16	16
42-44	12	12	12	13	13	13	14	14	14	15	15	15	16	16	17	17
45-47	13	13	13	14	14	14	15	15	15	16	16	16	17	17	17	18
48-50	14	14	14	15	15	15	16	16	16	17	17	17	18	18	18	19
51-53	14	15	15	15	16	16	16	17	17	17	18	18	19	19	19	20
54-56	15	16	16	16	17	17	17	18	18	18	19	19	19	20	20	20
57-59	16	16	17	17	17	18	18	19	19	19	20	20	20	21	21	21
60-62	17	17	18	18	18	19	19	19	20	20	20	21	21	21	22	22
63-65	18	18	18	19	19	20	20	20	21	21	21	22	22	22	23	23
66-68	19	19	19	20	20	20	21	21	21	22	22	22	23	23	23	24
69-71	19	20	20	20	21	21	22	22	22	23	23	23	24	24	24	25
72-74	20	21	21	21	22	22	22	23	23	23	24	24	24	25	25	25
75-77	21	21	22	22	22	23	23	23	24	24	25	25	25	26	26	26
78-80	22	22	22	23	23	24	24	24	25	25	25	26	26	26	27	27
81-83	23	23	23	24	24	24	25	25	25	26	26	26	27	27	28	28
84-86	23	24	24	24	25	25	25	26	26	26	27	27	28	28	28	29
87-89	24	24	25	25	25	26	26	27	27	27	28	28	28	29	29	29
90-92	25	25	26	26	26	27	27	27	28	28	28	29	29	29	30	30
93-95	26	26	26	27	27	27	28	28	28	29	29	29	30	30	31	31
96-98	26	27	27	27	28	28	28	29	29	29	30	30	31	31	31	32
99-101	27	27	28	28	28	29	29	29	30	30	31	31	31	32	32	32
102-104	28	28	28	29	29	29	30	30	31	31	31	32	32	32	33	33
105-107	28	29	29	29	30	30	30	31	31	32	32	32	33	33	33	34
108-110	29	29	30	30	30	31	31	32	32	32	33	33	33	34	34	34
111-113	30	30	30	31	31	31	32	32	32	33	33	34	34	34	35	35
114-116	30	31	31	31	32	32	32	33	33	34	34	34	35	35	35	36
117-119	31	31	32	32	32	33	33	33	34	34	35	35	35	36	36	36
120-122	32	32	32	33	33	33	34	34	34	35	35	36	36	36	37	37
123-125	32	33	33	33	34	34	34	35	35	35	36	36	37	37	37	38
126-128	33	33	34	34	34	35	35	35	36	36	36	37	37	38	38	38
129-131	33	34	34	34	35	35	36	36	36	37	37	37	38	38	39	39
132-134	34	34	35	35	35	36	36	37	37	37	38	38	38	39	39	39
135-137	35	35	35	36	36	36	37	37	37	38	38	39	39	39	40	40
138-140	35	35	36	36	37	37	37	38	38	38	39	39	40	40	40	41
141-143	36	36	36	37	37	37	38	38	38	39	39	39	40	40	41	41
144-146	36	36	37	37	38	38	38	39	39	39	40	40	41	41	41	42
147-149	37	37	37	38	38	38	39	39	40	40	40	41	41	41	42	42
150-152	37	38	38	38	39	39	39	40	40	40	41	41	42	42	42	43
153-155	38	38	38	39	39	39	40	40	41	41	41	42	42	42	43	43
156-158	38	38	39	39	40	40	40	41	41	41	42	42	43	43	43	44
159-161	39	39	39	40	40	40	41	41	42	42	42	43	43	43	44	44
162-164	39	39	40	40	41	41	41	42	42	42	43	43	44	44	44	45
165-167	39	40	40	41	41	41	42	42	42	43	43	44	44	44	45	45
168-170	40	40	41	41	41	42	42	43	43	43	44	44	44	45	45	46
171-173	40	41	41	41	42	42	43	43	43	44	44	44	45	45	46	46
174-176	41	41	41	42	42	43	43	43	44	44	44	45	45	46	46	46
177-179	41	41	42	42	43	43	43	44	44	44	45	45	46	46	46	47

If the sum of your skinfolds is over 180 mm, please consult a personal trainer or the Tonus Body Mass Calculator to interpret your results.

# FEMALE

## AGE

**SUM OF 3 SITES (MM)**

	18-20	21-23	24-26	27-29	30-32	33-35	36-38	39-41	42-44	45-47	48-50	51-53	54-56	57-59	60-62	63-65
6-8	4	4	4	5	5	5	5	5	6	6	6	6	6	6	7	7
9-11	5	5	6	6	6	6	6	7	7	7	7	7	7	8	8	8
12-14	7	7	7	7	7	7	8	8	8	8	8	8	9	9	9	9
15-17	8	8	8	8	8	9	9	9	9	9	9	10	10	10	10	10
18-20	9	9	9	9	10	10	10	10	10	10	11	11	11	11	11	12
21-23	10	10	10	11	11	11	11	11	11	12	12	12	12	12	12	13
24-26	11	11	11	12	12	12	12	12	13	13	13	13	13	13	14	14
27-29	12	12	13	13	13	13	13	14	14	14	14	14	14	15	15	15
30-32	13	14	14	14	14	14	14	15	15	15	15	15	16	16	16	16
33-35	14	15	15	15	15	15	16	16	16	16	16	16	17	17	17	17
36-38	16	16	16	16	16	16	17	17	17	17	17	18	18	18	18	18
39-41	17	17	17	17	17	18	18	18	18	18	18	19	19	19	19	19
42-44	18	18	18	18	18	19	19	19	19	19	20	20	20	20	20	20
45-47	19	19	19	19	19	20	20	20	20	20	21	21	21	21	21	22
48-50	20	20	20	20	21	21	21	21	21	21	22	22	22	22	22	22
51-53	21	21	21	21	22	22	22	22	22	22	23	23	23	23	23	24
54-56	22	22	22	22	23	23	23	23	23	23	24	24	24	24	24	25
57-59	23	23	23	23	24	24	24	24	24	24	25	25	25	25	25	26
60-62	24	24	24	24	25	25	25	25	25	25	26	26	26	26	26	27
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165-167	47	47	48	48	48	48	49	49	49	49	49	50	50	50	50	50
168-170	48	48	48	48	48	49	49	49	49	50	50	50	50	50	51	51
171-173	48	48	48	49	49	49	49	49	50	50	50	50	50	51	51	51
174-176	48	48	49	49	49	49	49	50	50	50	50	51	51	51	51	51
177-179	48	49	49	49	49	50	50	50	50	50	51	51	51	51	51	52

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