

Lafayette Skinfold Caliper II User's Manual



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Description

Thank you for purchasing the Lafayette Skinfold Caliper II. This uniquely designed caliper provides precise measurement at an affordable price. The 0-100 mm scale is what sets this instrument apart from other clinical calipers on the market that only have a 0-60 mm scale. The 0-100 mm scale is easy to read and it allows you to accurately measure the skinfold thickness of a larger portion of the population than the other calipers. The spring-loaded arms and pivoting tips adjust automatically for parallel measurement of skinfolds, and the circular tips provide comfort to the patient. The tension spring provides constant pressure over the entire operating range, meeting the pressure requirements of 10g/mm². The caliper is **lightweight, durable, and never needs calibration**.

Cleaning Instructions

Surfaces can be cleaned with a bleach-free disinfectant wipes, alcohol wipes, or hydrogen peroxide. Bleach based products are not recommended for this product.

Disclaimer: These cleaning instructions for Lafayette Instrument products are a recommendation of compatible cleaning materials only. Product end users are responsible for instituting an appropriate cleaning regimen utilizing best practices and techniques. Lafayette Instrument assumes no responsibility for the cleanliness or sanitation of the products after initial use nor makes any claim that the use of the recommended cleaning materials mitigates all risk of potential cross infection.

Technical Specifications

- Size: 5" x 6" x 0.6"
- Weight: 0.4lbs
- Measurement Range: 0-100mm
- Materials: Reinforced, glass-filled Acrylonitrile-Butadiene-Styrene (ABS)

The Skinny on Skinfold Calipers

Skinfold Calipers are a very cost-effective means of assessing body fat composition. If each measurement is performed correctly according to the recommended guidelines, there is a +/- 3% error.

Learning how to properly take skinfold measurements is easy, but it does take practice. It is recommended that you practice on at least 50-100 patients before you can master the technique. To limit variances, it is also recommend to be as consistent as possible. Have the same person take the measurements, and try to take the measurements during the same time of the day.

When using this instrument please follow these procedures to assist you in accurately taking skinfold measurements.

1. Take all measurements from the right side of the body. You should carefully identify, measure, and mark all sites for accuracy and consistency.
2. It is better to take measurements when the skin is dry because when the skin is moist or wet, the tester may grasp extra skin (fat) and get larger values.
3. The skinfold is grasped firmly by the thumb and index finger. In grasping the skinfold, the pads at the tip of the thumb and finger are used. The fold should be lifted 1 cm above the site to be measured.
4. Grasp the caliper and release the grip so that full compression is exerted on the skinfold. Read to the nearest 1mm, 3 to 4 seconds after the grip has been released.
5. A minimum of two measurements should be taken at each site. If the repeated measurement varies by more than 1mm, a third measurement should be taken.

NOTE: If consecutive fat measurements become smaller and smaller, the fat is being compressed. The tester should go on to the next site and return to the trouble spot after finishing the other measurements. The final value will be the average of the two that seem to best represent the skinfold fat site.

Practice is necessary to grasp the same size of skinfold consistently at exactly the same location every time. If there are a number of testers, the testers should practice this method together to standardize their testing procedures to avoid inter-tester error. If this is done, inter-tester error can usually be kept to less than 1 percent fat.

Skinfold Measurement for Women Based on the Jackson-Pollock Three Site Method

Triceps: A vertical fold on the posterior midline of the upper arm (over triceps muscle). Halfway between the acromion process (bony bump where the top of the arm joins the shoulder) and olecranon processes (bony tip of the elbow). The elbow should be extended and relaxed. Take the measurement 1 cm from the fingers.



Suprailiac: A diagonal fold in line with the natural angle of the iliac crest in the anterior auxillary line above the iliac crest (just over the iliac crest or hip bone and a little forward). Take the measurement 1 cm from the fingers.

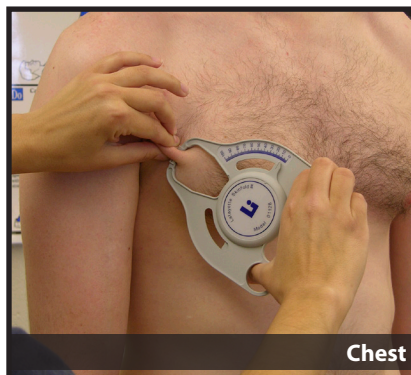


Thigh: A vertical fold on the anterior aspect of the thigh, midway between hip and knee joints. Have the patient shift their weight to the leg not being measured. Take the measurement 1 cm from the fingers.

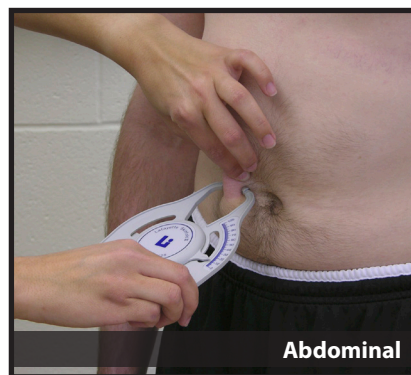


Skinfold Measurement for Men Based on the Jackson-Pollock Three Site Method

Chest: A diagonal fold taken one half of the distance between the anterior auxiliary line (front of the armpit) and the nipple. Take measurement 1 cm from the fingers.



Abdominal: A vertical fold taken at the lateral distance of approximately 2 cm from the umbilicus. Take measurement 1 cm from the fingers.



Thigh: A vertical fold on the anterior aspect of the thigh, midway between hip and knee joints. Have the patient shift their weight to the leg not being measured. Take the measurement 1 cm from the fingers.

For ease of determination, actual calculated percent fat values using age and the sum of three measurements have been developed. The following tables are provided for your use in easily determining the percent of fat of an individual. Table 1 (page 6) provides percent fat estimates for women using the sum of triceps, suprailiac, and thigh skinfolds. Table 2 (page 7) provides percent fat estimates for men using the sum of chest, abdominal and thigh skinfolds. Use the following examples to help you understand the charts: if the sum of three skinfolds of a 40-year-old woman was 75mm, her estimated percent fat would be 29.4% (Table 1); and if a 36-year-old man had 60mm of skinfold fat, his percent would be 18.5% (Table 2).



Table 1: Percent Fat Estimates for Women, Sum of Triceps, Suprailiac, and Thigh Skinfolds*

Age to the Last Year

Sum of Skinfolds (mm)	Under 22	23 to 27	28 to 32	33 to 37	38 to 42	43 to 47	48 to 52	53 to 57	Over 58
23-25	9.7	9.9	10.2	10.4	10.7	10.9	11.2	11.4	11.7
26-28	11.0	11.2	11.5	11.7	12.0	12.3	12.5	12.7	13.0
29-31	12.3	12.5	12.8	13.0	13.3	13.5	13.8	14.0	14.3
32-34	13.6	13.8	14.0	14.3	14.5	14.8	15.0	15.3	15.5
35-37	14.8	15.0	15.3	15.5	15.8	16.0	16.3	16.5	16.8
38-40	16.0	16.3	16.5	16.7	17.0	17.2	17.5	17.7	18.0
41-43	17.2	17.4	17.7	17.9	18.2	18.4	18.7	18.9	19.2
44-46	18.3	18.6	18.8	19.1	19.3	19.6	19.8	20.1	20.3
47-49	19.5	19.7	20.0	20.2	20.5	20.7	21.0	21.2	21.5
50-52	20.6	20.8	21.1	21.3	21.6	21.8	22.1	22.3	22.6
53-55	21.7	21.9	22.1	22.4	22.6	22.9	23.1	23.4	23.6
56-58	22.7	23.0	23.2	23.4	23.7	23.9	24.2	24.4	24.7
59-61	23.7	24.0	24.2	24.5	24.7	25.0	25.2	25.5	25.7
62-64	24.7	25.0	25.2	25.5	35.7	26.0	26.7	26.4	26.7
65-67	25.7	25.9	26.2	26.4	26.7	26.9	27.2	27.4	27.7
68-70	26.6	26.9	27.1	27.4	27.6	27.9	28.1	28.4	28.6
71-73	27.5	27.8	28.0	28.3	28.5	28.8	28.0	29.3	29.5
74-76	28.4	28.7	28.9	29.2	29.4	29.7	29.9	30.2	30.4
77-79	29.3	29.5	29.8	30.0	30.3	30.5	30.8	31.0	31.3
80-82	30.1	30.4	30.6	30.9	31.1	31.4	31.6	31.9	32.1
83-85	30.9	31.2	31.4	31.7	31.9	32.2	32.4	32.7	32.9
86-88	31.7	32.0	32.2	32.5	32.7	32.9	33.2	33.4	33.7
89-91	32.5	32.7	33.0	33.2	33.5	33.7	33.9	34.2	34.4
92-94	33.2	33.4	33.7	33.9	34.2	34.4	34.7	34.9	35.2
95-97	33.9	34.1	34.4	34.6	34.9	35.1	35.4	35.6	35.9
98-100	34.6	34.8	35.1	35.3	35.5	35.8	36.0	36.3	36.5
101-103	35.3	35.4	35.7	35.9	36.2	36.4	36.7	36.9	37.2
104-106	35.8	36.1	36.3	36.6	36.8	37.1	37.3	37.5	37.8
107-109	36.4	36.7	36.9	37.1	37.4	37.6	37.9	38.1	38.4
110-112	37.0	37.2	37.5	37.7	38.0	38.2	38.5	38.7	38.9
113-115	37.5	37.8	38.0	38.2	38.5	38.7	39.0	39.2	39.5
116-118	38.0	38.3	38.5	38.8	39.0	39.3	39.5	39.7	40.0
119-121	38.5	38.7	39.0	39.2	39.5	39.7	40.0	40.2	40.5
122-124	39.0	39.2	39.4	39.7	39.9	40.2	40.4	40.7	40.9
125-127	39.4	39.6	39.9	40.1	40.4	40.6	40.9	41.1	41.4
128-130	39.8	40.0	40.3	40.5	40.8	41.0	41.3	41.5	41.8

*Percent fact calculated by the formula of Siri. Percent fat = $((4.95/BD) - 4.5) \times 100$, where BD = body density.

Reference

Baumgartner, T.A., Jackson, A.S. Measurement for Evaluation in Physical Education. 2nd Edition. W.C. Brown Co. Dubuque, Iowa, 1983.

Table 2: Percent Fat Estimates for Men. Sum of Chest, Abdominal and Thigh Skin Folds*

Age to the Last Year

Sum of Skinfolds (mm)	Under 22	23 to 27	28 to 32	33 to 37	38 to 42	43 to 47	48 to 52	53 to 57	Over 58
8-10	1.3	1.8	2.3	2.9	3.4	3.9	4.5	5.0	5.5
11-13	2.2	2.8	3.3	3.9	4.4	4.9	5.5	6.0	6.5
14-16	3.2	3.8	4.3	4.8	5.4	5.9	6.4	7.0	7.5
17-19	4.2	4.7	5.3	5.8	6.3	6.9	7.4	8.0	8.5
20-22	5.1	5.7	6.2	6.8	7.3	7.9	8.4	8.9	9.5
23-25	6.1	6.6	7.2	7.7	8.3	8.8	9.4	9.9	10.5
26-28	7.0	7.6	8.1	8.7	9.2	9.8	10.3	10.9	11.4
29-31	8.0	8.5	9.1	9.6	10.2	10.7	11.3	11.8	12.4
32-34	8.9	9.4	10.0	10.5	11.1	11.6	12.2	12.8	13.3
35-37	9.8	10.4	10.9	11.5	12.0	12.6	13.1	13.7	14.3
38-40	10.7	11.3	11.8	12.4	12.9	13.5	14.1	14.6	15.2
41-43	11.6	12.2	12.7	13.3	13.8	14.4	15.0	15.5	16.1
44-46	12.5	13.1	13.6	14.2	14.7	15.3	15.9	16.4	17.0
47-49	13.4	13.9	14.5	15.1	15.6	16.2	16.8	17.3	17.9
50-52	14.3	14.8	15.4	15.9	16.5	17.1	17.6	18.2	18.8
53-55	15.1	15.7	16.2	16.8	17.4	17.9	18.5	19.1	19.7
56-58	16.0	16.5	17.1	17.7	18.2	18.8	19.4	20.0	20.5
59-61	16.9	17.4	17.9	18.5	19.1	19.7	20.2	20.8	21.4
62-64	17.6	18.2	18.8	19.4	19.9	20.5	21.1	21.7	22.2
65-67	18.5	19.0	19.6	20.2	20.8	21.3	21.9	22.5	23.1
68-70	19.3	19.9	20.4	21.0	21.6	22.2	22.7	23.3	23.9
71-73	20.1	20.7	21.2	21.8	22.4	23.0	23.6	24.1	24.7
74-76	20.9	21.5	22.0	22.6	23.2	23.8	24.4	25.0	25.5
77-79	21.7	22.2	22.8	23.4	24.0	24.6	25.2	25.8	26.3
80-82	22.4	23.0	23.6	24.2	24.8	25.4	25.9	26.5	27.1
83-85	23.2	23.8	24.4	25.0	25.5	26.1	26.7	27.3	27.9
86-88	24.0	24.5	25.1	25.7	26.3	26.9	27.5	28.1	28.7
89-91	24.7	25.3	25.9	26.5	27.1	27.6	28.2	28.8	29.4
92-94	25.4	26.0	26.6	27.2	27.8	28.4	29.0	29.6	30.2
95-97	26.1	26.7	27.3	27.9	28.5	29.1	29.7	30.3	30.9
98-100	26.9	27.4	28.0	28.6	29.2	29.8	30.4	31.0	31.6
101-103	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3
104-106	28.2	28.8	29.4	30.0	30.6	31.2	31.8	32.4	33.0
107-109	28.9	29.5	30.1	30.7	31.3	31.9	32.5	33.1	33.7
110-112	29.6	30.2	30.8	31.4	32.0	32.6	33.2	33.8	34.4
113-115	30.2	30.8	31.4	32.0	32.6	33.2	33.8	34.5	35.1
116-118	30.9	31.5	32.1	32.7	33.3	33.9	34.5	35.1	35.7
119-121	31.5	32.1	32.7	33.3	33.9	34.5	35.1	35.7	36.4
122-124	32.1	32.7	33.3	33.9	34.5	35.1	35.8	36.4	37.0
125-127	32.7	33.3	33.9	34.5	35.1	35.8	36.4	37.0	37.6

*Percent fact calculated by the formula of Siri. Percent fat = $((4.95/BD) - 4.5) \times 100$, where BD = body density.

Interpretation

Without a precise norm for everyone, it seems reasonable to maintain body composition proportions at their level at physical maturity. The average 18-22 year-old male is 15% body fat, and the average female of the same age group is 25% fat. The standard deviation for percent fat is ±5%. Two standard deviation units above the average (25% for men and 35% for women) is generally considered as absolute obesity. One standard deviation above the average (20% for men and 30% for women) is considered too fat. Most experts agree that the ideal standard upper limit for men should be 16% to 19%, and for women 22% to 25%.

In giving advice on weight reduction, an estimated weight loss can be calculated theoretically to get the patient down to ideal or desired weight. Using the standard of 16% for men and 23% for women, a patient's desired weight is calculated as follows:

Weight = actual body weight, percent fat = the estimated percent body fat

Desired Weight (men)	Desired Weight (women)
$\frac{(\text{weight} - (\text{weight} * \% \text{ fat}))}{100}$	$\frac{(\text{weight} - (\text{weight} * \% \text{ fat}))}{100}$
0.84	0.77

For example, a 40-year-old male patient who is 23% fat and weighs 210 pounds would have to reduce to 192.5 pounds to attain his goal of 16% fat. A 35-year-old female who is 28% fat and weighs 145 pounds would have to reduce to 135.6 pounds to attain her desired goal of 23% fat.

The numerator of the formulas takes all the fat weight away from the total body weight, leaving the lean body mass. The denominator adds back the desired amount of fat weight to the lean body mass. If another desired weight (percent fat goal) is wanted, it is simply necessary to change the fraction value in the denominator.

This technique for estimating desirable weight is not without error, and it is suggested that two pounds be added and subtracted from the desired weight to provide a desired weight range. For the above example, this would mean 190.5 to 194.5 pounds for the male and 133.6 to 137.6 for the female.

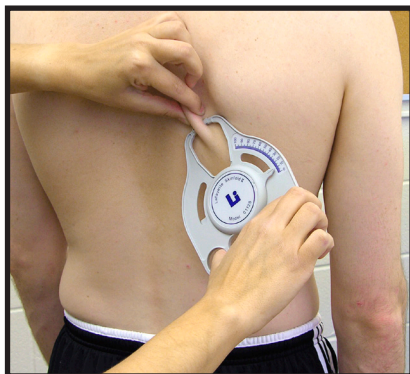
Although these desired weight formulas are useful in working with patients and giving them objective goals for fat and weight loss, they have certain limitations. Weight loss depends on calorie intake and expenditure, but diet and exercise affect body composition differently. When weight loss comes from diet alone, both fat and lean tissue is reduced, which exercise alone will increase and/or maintain lean body mass and reduce body fat. Therefore, the accuracy of the ideal weight formulas depends on how weight and fat are lost. Periodic checks of body composition during the weight reduction program will help refine estimations.

Skinfold Measurement for School-Age Boys and Girls

The skinfold test for school age children uses two sites, the triceps and the subscapular, because they are easy to measure and correlate highly with total body fat. The triceps skinfold is measured over the triceps muscle of the right arm, halfway between the elbow and the acromion process of the scapula, with the skinfold parallel to the longitudinal axis of the upper arm. The subscapular site, also on the right side of the body, is 1 cm below the inferior angle of the scapula, in line with the natural cleavage lines of the skin. If it is possible to secure just one skinfold, use the triceps site. The tables, which follow is provided for your estimation of body fatness. Tables 3 and 4 (pages 10 and 11 respectively) list norms for both triceps plus subscapular in boys and girls respectively. Tables 5 and 6 (pages 12 and 13 respectively) list percentile norms for tricep skinfold only (Table 5 boys and Table 6 girls). **

The percentile value reflects the percentage of boys and girls in the national sample who had or exceeded that skinfold thickness. For example, for a 15-year-old girl, the 25th percentile for the sum of triceps and subscapular skinfolds is 23mm (Table 4, page 11). This means that the sum of skinfolds was 34mm or more in 35 percent of girls age 15. The higher the skinfold reading, the lower the percentile, thus lower percentile ranking reflect a higher degree of fatness.

Subscapular/Boy: On right side of the body, 1 cm below the inferior angle of the scapula, in line with the natural cleavage lines of the skin.



Subscapular/Girl: On right side of the body, 1 cm below the inferior angle of the scapula, in line with the natural cleavage lines of the skin.



Although we know skinfolds are related to body fatness in children, we are yet unable to determine absolute amounts of body fat with certainty. As children mature, the relation of skinfold fat to body fatness changes. Today, national percentile norms are the best frame of reference for interpreting skinfold fat results.

The criterion for the wanted degree of fatness in children falls above the 50th percentile. Children between the 50th and 25th percentile should maintain their weight at that level for the current year. Those below the 25th percentile should be strongly encouraged to reduce their weight until their skinfold fat measurement reaches a more acceptable level.

Table 3: Percentile norms for boys for sum of triceps plus subscapular skinfolds.

Age	6	7	8	9	10	11	12	13	14	15	16	17*
Percentile												
95	8	9	9	9	9	9	9	9	9	9	9	9
75	11	11	11	11	12	12	11	12	11	12	12	12
50	12	12	13	14	14	16	15	15	14	14	14	15
25	14	15	17	18	19	22	21	22	20	20	20	21
5	20	24	28	34	33	38	44	46	37	40	37	38

*The norms for age 17 can be used for age 18

Source: From F. E. Johnson et al., *Skinfold Thickness of Children 6-11 Years and Skinfold Thickness of Youth 12-17 Years* (Washington, D.C.: U.S. National Center for Health Statistics, 1972, 1974). Also presented in full in the AAHPERD Manual, 1980.

Table 4: Percentile norms for girls for sum of triceps plus subscapular skinfolds.

Age	6	7	8	9	10	11	12	13	14	15	16	17*
Percentile												
95	9	10	10	10	10	11	11	12	13	14	14	15
75	12	12	13	14	14	15	15	16	18	20	20	20
50	14	15	16	17	18	19	19	20	24	25	25	27
25	17	19	21	24	25	25	27	30	32	34	34	36
5	26	28	36	40	41	42	48	51	52	56	57	58

*The norms for age 17 can be used for age 18

Source: From F. E. Johnson et al., *Skinfold Thickness of Children 6-11 Years and Skinfold Thickness of Youth 12-17 Years* (Washington, D.C.: U.S. National Center for Health Statistics, 1972, 1974). Also presented in full in the AAHPERD Manual, 1980.

Table 5: Percentile norms, sample sizes, means, and standard deviations for triceps skinfold thickness (in millimeters) for boys.

Percentiles								
Age	5th	25th	50th	75th	95th	<i>n</i>	\bar{X}	<i>s</i>
6	13	9	8	6	5	575	8.1	2.8
7	14	10	8	6	4	632	8.4	3.2
8	17	11	8	6	4	618	9.0	3.8
9	20	12	8	7	5	603	10.0	5.0
10	20	12	9	7	5	576	10.1	4.4
11	22	14	10	7	5	628	11.0	5.3
12	23	13	9	7	5	643	10.7	5.8
13	23	13	9	7	4	626	10.5	5.9
14	21	12	8	6	4	617	9.5	5.6
15	21	11	8	6	4	613	9.0	5.1
16	20	11	8	6	4	555	8.9	4.9
17*	20	11	8	6	4	489	9.0	5.4

*The norms for age 17 can be used for age 18

Source: From F. E. Johnson et al., *Skinfold Thickness of Children 6-11 Years and Skinfold Thickness of Youth 12-17 Years* (Washington, D.C.: U.S. National Center for Health Statistics, 1972, 1974). Also presented in full in the AAHPERD Manual, 1980.

Table 6: Percentile norms, sample sizes, mean, and standard deviations for triceps skinfold thickness (in millimeters) for girls.

Percentiles								
Age	5th	25th	50th	75th	95th	<i>n</i>	\bar{X}	<i>s</i>
6	16	11	9	7	6	536	9.7	3.4
7	17	12	10	8	6	609	10.4	3.6
8	20	14	10	8	6	613	11.4	4.4
9	22	14	11	9	6	581	12.3	4.8
10	23	15	12	9	6	584	12.6	5.1
11	23	15	12	9	6	564	12.6	5.2
12	25	16	12	9	6	547	12.9	5.8
13	26	17	12	9	6	582	13.6	6.1
14	27	18	14	11	7	586	14.8	6.1
15	29	20	15	12	7	502	15.8	6.6
16	30	21	16	12	8	535	16.5	6.9
17*	29	20	16	12	8	468	16.5	6.2

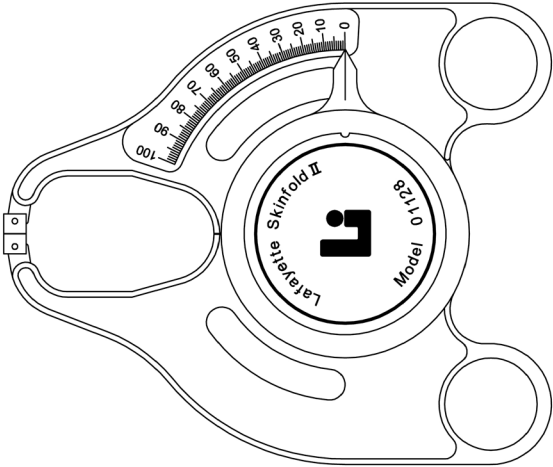
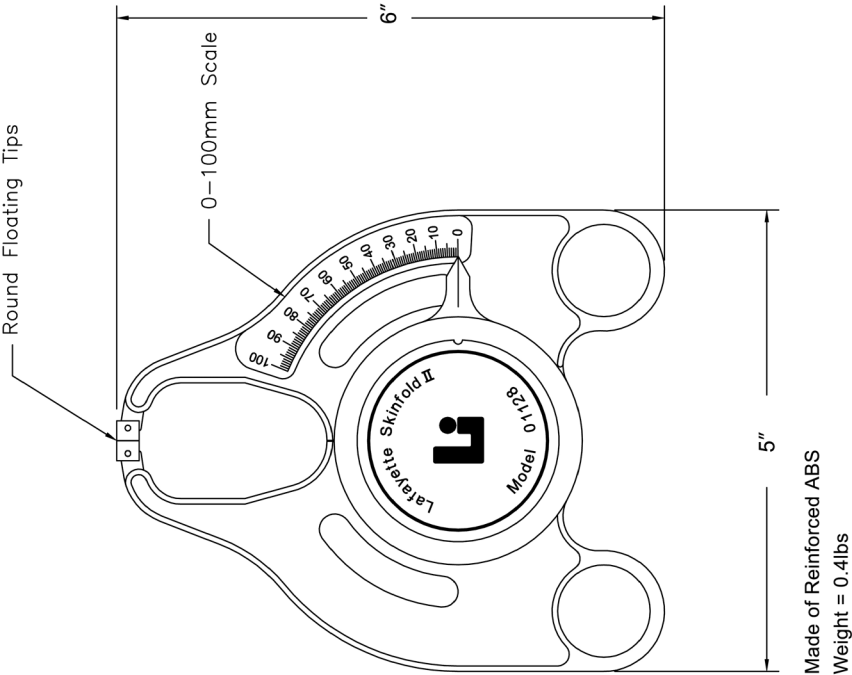
*The norms for age 17 can be used for age 18

Source: From F. E. Johnson et al., *Skinfold Thickness of Children 6-11 Years and Skinfold Thickness of Youth 12-17 Years* (Washington, D.C.: U.S. National Center for Health Statistics, 1972, 1974). Also presented in full in the AAHPERD Manual, 1980.

Reference

Pollack, M.L., Schmidt, D.H., MD, Jackson, A.S., PED, *Measurement of Cardio-Respiratory Fitness and Body Composition in the Critical Setting*, Comprehensive Therapy, Vol. 6, No. 9, September 1980.

Lafayette Instrument Skinfold Caliper II



Notes

Add any user notes here for your convenience.

Terms and Conditions

LIC Worldwide Headquarters

Toll-Free: (800) 428-7545 (USA only)

Phone: (765) 423-1505

Fax: (765) 423-4111

Email: sales@lafayetteinstrument.com

export@lafayetteinstrument.com (Outside the USA)

Mailing Address:

Lafayette Instrument Company

PO Box 5729

Lafayette, IN 47903, USA

Lafayette Instrument Europe:

Phone: +44 1509 817700

Fax: +44 1509 817701

Email: eusales@lafayetteinstrument.com

Phone, Fax, Email or Mail-in Orders

All orders need to be accompanied by a hard copy of your purchase order. All orders must include the following information:

- Quantity
- Part Number
- Description
- Your purchase order number or method of pre-payment
- Your tax status (include tax-exempt numbers)
- Shipping address for this order
- Billing address for the invoice we'll mail when this order is shipped
- Signature and typed name of person authorized to order these products
- Your telephone number
- Your email address
- Your FAX number

Domestic Terms

There is a \$50 minimum order. Open accounts can be extended to most recognized businesses. Net amount due 30 days from the date of shipment unless otherwise specified by us. Enclose payment with the order; charge with VISA, MasterCard, American Express, or pay COD. We must have a hard copy of your purchase order by mail, E-mail or fax. Students, individuals and private companies may call for a credit application.

International Payment Information

There is a \$50 minimum order. Payment must be made in advance by: draft drawn on a major US bank; wire transfers to our account; charge with VISA, MasterCard, American Express, or confirmed irrevocable letter of credit. Proforma invoices will be provided upon request.

Exports

If ordering instrumentation for use outside the USA, please specify the country of ultimate destination, as well as the power requirements (110V/60Hz or 220V/50Hz). Some model numbers for 220V/50Hz will have a "C" suffix.

Quotations

Quotations are supplied upon request. Written quotations will include the price of goods, cost of shipping and handling, if requested, and estimated delivery time frame. Quotations are good for 30 days, unless otherwise noted. Following that time, prices are subject to change and will be re-quoted at your request.

Cancellations

Orders for custom products, custom assemblies or instruments built to customer specifications will be subject to a cancellation penalty of 100%. Payment for up to 100% of the invoice value of custom products may be required in advance. Cancellation for a standard Lafayette Instrument manufactured product once the product has been shipped will normally be assessed a charge of 25% of the invoice value, plus shipping charges. Resell items, like custom products, will be subject to a cancellation penalty of 100%.

Exchanges and Refunds

Please see the cancellation penalty as described above. No item may be returned without prior authorization of Lafayette Instrument Company and a Return Goods Authorization (RGA#) number which must be affixed to the shipping label of the returned goods. The merchandise should be packed well, insured for the full value and returned along with a cover letter explaining the reason for return. Unopened merchandise may be returned prepaid within thirty (30) days after receipt of the item and in the original shipping carton. Collect shipments will not be accepted. Product must be returned in saleable condition, and credit is subject to inspection of the merchandise.

Repairs

Instrumentation may not be returned without first receiving a Return Goods Authorization Number (RGA). When returning instrumentation for service,

please call Lafayette Instrument to receive a RGA number. Your RGA number will be good for 30 days. Address the shipment to:

Lafayette Instrument Company

3700 Sagamore Parkway North

Lafayette, IN 47904, USA.

Shipments cannot be received at the PO Box. The items should be packed well, insured for full value, and returned along with a cover letter explaining the malfunction. An estimate of repair will be given prior to completion ONLY if requested in your enclosed cover letter. We must have a hard copy of your purchase order by mail or fax, or repair work cannot commence for non-warranty repairs.

Damaged Goods

Damaged instrumentation should not be returned to Lafayette Instrument prior to a thorough inspection. If a shipment arrives damaged, note damage on delivery bill and have the driver sign it to acknowledge the damage. Contact the delivery service, and they will file an insurance claim. If damage is not detected at the time of delivery, contact the carrier/shipper and request an inspection within 10 days of the original delivery. Please call the Lafayette Instrument Customer Service Department for repair or replacement of the damaged merchandise.

Limited Warranty

Lafayette Instrument Company warrants equipment manufactured by the company to be free of defects in material and workmanship for a period of one year from the date of shipment, except as provided hereinafter. The original manufacturer's warranty will be honored by Lafayette Instrument for items not manufactured by Lafayette Instrument Company, i.e. resell items. This assumes normal usage under commonly accepted operating parameters and excludes consumable products.

Warranty period for repairs or used instrumentation purchased from Lafayette Instrument is 90 days. Lafayette Instrument Company agrees either to repair or replace, at its sole option and free of part charges to the customer, instrumentation which, under proper and normal conditions of use, proves to be defective within the warranty period. Warranty for any parts of such repaired or replaced instrumentation shall be covered under the same limited warranty and shall have a warranty period of 90 days from the date of shipment or the remainder of the original warranty period whichever is greater. This warranty and remedy are given expressly and in lieu of all other warranties, expressed or implied, of merchantability or fitness for a particular purpose and constitutes the only warranty made by Lafayette Instrument Company.

Lafayette Instrument Company neither assumes nor authorizes any person to assume for it any other liability in connection with the sale, installation, service or use of its instrumentation. Lafayette Instrument Company shall have no liability whatsoever for special, consequential, or punitive damages of any kind from any cause arising out of the sale, installation, service or use of its instrumentation. All products manufactured by Lafayette Instrument Company are tested and inspected prior to shipment. Upon prompt notification by the Customer, Lafayette Instrument Company will correct any defect in warranted equipment of its manufacture either, at its option, by return of the item to the factory, or shipment of a repaired or replacement part. Lafayette Instrument Company will not be obliged, however, to replace or repair any piece of equipment, which has been abused, improperly installed, altered, damaged, or repaired by others. Defects in equipment do not include decomposition, wear, or damage by chemical action or corrosion, or damage incurred during shipment.

Limited Obligations Covered by this Warranty

1. In the case of instruments not of Lafayette Instrument Company manufacture, the original manufacturer's warranty applies.
2. Shipping charges under warranty are covered only in one direction. The customer is responsible for shipping charges to the factory if return of the part is required.
3. This warranty does not cover damage to components due to improper installation by the customer.
4. Consumable and/or expendable items, including but not limited to electrodes, lights, batteries, fuses, O-rings, gaskets, and tubing, are excluded from warranty.
5. Failure by the customer to perform normal and reasonable maintenance on instruments will void warranty claims.
6. If the original invoice for the instrument is issued to a company that is not the company of the end user, and not an authorized Lafayette Instrument Company distributor, then all requests for warranty must be processed through the company that sold the product to the end user, and not directly to Lafayette Instrument Company.

Export License

The U.S. Department of Commerce requires an export license for any polygraph system shipment with an ULTIMATE destination other than: Australia, Japan, New Zealand or any NATO Member Countries. It is against U.S. law to ship a Polygraph system to any other country without an export license. If the ultimate destination is not one of the above listed countries, contact us for the required license application forms.