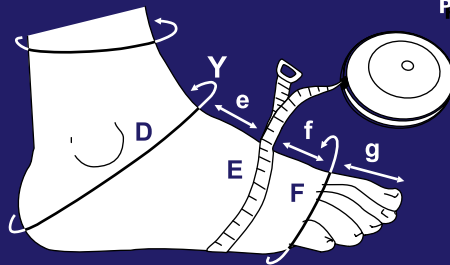


MEASURING FOR CUSTOM-MADE PRESSURE GARMENTS

LYMPHEDEMA GARMENTS



Pressure Garments • Custom & Ready-Made



Revised January 2008

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2424 East University Drive, Phoenix, Arizona 85034
voice: 602-267-7854 • toll-free: 800-421-5647 • fax: 602-273-6931

20080121_A

**Hand
#6 Left Glove to Wrist**

Peach. Open tips. The glove is to be extended an additional 1 1/2 inches proximally to the A2 measurement. Omit the standard elastic band at the wrist and make the glove out of Close Knit Material.

Omitting the band at the wrist for a lymphedema patient is indicated in order to avoid compromising proximal lymph fluid return. Likewise, extending the glove proximally an additional 1.5 inches is a good idea in order to avoid too narrowly overlapping the sleeve and creating a tourniquet. These would normally be good features for a lymphedema glove design, however, you must specify them. We do not typically add these features simply based on the diagnosis because there may be some therapeutic situations in which alternative designs would be desirable.

HAND MEASUREMENT CHART



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2424 East University Drive, Phoenix, Arizona, U.S.A. 85034-6911
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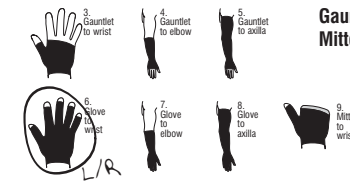
Patient Doe, Jane
 Last Name First Name
 Bio-Concepts Use Only
 Date 12/18/07 Age 38 Sex F
 Garment color C23
 Insert _____
 Lining _____
 Left hand zipper: Dorsal Palmar Ulnar Radial
 With hook & loop zipper stop tab
 Right hand zipper: Dorsal Palmar Ulnar Radial
 With hook & loop zipper stop tab
 Glove and Gauntlet zippers normally open at the proximal end of the garment and extend to just proximal to the knuckles (MCPs).
 Finger/thumb tips closed Finger/thumb tips open

Refer to the Bio-Concepts Measuring Manual for detailed procedures, additional instructions, and example measuring charts.

Additional instructions or comments:

Extend glove to A2 = 80
No band at wrist
Close Knit Material

CIRCLE ITEMS ORDERED
 Bio-Concepts Use Only: F=



HAND TRACINGS ARE REQUIRED for all Gloves, Gauntlets, & Mittens

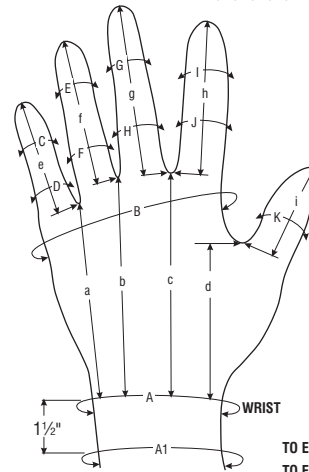
Use the UPPER EXTREMITY CHART for adding sleeves to gloves & gauntlets.

REQUIRED MEASUREMENTS
 Gloves: All
 Mittens: All, except C thru J
 Gauntlet: A1, A, B, K, d, & i

Refer to the Bio-Concepts Measuring Manual for instructions on measuring contracted fingers.

Use the hand tracing to illustrate special features & options.

NOTE: Always take distances (a-i) from a hand tracing not from the patient



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	LEFT HAND	RIGHT HAND	
A1	6 2		
A	5 7		
B	7 5		
C	1 5		
D	2 2		
E	1 7		
F	2 2		
G	2 1		
H	2 3		
I	2 0		
J	2 4		
K	2 3		
a	3 7		
b	4 3+		
c	4 4		
d	3 2		
e	2 3	1 4	
f	2 6	1 6	
g	3 2	2 7+	
h	3 2	2 6	
i	2 1+	1 0	

TO END OF FINGER
 TO END OF GLOVE FOR OPEN TIPS

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See page 15 for an explanation of the shorthand measurement notation system.

Hand Chart -- LYMPHEDEMA EXAMPLE

CUSTOM GARMENTS FOR LYMPHEDEMA

Lymphedema is a chronic swelling of specific areas of the body due to damage to the lymph system. This condition results from pooling of protein-rich lymph fluid in a compromised lymph vascular system. Bio-Concepts custom pressure garments are highly effective in managing both primary and secondary lymphedema when used in combination with a conscientiously applied comprehensive lymphedema management program.

Manual Lymph Drainage. A light-touch massage to clear lymph paths and stimulate the movement of trapped lymph.

Compression Bandaging. Condition-specific bandages and foam inserts to force excess lymph fluid back into the lymphatic system.

Therapeutic Exercises. Geared to the patient's ability and promoting lymph drainage and optimize range of motion and increased physical strength.

Custom Pressure Garments. To be worn daily to maintain lymph paths established with drainage, bandaging, and exercise.

Lymphedema of the Upper Extremity

The measuring and fitting procedures described in preceding pages apply to custom garments used for many conditions. Here we describe procedures for measuring and fitting a custom garment to be used in managing lymphedema resulting from radical mastectomy. We have worked closely with lymphedema experts to develop a custom garment solution for this patient group. This particular example presumes a patient with lymphedema evident or suspected in the hand and arm, but which does not involve the axilla or any part of the torso, and it presumes that the patient is undergoing regular therapy.

#2 Sleeve to Axilla

- Silicone-lined band at the top to prevent it from sliding down.

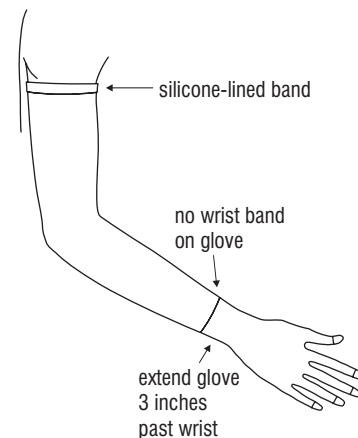
#6 Glove to Wrist

- No elastic band at wrist to avoid a tourniquet effect.
- Proximal end of the glove extended to 3 inches from the wrist instead of the usual 1½ inches to ensure greater overlap with the sleeve.

NOTE: Every option listed above must be specified on the appropriate measuring charts. Additional options may include an insert at the antecubital fossa (elbow crease) to prevent irritation from bunching of the fabric and an expansion panel to accommodate minor fluctuations in measurements.

Now with LuxFab™!

Bio-Concepts is pleased to announce the availability of LuxFab™ our new Dorlastan/Lycra 3-way stretch fabric. LuxFab™ is especially useful for compliant patients as a substitute for high-time wrapping. Its sturdy firm pressure maintains prescribed pressures well throughout the day and throughout the life of the garment. Please call for pricing information.



Typical LuxFab™ lymphedema sleeve with glove combination

Left Hand Tracing Guide -- LYMPHEDEMA EXAMPLE

LEFT HAND TRACING GUIDE **BIOCONCEPTS** 2424 E. University Drive, Phoenix, Arizona, U.S.A. 85034-6911
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 e-mail: bio-con@bio-con.com • worldwideweb: http://www.bio-con.com

REQUIRED in conjunction with HAND MEASUREMENT CHART • Position and trace patient's hand within outline

Patient Doe Jane Bio-Concepts Patient No. _____ Date 12/18/07

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Correct Incorrect

If the glove is to have open finger tips, mark the desired ends of the fingers on the tracing with tic marks.

Please do not send a hand tracing without a scale

Draw a 3-inch long line in this box

PLEASE DO NOT WRITE IN MARGINS

Take measurements a-i on the Hand Measurement Chart from the hand tracing.

Place wrist crease on this line

Left Hand Tracing

Open finger tips are indicated by lines drawn across the digits.

#2 Sleeve Wrist to Axilla

Requested Features:

1. insert at the antecubital fossa (elbow crease) to prevent discomfort of material bunching
2. expansion panel to facilitate donning and to accommodate fluctuations in measurements
3. silon-TEX lining on the elastic band at the top of the sleeve to keep it from sliding down

This is a typical combination of features with our Close-Knit fabric. When using our LuxFab™ material we often find that the elbow insert and expansion panels are not needed.

UPPER EXTREMITY MEASUREMENT CHART

Patient Doe, Jane
 Bio-Concepts Last Name First Name
 Patient No. _____
 Date 12/18/07 Age 38 Sex F
 Garment color C23
 Insert Anterior elbow (R) & (L)
 Lining Silon top band
 Left hand zipper: Dorsal Palmar Ulnar Radial
 With hook & loop zipper stop tab
 Length (if not full) _____
 Right hand zipper: Dorsal Palmar Ulnar Radial
 With hook & loop zipper stop tab
 Length (if not full) _____
 Expansion panel: Left Right
 (Expansion panels are full length by default; ulnar when sleeve separate from torso, palmar when attached to a torso garment)
 Refer to the Bio-Concepts Measuring Manual for detailed procedures, additional instructions, and example measuring charts.
 Additional instructions or comments:
Close-knit fabric

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CIRCLE ITEMS ORDERED

Bio-Concepts Use Only:

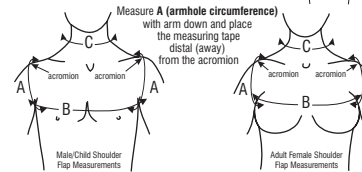
F=

Shoulder Flaps



	LEFT	RIGHT
A		
B		
C		

Shoulder flaps may be attached to any sleeve that reaches the axilla (No. 1, No. 2, No. 5, No. 8). Select flap style above, sleeve style to lower left. Enter shoulder flap measurements at left and sleeve measurements below.



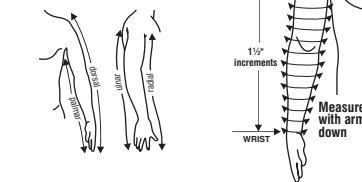
Sleeves



Sleeves for Gloves & Gauntlets



Sleeves for Briefs, Suits, & Vests



Stump Measurement

STUMP	LEFT	RIGHT
b		
c		

Stump cover style: Orange peel
 Insert

FROM WRIST or AXILLA	LEFT ARM	RIGHT ARM
0	5 ⁷	
1½	6 ⁰	
3	7 ⁰	
4½	8 ⁰	
6	8 ⁶	
E 7½	9 ^{0 0+}	
9	9 ⁰	
10½	8 ⁷	
12	9 ⁴	
13½	10 ³	
15	10 ⁴	
16½	11 ⁰	
18		
19½		
21		

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See page 15 for an explanation of the shorthand measurement notation system.

Upper Extremity Chart -- LYMPHEDEMA EXAMPLE

The example charts on pages 66 and 68-69 include a **Hand Measurement Chart** and **Hand Tracing Guide** for the **Glove to Wrist** and an **Upper Extremity Measurement Chart**. Include the **Order Form** and be sure to indicate the correct diagnosis by checking the box labeled "Lymphedema".

The Silon-TEX band at the top of the sleeve eliminates the need to attach the sleeve to a shoulder flap. If lymphedema is evident in the axillary region or near the acromial region, then a **10A Shoulder Flap** would be necessary. A **10A Male Shoulder Flap** would be used for a patient with a complete mastectomy, while a **10A Female Shoulder Flap** would be indicated for the patient with partial mastectomy, reconstructed breasts, or prosthetic breasts. In some cases the lymphedema becomes prevalent throughout the upper torso, on one or both sides. For these patients a **#31 Sleeved Vest** is needed.

Our standard glove construction includes an elastic band at the proximal end. This band is not required when used in combination with a sleeve, and can, for some lymphedema patients, cause painful constrictions at the wrist.

Please note the way the measurements are recorded and the specifications are given for the various options and features. Keep in mind that this protocol works well with many post-mastectomy lymphedema patients, but numerous alternative configurations are available which may work even better for your patient.

Lymphedema of the Upper and Lower Torso

Injury, accidental or purposeful removal, or congenital absence of lymph nodes anywhere in the body may result in the potential for lymphedema. Shoulder regions in the upper torso, the lower torso, and upper thighs adjacent to the groin are frequently affected by lymphedema.

Lymphedema of the Upper Torso

In a few cases the upper extremities may be clear of lymphedema while the adjacent torso is heavily involved. In these cases a **#31 Sleeved Vest**, with one or both sleeves attached is preferred over a simple **#10A Shoulder Flap**. The purpose of the **Shoulder Flap** is to hold up a sleeve, it is not intended to apply therapeutic pressure to the torso.

Lymphedema of the Lower Torso

Lymphedema of the lower torso and upper thighs would be best managed with a **#19 Two Legs to Waist**. In a few cases it may be possible to use a **#23 Brief Two Legs to Above Knee**, but unless compression is applied from regions well distal of the source of the lymphedema, the garment may prevent movement of lymph fluid towards lymph nodes; the opposite of what is intended.

Lymphedema of the Lower Extremity

Custom pressure garments for lymphedema of the feet, ankles, and lower legs may be managed with a comprehensive treatment program similar to that used to treat post-mastectomy lymphedema.

The following lists the garments and features we have found works best for this patient group:

#12 Stocking to Knee (or #13 Stocking to Thigh)

- Silicone-lined band at the top to prevent it from sliding down.
- Medial zipper.
- Anterior ankle insert of the same stretch fabric to prevent irritation of bunching fabric in the ankle crease.
- Posterior expansion panel may be needed for some patients who fluctuate measurements and need extra assistance in donning the garment.

For the adult patient, the lower extremity lymphedema garment is most effective when made using Regular Material or LuxFab™. For some patients, the standard 1 inch band lined with Silon-TEX at the top of the stocking may not be enough. You should consider requesting a 1½ or 2 inch wide band instead.