

# Foot Measurement Procedure

The following pages illustrate the measurements needed to assess foot volumes and a recommended sequence for those measurements. On the last page is a data sheet that is useful for recording the measurements, which should make it easy to input the data to Limb Volumes Professional. When using LVP to track and document lower extremity volume changes, you have the option of including foot volumes to the total determination of extremity volume.

The algorithm used by LVP to determine foot volume and its change with therapy has been substantiated by extensive research in which foot volumes were determined directly using the water displacement method, which is the accepted gold standard. Volume estimates based on the algorithm deviate on average from those obtained with water displacement by less than 5%, which is adequate for most clinical purposes.

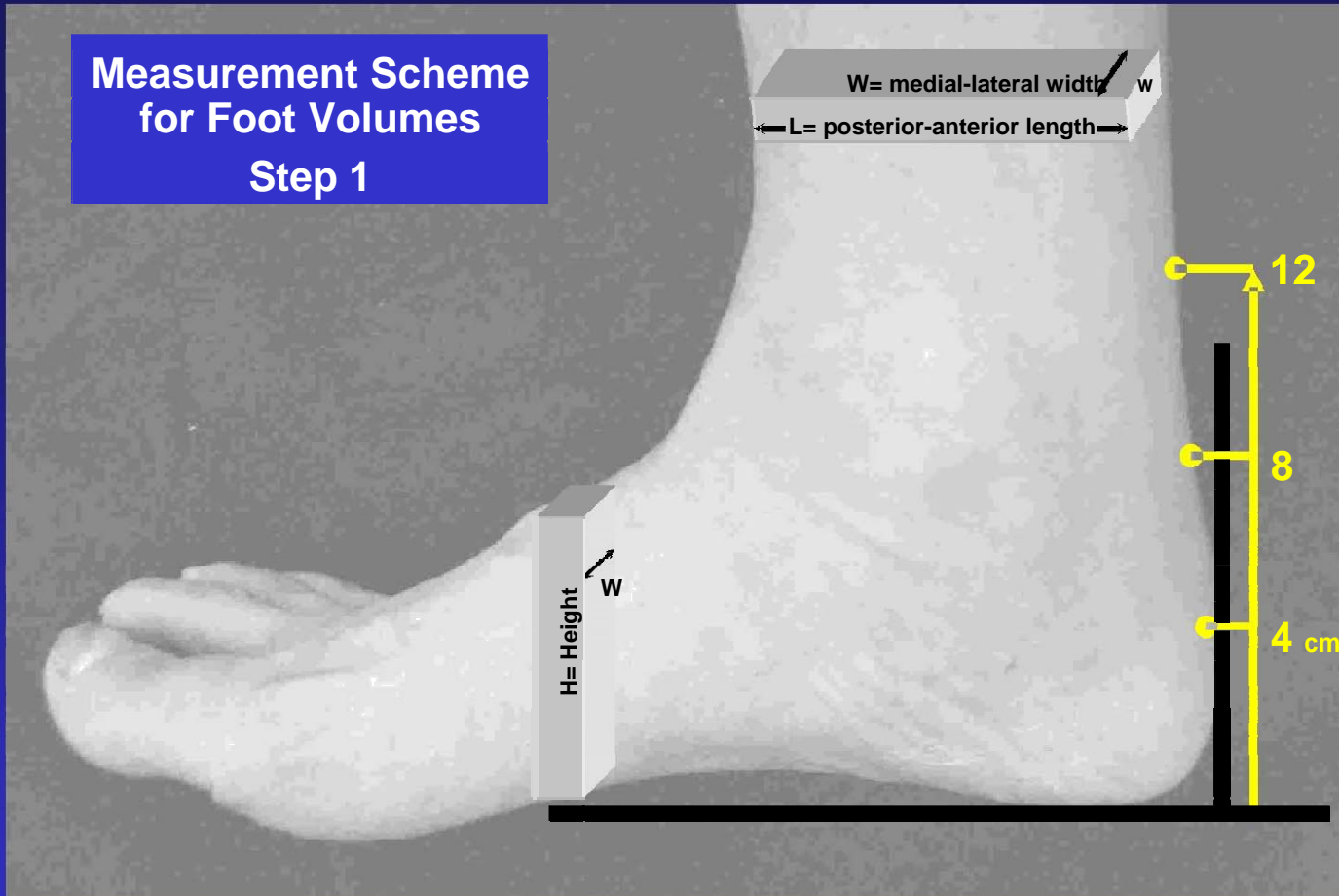
The instructions are broken down into discrete steps. Although inclusion of foot volume requires some additional time, there are many clinical conditions in which such additional effort is well warranted. You the clinician/therapist are the best judge of its utility.

If there are any questions please

[support@limbvolumes.org](mailto:support@limbvolumes.org)

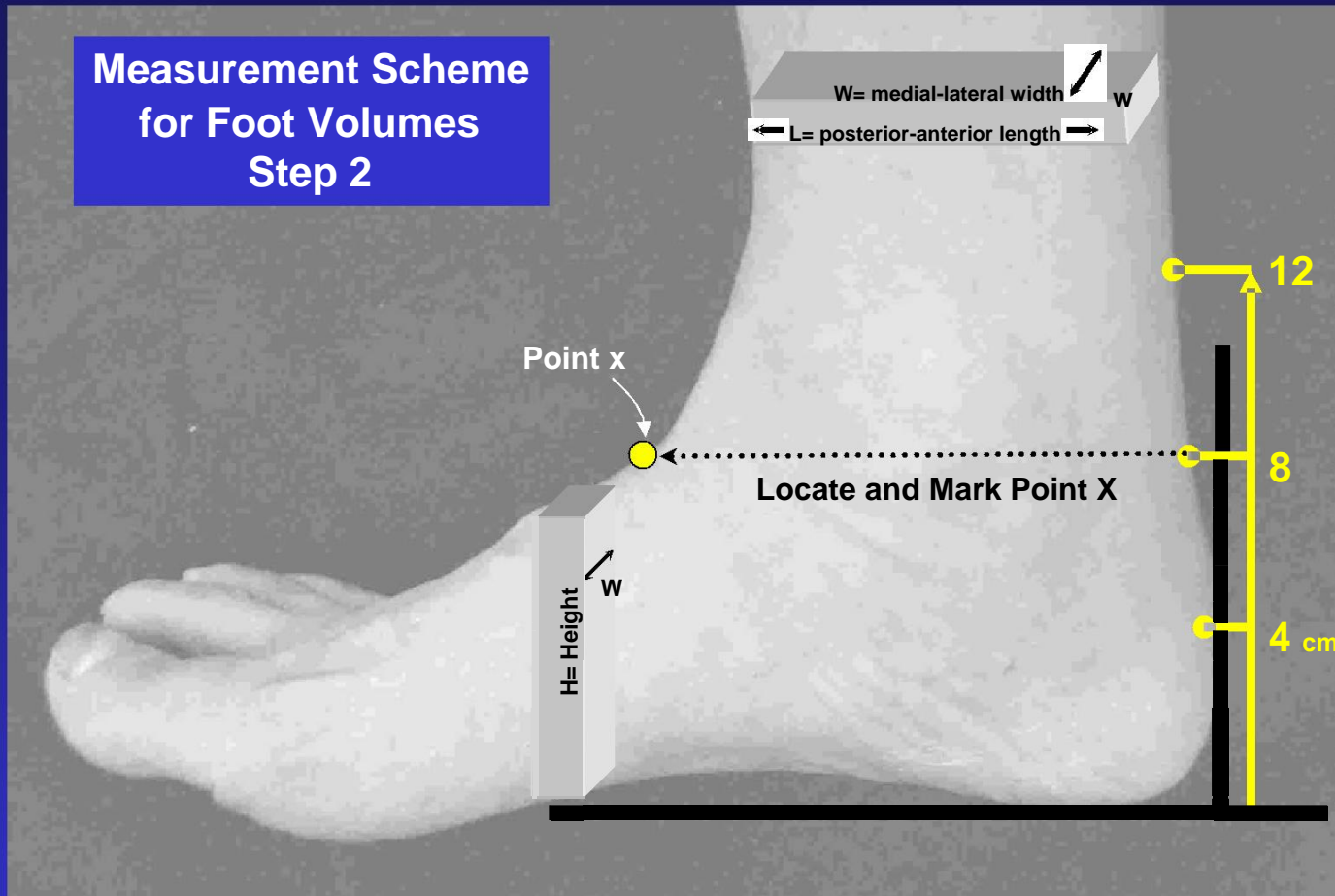
## Measurement Scheme for Foot Volumes

### Step 1

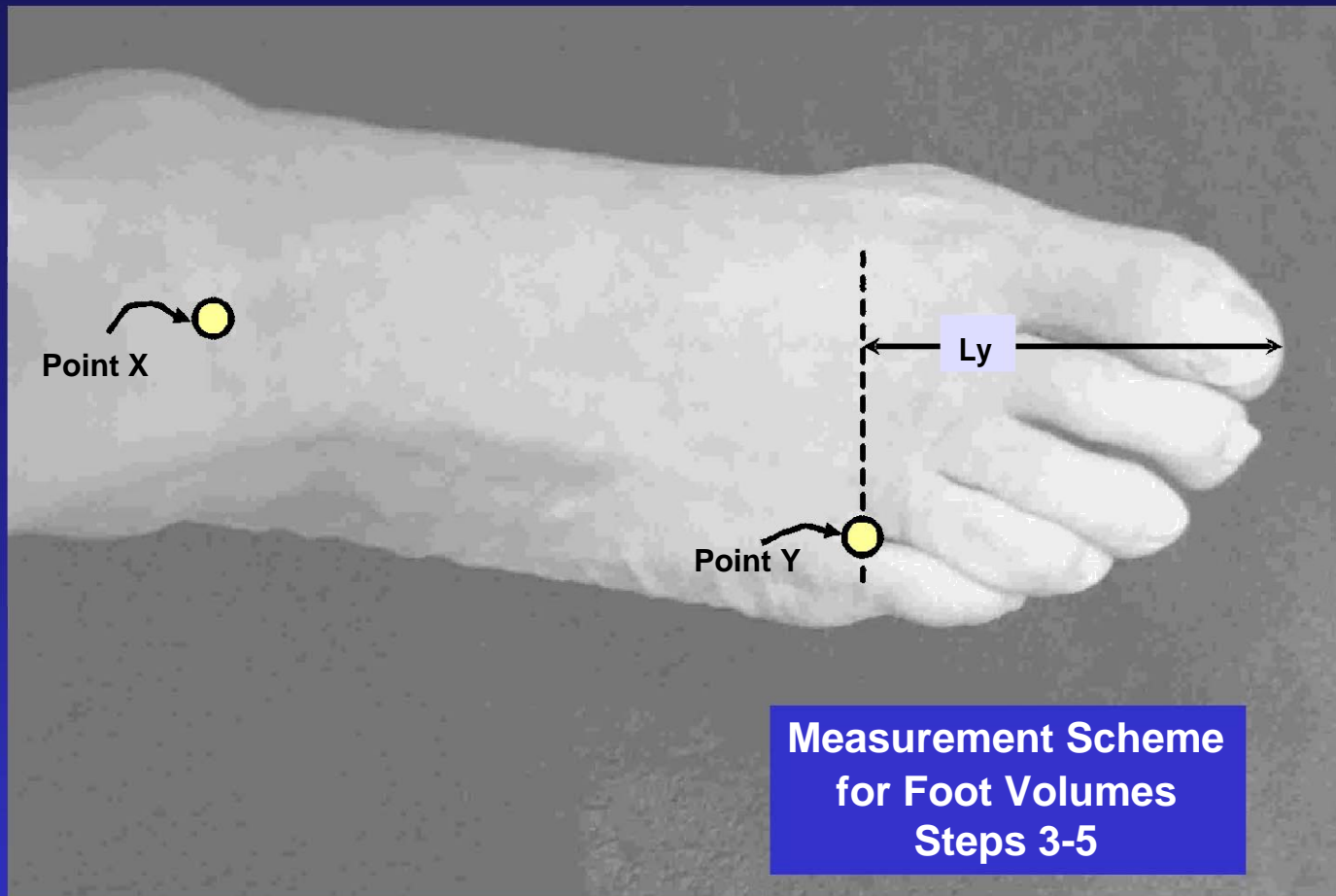


1. Position foot at about  $90^{\circ}$  flexion and then mark the foot at heights of 4, 8 and 12 cm from bottom.

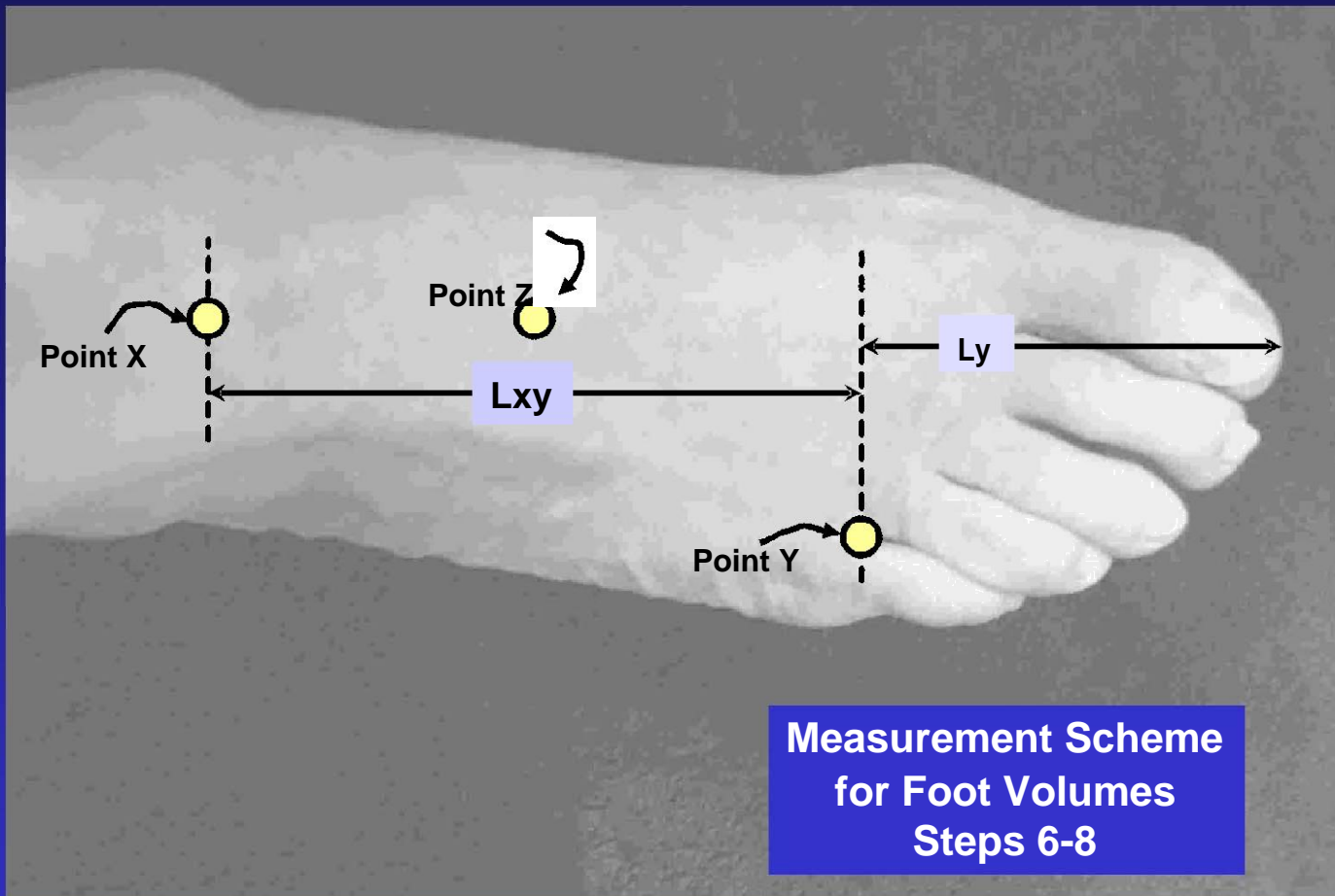
## Measurement Scheme for Foot Volumes Step 2



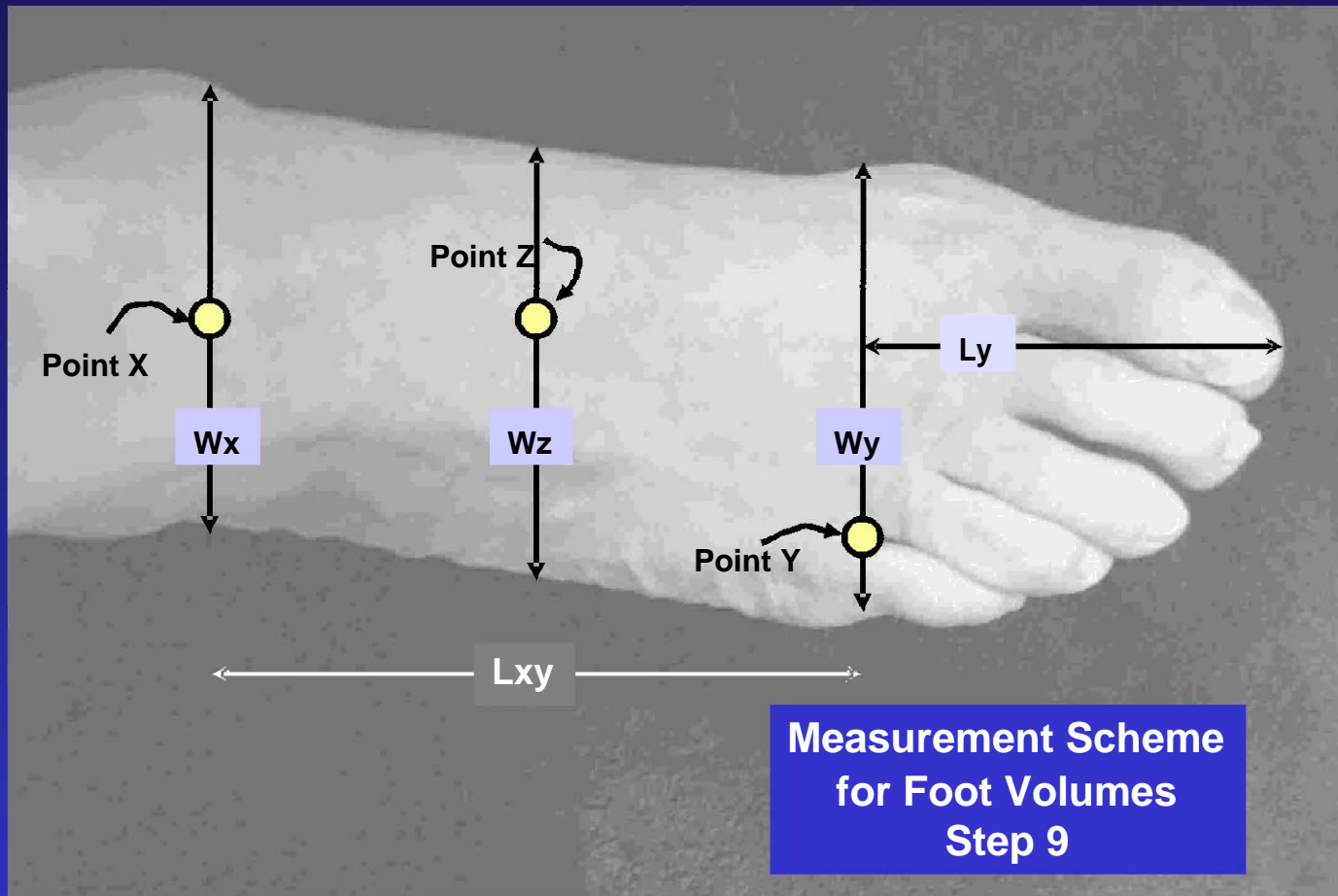
2. At the 8 cm height locate and mark point x. This is determined by the point where a horizontal line, if drawn, would end.



3. Locate and mark the point Y where the crease between toes 5 and 4 ends.
  4. Draw a line through point Y as shown.
  5. Measure the perpendicular distance (Ly) to furthest point on toes
- RECORD L2**

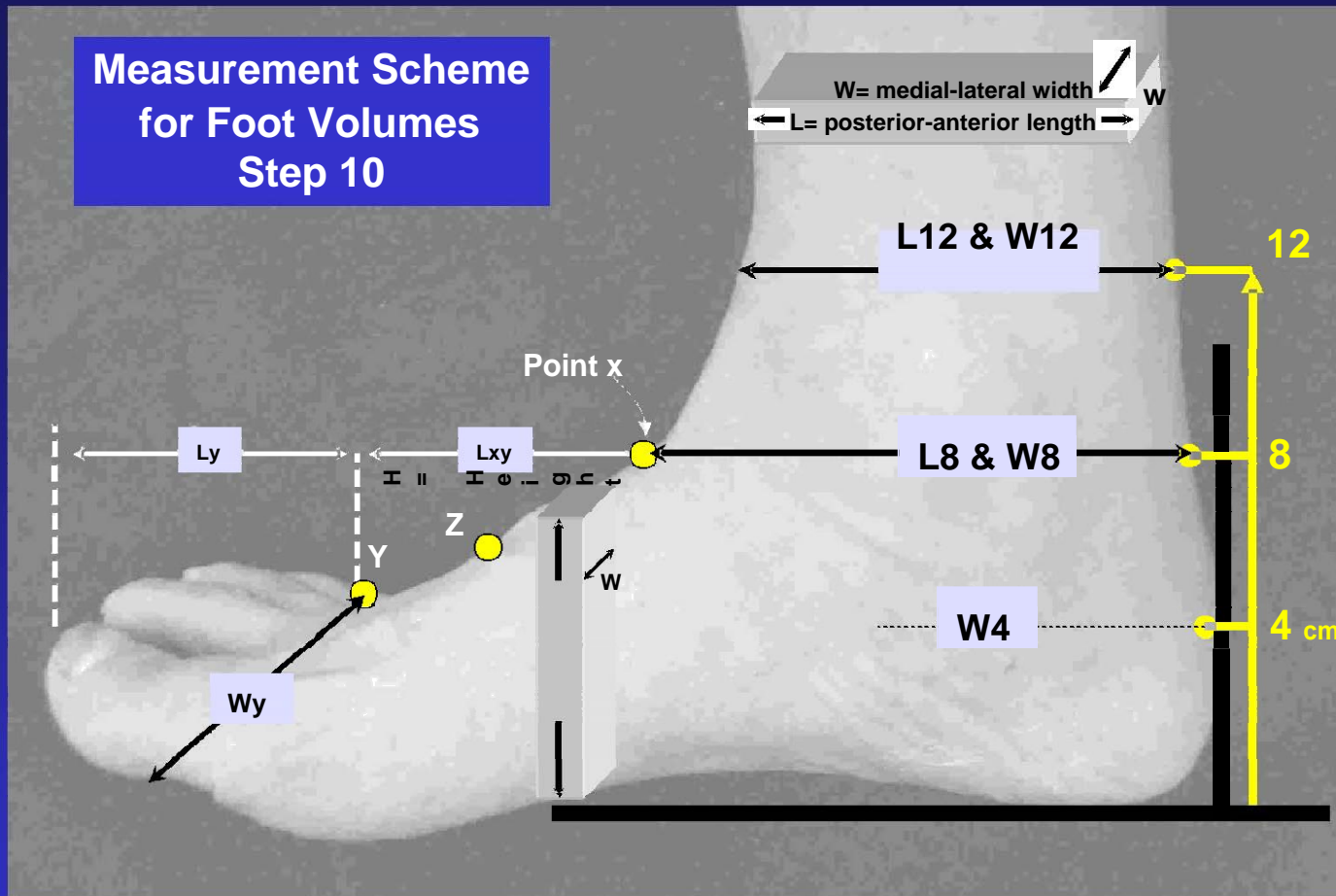


6. Draw a horizontal line through point X (previously marked) as shown.
7. Measure the length ( $L_{xy}$ ) between the two lines - RECORD  $L_{xy}$
8. Mark a point (Z) midway between X and Y



9. Using calipers measure and RECORD the widths Wx, Wz and Wy.

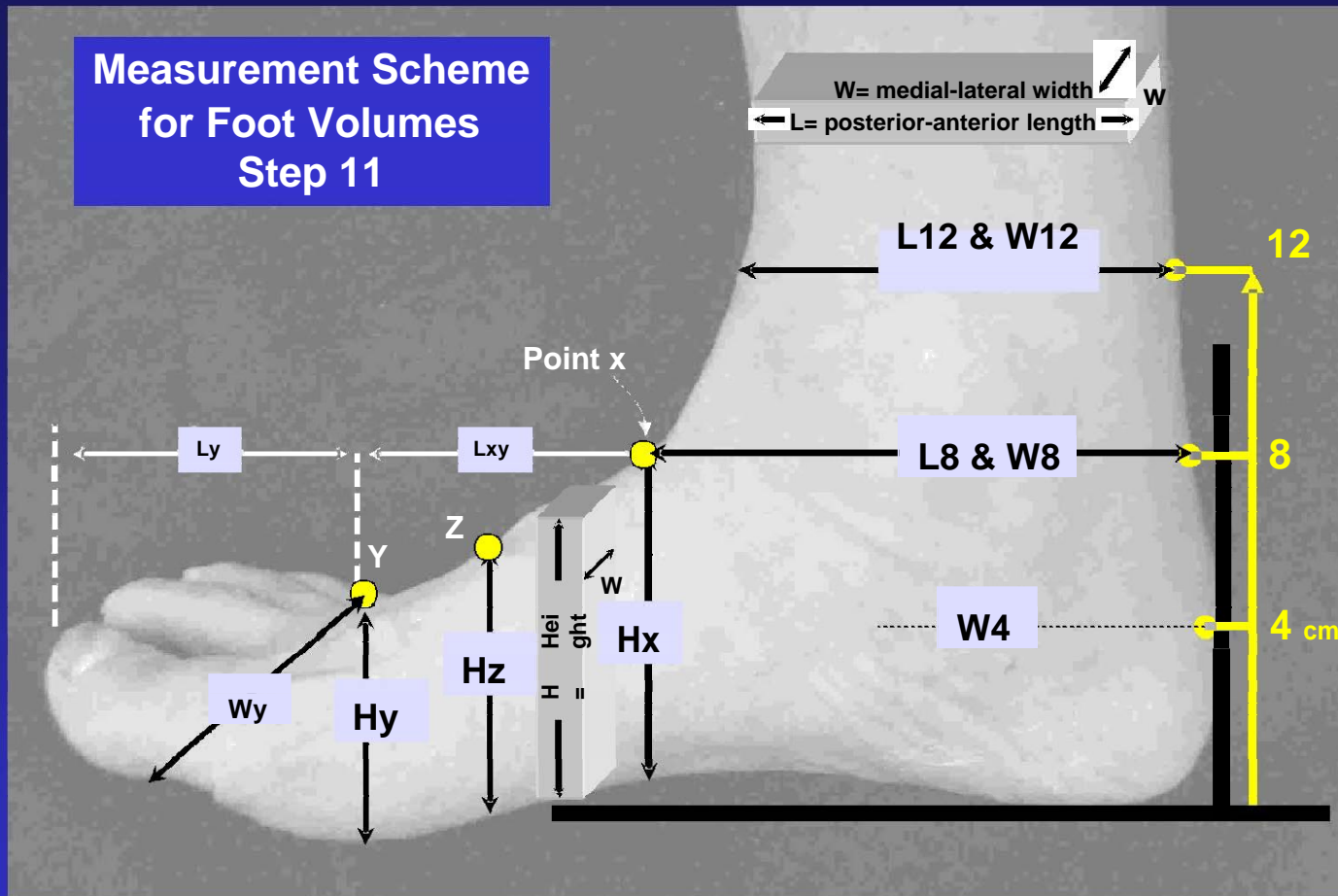
# Measurement Scheme for Foot Volumes Step 10



10. Using calipers measure and RECORD the Lengths at 12 and 8 cm and the widths at 12, 8 and 4 cm as indicated.



# Measurement Scheme for Foot Volumes Step 11



11. Measure and RECORD the Heights  $H_x$ ,  $H_z$  and  $H_y$  as indicated.



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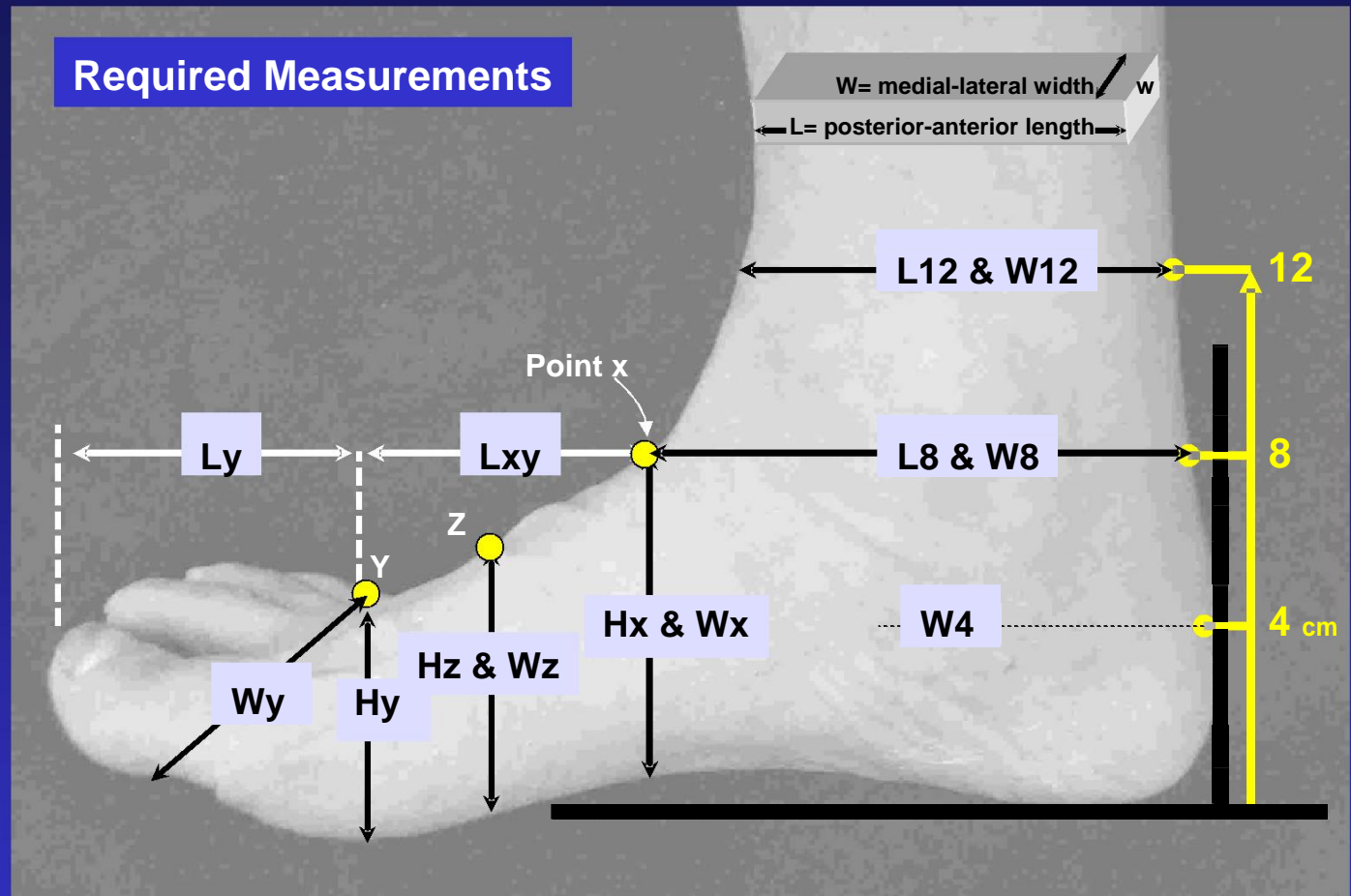
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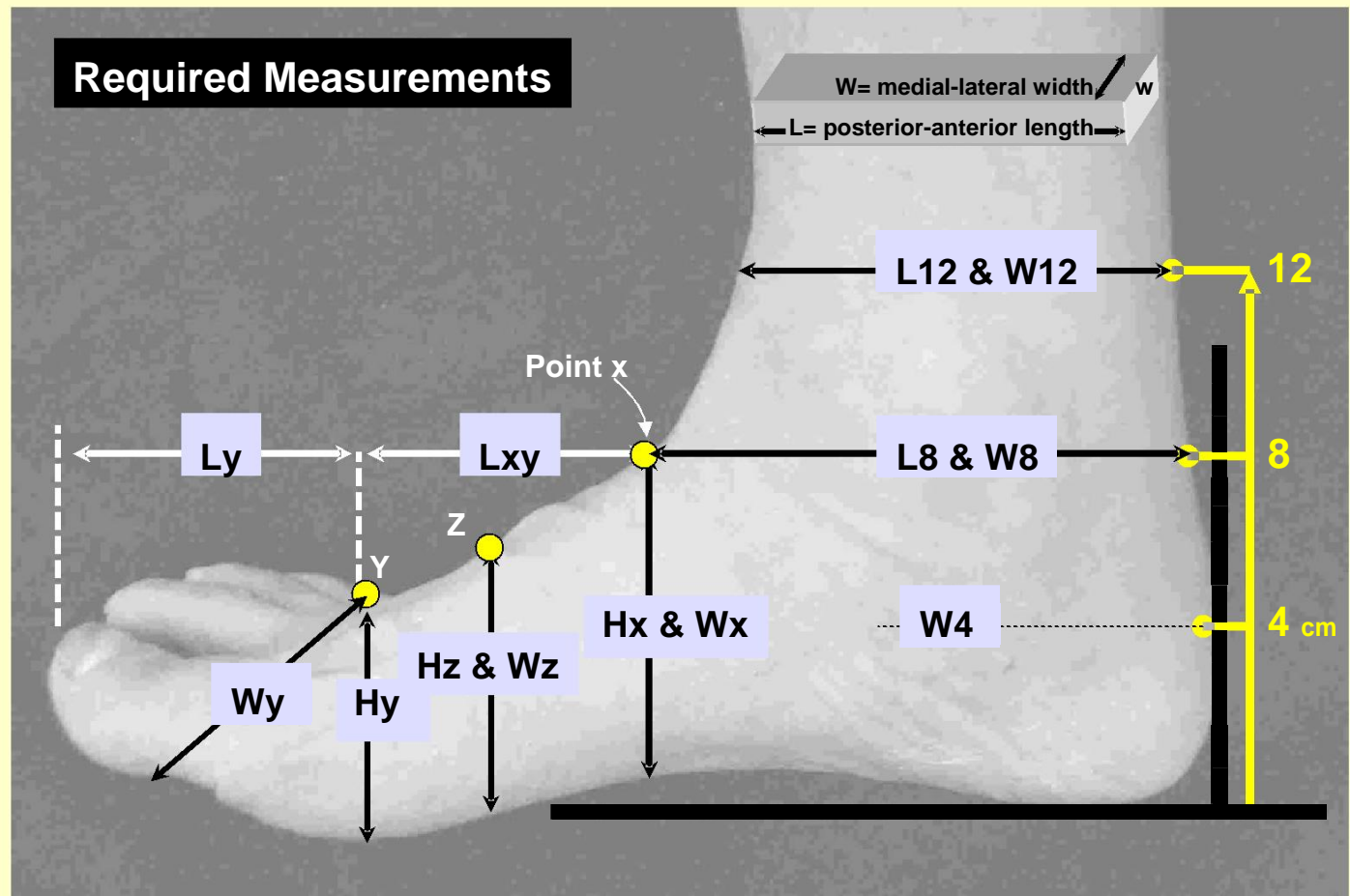
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## Required Measurements



**For ease of data entry and consistency, enter data in mm**

Ly	_____
Lxy	_____
Wx	_____
Wz	_____
Wy	_____
L12	_____
L8	_____
W12	_____
W8	_____
W4	_____
Hx	_____
Hz	_____
Hy	_____



For ease of data entry and consistency, enter data into the FOOTC page of LVP4.0 in millimeters (mm) only

**This page can be printed and used  
as a Data Recording Sheet for  
Your foot measurements**

Clinical Software Innovations ----- [support@limbvolumes.org](mailto:support@limbvolumes.org)