

Bone Density: Height and Weight Measurements

Purpose

This document provides a procedure to perform accurate height and weight measurements for Bone Density (BD) examinations.

Site Applicability

This standard is applicable to all Lower Mainland Medical Imaging (LMMI) departments within Fraser Health (FH), Providence Health Care (PHC), Provincial Health Services Authority (PHSA) and Vancouver Coastal Health (VCH).

Practice Level

Profession:	Responsibilities:
Bone Density Technologist	<ul style="list-style-type: none"> Obtain accurate height and weight measurement for a patient undergoing a bone density examination Document the measurements accurately on the patient EHR

Need to Know

It is a mandatory standard of the [Diagnostic Accreditation Program](#) (BD2.2.7) to have patient height and weight accurately measured at the time of the examination and (BD3.3.4) that there is a consistent and accurate procedure to determine the patient's height and weight.

Height and weight measurements should be measured at the BD facility. Measurements provided by other medical practitioners should only be used in exceptional circumstances where it is not possible to perform the measurements (e.g. patient cannot stand). If height or weight data were not measured directly by the BD facility, this should be documented on the technologist worksheet.

Accurate height and weight measurements are important elements in the performance of bone densitometry exams. Attention to the way in which measurements are performed will improve the accuracy and reliability of diagnosing osteoporosis or in the monitoring of osteoporosis therapy.

Procedure

- To ensure reliable and consistent height measurements are obtained, it is recommended that measurements be taken using a wall mounted stadiometer or a freestanding height/weight measuring device

Figure 1: Wall mounted stadiometer



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- a. Instruct the client to remove their shoes
 - b. Instruct the client to stand with their back to the wall and look directly forward. The back of their feet, upper back and head should all be in contact with the wall or close to the measuring rod. They should be positioned directly underneath the drop down measuring device.
 - c. Instruct the client to look straight ahead and remain still
 - d. Lower the measuring device until it rests gently on the top of the client's head
 - e. The horizontal arm of the measuring device should compress the hair as much as possible and remain at a rigid right angle to the measuring scale when the measurement is taken
 - f. The measurement should be taken during exhalation or quiet breathing
 - g. Record the measurement to the nearest 0.1 cm.
 - h. Repeat measurement if necessary (i.e. patient movement)
2. To ensure reliable weight measurements are obtained using body weight scales:

Figure 2: Using a body weight scale



- a. Zero the scale prior to the client stepping on the scale
- b. Instruct the client to remove their shoes, empty all items from their pockets and remove any substantial items of clothing (e.g.: jackets, heavy sweaters)
- c. Instruct the client to look straight ahead, keep their arms at their sides and remain still on the scale during the measurement
- d. Wait for the needle/display to settle to one reading before recording the measurement
- e. Record the patient weight to the nearest 0.1kg
- f. If applicable, document variances in the client's state (e.g.: severe fluid retention, large amount of food recently consumed, wearing an immovable brace or cast)

References

- BC College of Physicians and Surgeons. Diagnostic Accreditation Program Standards (2020). Retrieved from: <https://www.cpsbc.ca/accredited-facilities/dap/accreditation-standards-DI>
- Canadian Association of Radiologists. CAR Technical Standards for Bone Mineral Densitometry Reporting (2013). Retrieved from: <https://car.ca/wp-content/uploads/Technical-Standards-for-Bone-Mineral-Densitometry-Reporting-2013.pdf>

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Patient Direct Taking Height, Weight and 'BMI' Measurements. Retrieved from <https://www.ptdirect.com/training-delivery/client-assessment/taking-height-weight-and-2018bmi2019-measurements>

Alberta Health Services. Stadiometer: Measuring Height 2 to 19 Years of Age. <https://www.albertahealthservices.ca/assets/info/hp/cgm/if-hp-cgm-measuring-height-2-19-years.pdf>

Effective Date:	28-JUN-2023			
Posted Date:	28-JUN-2023			
Last Revised:	28-JUN-2023			
Last Reviewed:	28-JUN-2023			
Approved By:	Bone Density PPC			
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Owners:	Bone Density Regional Practice Lead, LMMI			
Revision History:	Version	Date	Description/ Key Changes	Revised By (Name and Position)
	1.0	09-AUG-2016	Initial release	Rhonda Hollerbaum, RPL
	2.0	28-JUN-2023	Moved into SHOP Format Expanded need to know section. Included recording of ht and wt to nearest 0.1 cm and 0.1 kg, Added client related factors for weight, updated references	Rhonda Hollerbaum, RPL