WHY USE THE MID-UPPER ARM CIRCUMFERENCE (MUAC) MEASUREMENT?

Up to **1 in 3 children** admitted to a Canadian tertiary hospital is malnourished.[1]

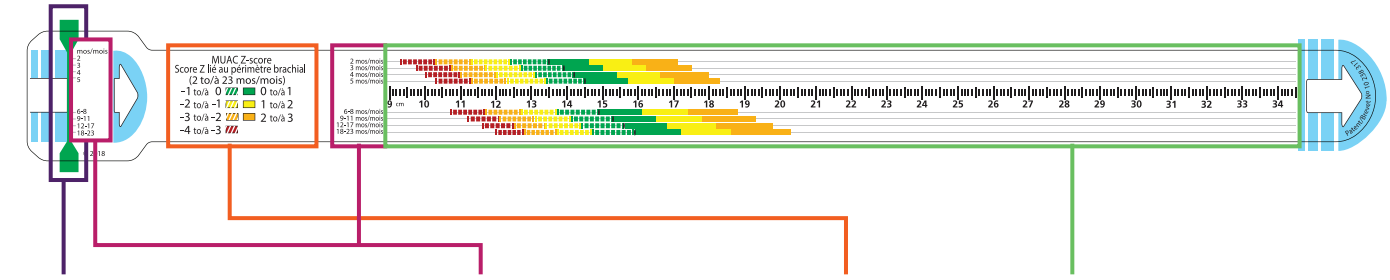
Scientific Overview

The MUAC is a convenient, simple anthropometric measurement to help identify children who are at risk of malnutrition and in need of further nutritional assessment. It is especially valuable when height and/or weight measures are unreliable or unfeasible.

The MUAC is another way to assess a child's nutritional status. Like height and weight measures, the MUAC can indicate whether a child is in a normal anthropometric range for his or her age by comparing the measured value to the reference population.[2]

MUAC Z-score Tape

This new MUAC tape can be used in infants and children 2 months to 18 years old and conveniently identifies the Z-score range of the measurement when taken.



1. The zero end of the tape (where you read the patient's MUAC measurement and Z-score)

2. The age-range reference:
Infant tape: 2 to 59 months
Child tape: 5 to 18 years old

3. The Z-score key

MUAC Z-score
Score Z lié au périmètre brachial
(2 to/à 23 mos/mois)
-1 to/à 0 — 0 to/à 1
-2 to/à -1 — 1 to/à 2
-3 to/à -2 — 2 to/à 3
-4 to/à -3

4. The colour band with centimetre graduations

Applying to Your Practice

Monitoring of anthropometric measures, including the MUAC, should be done routinely to help with early identification of infants and children at risk of malnutrition or growth faltering.

A full nutritional assessment by a dietitian is indicated in infants and children with low anthropometric values (Z-scores <-2), followed by a prompt individualized intervention in those found to be malnourished.

Key Takeaways

Early identification of a child with or at risk of malnutrition, as well as effective nutritional intervention are critical to help restore normal growth and development.
The MUAC is:

- a validated primary indicator of malnutrition used to identify children who are at nutritional risk;
- used to indicate whether a child is in a normal anthropometric range for his or her age;
- a simple additional tool that can help monitor a child's nutritional status and growth trajectory.

1. Bélanger V et al. *J Pediatr* 2019;205:160-7.e6.
2. Abdel-Rahman SM et al. *Nutr Clin Pract* 2017;32:68-76.

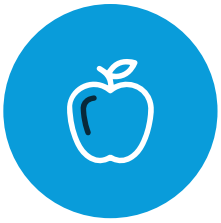
WHY USE THE MID-UPPER ARM CIRCUMFERENCE (MUAC) MEASUREMENT?

Up to **1 in 3 children** admitted to a Canadian tertiary hospital is malnourished.[1]

During hospitalization, children's **nutritional status deteriorates** with poor intake and weight loss.[1,2]

Malnutrition can negatively impact a child's growth, development, and other relevant health outcomes.

Screening should be fully exploited in order to detect at risk or malnourished children.



The MUAC, a validated anthropometric measurement, is a **primary indicator** of malnutrition.

1. Bélanger V et al. *J Pediatr* 2019;205:160-7.e6.
2. Carter L et al. *Can J Diet Pract Res* 2019;80:195-9.

Children's Mercy Hospital's MUAC Z-score tape is made available by Abbott. Contact your Abbott representative or visit ANHI.org for more information.

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