



# 17. Measuring mid upper arm circumference (MUAC)

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## What is a MUAC test?

- The MUAC test measures the circumference of (or distance around) the mid upper arm.

## Why is the MUAC test important?

- The MUAC test can identify children between six months and five years old who have malnutrition (wasting or thinness) and are at risk of dying.

## What you need to know

- MUAC is a simple measurement. It uses a coloured tape that is wrapped around the left upper arm. Parents and carers can be trained to measure the MUAC.
- Children aged six months to five years who have a MUAC reading of less than 12.5 cm or whose arm circumference falls within the red or yellow indicator on the coloured tape (see table below) should be referred to the nearest health or nutrition centre.

## How to measure MUAC

1. Explain the procedure to the child's mother or caregiver.
2. Ensure that the child is not wearing any clothing on his or her left arm.
3. If possible, the child should stand straight and sideways to the measurer.
4. Bend the child's left arm at 90 degrees to the body.
5. Find the mid-point of the upper arm. The mid-point is between the tip of the shoulder and the elbow.
6. Mark with a pen the mid-upper arm point.
7. Ask the child to relax the arm so it hangs by his or her side.
8. Using both hands, place the MUAC tape window (0 cm) on the mid-point.
9. While keeping the left hand steady, wrap the MUAC tape around the outside of the arm with the right hand.
10. Feed the MUAC tape through the hole in the tape while keeping the right hand planted on the arm.
11. Pull the tape until it fits securely around the arm while keeping the right hand steady on the child's arm.
12. Read and record the measurement at the window of the MUAC tape to the nearest millimetre (mm).
13. If a child has a MUAC of less than 12.5 cm (coloured yellow or red on the tape) a referral form must be filled out so that the child can receive treatment.

## What do different measures and colours mean?

Colour	Nutritional status	MUAC (cm)	MUAC (mm)	Action
Red	Severe	<11.5 cm*	<115 mm*	Refer to the nearest health facility that provides therapeutic feeding.
Yellow	Moderate	11.5-12.4 cm	115-124 mm	Refer to the nearest health or nutrition centre that provides supplementary feeding (if available).
Green	Healthy	>12.5 cm **	>125 mm**	Encourage the carer to continue with healthy hygienic care and feeding practices, and to return if the child becomes sick or weaker.

\* < means "less than"

\*\* > means "more than"

## What you can do

- Inform the community and parents that MUAC tapes identify children who are malnourished.
- Use MUAC to measure children between six months and 59 months of age, especially those who are sick, thin or weak.
- Find out which health facilities or centres treat malnourished children in your area. (Some facilities only address severe acute malnutrition (SAM)).
- Refer children that have a MUAC of less than 12.5 cm or indicate red or yellow on the coloured tape, with their families, to the above centres for treatment.

## Community messages

- Inform the community that thin, weak children who are not growing well can obtain treatment without cost.
- Find out the local word for a child who is very thin and use it to help find cases.
- Encourage caregivers to seek health treatment quickly if their child is malnourished. Tell them that treatment will enable the child to grow well, prevent stunting, and help the child to avoid diseases later in life.
- Explain the MUAC arm measurement to caregivers. Tell them that it shows which children are malnourished and should receive treatment.



## Community messages



29. Attending nutrition checks