Aim

To identify children as early as possible who are overweight or obese and appropriately refer or support children and their families to make positive lifestyle changes.

It is noted that unless advised by a paediatric specialist, weight loss is not recommended for overweight children. The emphasis is on weight maintenance over time to improve weight in relation to height and age.

Background

The early identification of overweight and obesity in childhood can improve long-term physical and psychosocial health outcomes. The earlier overweight is detected in young children, the easier it is to address and correct. Intensive and longer duration programs are usually required for families where a child’s weight has reached the obese range. Prevention and treatment interventions are most likely to be successful when implemented pre-puberty.

The likelihood of overweight and obesity persisting from childhood into adulthood increases with the degree of adiposity (‘fatness’), age of the child and parental obesity. A systematic review of several studies tracking childhood overweight into adulthood reported:

- 85% of overweight children aged 2 - 5 years became obese adults
- Between 76% and 78% overweight children aged 9 - 11 years became obese adults
- Between 86% or 90% overweight children aged 15 - 17 years became obese adults.

Research indicates that parents are poorly skilled at identifying weight concerns in their own children. Results from parent perception surveys highlight significant misalignment between parental perceptions of children’s weight status and clinically robust population surveys.

Weight is often viewed as a sensitive topic for parents and their children. Many parents do not perceive that their child has a weight problem, and many others are not willing to acknowledge or address weight issues. Parent involvement, however, is critical to the success of any child’s weight management intervention.
The way a health professional approaches the issue of childhood overweight and obesity significantly influences parents' willingness to seek help and take action. In order to engage well with parents, health professionals require a good understanding of parental views and circumstances, and a sensitive approach when broaching the issue.

The National Health and Medical Research Council (NHMRC) recommends the use of BMI scores plotted on the BMI-for-Age Percentile charts (for boys or girls) as an initial (first level) assessment to identify children who may be overweight or obese.

There are a number of considerations to be taken into account when interpreting the BMI-for-age percentiles, including: height, early or late onset of puberty, unusual body fat distribution, highly developed muscles, and ethnicity. For more information please refer to page 9 ‘Considerations when interpreting BMI-For-Age weight status results’. The BMI is not a diagnostic tool. It is to be used in conjunction with information about family lifestyle and health history.

BMI is a score calculated as the ratio of an individual's weight in kilograms to height in metres squared (kg/m²). In adults, BMI measures excess body weight for height. In children, the BMI score is adjusted for age and gender (on BMI-for-Age and gender percentile growth charts), in order to account for growth and body fat changes that occur as part of normal development. The BMI percentile indicates the relative position of the child in relation to others at the same age.

Infants and young children have a relatively higher proportion of fat as a normal component of growth. During middle childhood BMI falls as children become relatively leaner, and then increases as puberty approaches and body composition approaches that of adulthood. When measuring BMI in children BMI-for-age charts must be used to interpret the measurement.

Both the US Center for Disease Control and Prevention (CDC) and the World Health Organization (WHO) have developed BMI-for-age and gender percentile growth charts. In 2014 Western Australia introduced the WHO height and weight growth charts for the 0 to 5 years cohort. A staged introduction of these charts over a five year period commenced with babies born from January 2015 and will include the use of WHO BMI charts from 2 to 5 years when required. School aged children over 5 years of age will continue to be plotted on CDC BMI charts. It is important that children and adolescents are consistently monitored against the appropriate chart, and not across different charts.

Key Points

- Staff are to be familiar with the Overweight and obesity in primary school aged children guideline prior to undertaking growth assessments.

- Community health professionals working in schools are to advocate for effective health policy on physical activity and healthy eating within the school environment, based on the Health Promoting Schools Framework. This will support parents and the school community to make positive behaviour change.

- Use of newsletter items will promote healthy messages related to healthy eating and physical activity. The School Health Resources section of the intranet provides many newsletter items.

- Targeted growth assessments require parental consent and engagement must be sought and recorded on the CHS142, Referral to Community Health form, prior to conducting a BMI assessment.
• When talking to parents about their child’s weight, parental engagement is critical. If the parent/carer does not acknowledge a weight concern in their child, or is not ready to make changes to family behaviour or lifestyle, then staff should not pursue the conversation and/or assessment. Staff should consider providing contact details or organising a follow-up appointment instead.

• Where there are concerns that a child is obese and there is lack of parent engagement, discuss with the school principal and Health line manager. The information sheet developed by the Statewide Protection of Children Coordination Unit (SPOCC) may be useful in these circumstances. See- Department of Health WA Information sheet 8 Child obesity and child protection.

• For concerns about a child over seven years of age who is potentially underweight do not conduct a growth assessment. Refer to Eating Disorders guideline.

• Training on BMI assessment, chart plotting, sensitive communication with parents and lifestyle counselling is essential. Refer to the online training package *Talking with parents about children’s weight* (see Appendix B). **Staff are strongly encouraged to complete this training prior to undertaking growth assessments.**

• Targeted weight assessments for older children are to be conducted in a manner that maintains privacy and confidentiality. Parents should be invited to attend a targeted assessment.

• The results of the height and weight assessment must be kept confidential. No comments on height/weight should be offered during the measurement process. If the student requests results, height/weight scores can be shared but language that labels should not be used, such as too short, too tall, underweight or overweight.

• Community health professionals should practice infection prevention and management. Hand hygiene is to be performed at all appropriate stages of the procedure.

**Equipment**

• Stadiometer or height rule

• Digital weight scale

• Calculator (may include calculator on mobile phone)

See Appendix A for further information on equipment specifications.
### Procedure

<table>
<thead>
<tr>
<th>Steps</th>
<th>Additional Information</th>
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</thead>
<tbody>
<tr>
<td><strong>1. Identify the need for a growth assessment</strong>&lt;br&gt;• A concern is raised by the parent/carer, teacher, student or community health professional at any time.</td>
<td>Consider a growth assessment if there is a visible discrepancy in body size for age and height.</td>
</tr>
<tr>
<td><strong>2. Parent/carer consent and engagement.</strong>&lt;br&gt;<strong>Targeted growth assessment</strong>&lt;br&gt;• If a growth concern is identified by a teacher or school health staff it is essential that the parent/carer be contacted before an assessment is conducted. In this case, consent can be obtained on the CHS 142: Referral to Community Health Nurse form (which also makes provision for verbal consent).&lt;br&gt;• On contacting the parent/carer, determine the following:&lt;br&gt;  o An acknowledgement that a possible weight issue may be present;&lt;br&gt;  o The beliefs and views on the weight issue, and concerns about the weight status of the child; and,&lt;br&gt;  o Parent/carer ‘readiness’ for behavioural change.</td>
<td>Note: Consent for health assessment is only valid within the same school year. If parent engagement cannot be achieved for targeted weight assessment, offer follow-up in 12 months. The ‘Talking with parents about children’s weight’ online training package provides staff with good techniques to use when approaching parents or carers to discuss weight concerns. See Appendix B.</td>
</tr>
<tr>
<td><strong>3. Conduct a BMI assessment.</strong>&lt;br&gt;<strong>Setting up:</strong>&lt;br&gt;• Ensure that the stadiometer is correctly assembled according to manufacturer’s instructions.&lt;br&gt;• Ensure that the weighing scales are placed on a firm level surface with the indicator/switch on ‘weight’. Follow manufacturer’s guidelines if using the scales on carpet.&lt;br&gt;• Use of a laminated template showing an outline of two feet may help orient the child to where to stand for the weight and height.&lt;br&gt;• Targeted growth assessments must be done in an area which ensures privacy.</td>
<td>When conducting growth assessments staff should consider ways of maintaining privacy and confidentiality. Take care when disassembling the stadiometer as it may cause strain on the wrists.</td>
</tr>
</tbody>
</table>
## Measure height:

- Hair/head accessories may need to be removed so that positioning of the body can be seen on the stadiometer.

- The child must stand with weight distributed evenly on both feet, heels together, arms hanging freely by the sides and the head positioned so that the line of vision is at right angles to the body.

- There are usually three contact points between the body and the scale: upper back, buttocks and heels. Note: in a few individuals only two points of contact may occur (buttocks and heels).

- The head must be positioned in the Frankfort horizontal plane (refer to Figure 1). The Frankfort plane is achieved when the lower edge of the eye socket (Orbitale®) is in the same horizontal plane as the notch above the flap of the ear (Tragion®).

- This technique obtains the maximum distance from the base of the stadiometer to the skull (Vertex®). This is best aligned by viewing the child from the side.

- To obtain consistent measure, the child is asked to inhale deeply and stretch to their fullest height while the moveable head piece is brought onto the top of the head with sufficient pressure to compress the hair.

- Ask the child to step away from the stadiometer and then stand back against it and take a second measurement. If the two measurements differ by more than 0.5cm then take a third measurement. Height is the average of the two closest measurements.

- Measure in centimetres and record to the nearest 0.1 cm. Convert to metres for BMI calculation, e.g. 108.3 cm is equal to 1.083 m.

## Measure weight:

- Request the child to remove his/her jumper, jacket, coat, shoes and empty pockets.

- Adjustments for clothing should only be included in calculation if adequate layers of clothing cannot be removed.

- Check the scale is reading zero.

<table>
<thead>
<tr>
<th>Additional Information</th>
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</table>
| **Figure 1:** The three contact points between the body and the stadiometer. 
| Source: Reproduced from Marfell-Jones et al., 2006. 
| Round the measurement to the nearest 0.1cm. |

<table>
<thead>
<tr>
<th>Approximate weight of kindergarten/pre-primary clothing. To be used as a guide only, if required.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Zip-up jumper</strong></td>
</tr>
<tr>
<td><strong>Pullover jumper</strong></td>
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</tbody>
</table>
The student stands over the centre of the platform, with the body weight evenly distributed between both feet.

- Request the child to look straight ahead.
- Document unusual features, i.e. amputation, artificial limb.
- Record the measurement to the nearest 0.1 kg. For example, 18.3 kg.

4. Calculate BMI.
   To calculate the BMI number, weight is measured in kilograms and height is measured in metres. Enter the weight and height measurements into the formula given below and calculate the BMI.

   Formula: \( BMI = \frac{\text{Weight (kg)}}{[\text{Height (m)}]^2} \)

   Example: Weight: 18.2 kg  Height: 1.083 m
   
   \[ BMI = \frac{18.2}{1.083^2} = \frac{18.2}{1.172} = 15.5 \]

Determine the BMI-for-Age Percentile and Weight Status Category

- Use ‘BMI-for-Age Percentile Chart’ to plot BMI number according to the gender and age, and obtain BMI-for-Age percentile.
- Use ‘Weight Assessment Form for Girls/Boys: CHS 430A/B’ to plot BMI-for-Age percentile.

For more information on BMI and Percentile charts refer to ‘Associated Tools and Resources’ section.

The [CDC BMI and percentile calculator](https://www.cdc.gov/growthcharts/bmi_calculator.htm) for children and adolescents is a very useful tool.

NB: Select metric version

Remember that BMI percentiles are a guide only and are not diagnostic of weight status categories but contribute to an overall clinical impression.

Example: A 7 year old boy with a BMI of 20 indicates the obese category (95th percentile or greater), however if he maintains his weight and a BMI of 20 at 12 years, he will be within a healthy weight range (less than the 85th percentile).
Growth assessment school aged children

<table>
<thead>
<tr>
<th>Steps</th>
<th>Weight status category*</th>
<th>Percentile range(^7)</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Underweight</strong></td>
<td>Less than 5(^{th}) percentile</td>
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<tr>
<td></td>
<td><strong>Healthy weight</strong></td>
<td>5(^{th}) percentile to less than the 85(^{th}) percentile</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Overweight</strong></td>
<td>85(^{th}) to less than 95(^{th}) percentile</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Obese</strong></td>
<td>Equal to or greater than the 95(^{th}) percentile</td>
<td></td>
</tr>
</tbody>
</table>

5. **Documentation.**

**SEHA (targeted) weight assessment**

Underweight range:
- CHS 409-2 Health Assessment Results- include height, weight, BMI score and percentile only.
- CHS 430A/B triplicate (x 1- Health service, x 1- parent copy, x 1- referral).

Healthy weight range:
- CHS 409-2 Health Assessment Results- include height, weight, BMI score, percentile and 'healthy weight'.

Overweight range:
- CHS 409-2 Health Assessment Results- include height, weight, BMI score and percentile only.
- CHS 430A/B triplicate (x 1- Health service, x 1- parent copy, x 1- referral). Provide parent with CHS 430A/B only after making contact with the parent.

Obese range:
- CHS 409-2 Health Assessment Results- include height, weight, BMI score and percentile only.
- CHS 430A/B triplicate (x 1- Health service, x 1- parent copy, x 1- referral).

**Documentation of Targeted weight assessment (regardless of outcome)**
- CHS 412 Progress Notes and/or CHS 142 Referral to Community Health Nurse &
- CHS 430A/B triplicate (x 1- Health service, x 1- parent copy, x 1- referral).

Document physical problems or heavy clothing that may interfere with the accuracy of the measurement.

HCARE: Primary issue- 0618; Secondary issue- 0306; Service provided- 01/02 etc.

CDIS: Record all growth data in CDIS regardless of the result.

Acceptance of BMI results by the parent may be enhanced by sending the CHS 430 BMI form to the parent after the initial contact has been made when the child is in the ‘overweight’ range.
Considerations when interpreting BMI-For-Age weight status results

While the cut-off points for weight categories on the BMI percentile charts are clearly defined, their application should be used with professional judgment and consideration of several factors when assessing individuals:

- **Early or late onset of puberty:** Weight and height increases are most significant during puberty. This growth period is generally early during puberty in females due to peri-menarchal weight gain, and towards late puberty in males due to increase in lean body tissue.

- **Unusual body-fat distribution:** E.g. central/visceral obesity carries an increased risk of poor health outcomes.

- **Highly developed muscles:** Some children may be more athletic than others and have a higher than average muscle mass which can lead to a higher than normal BMI result; and

- **Ethnicity:** Racial differences can affect the true proportion of body fat and BMI, and therefore appropriate cut-off points. A BMI reference chart relevant to the ethno-cultural mix of the current Australian demographic has not yet been developed.

In any of the above instances, it is recommended that a clinical decision should be made as to whether or not to refer the child for a more comprehensive assessment. For more information on factors that contribute to BMI results see *Overweight and obesity in primary school-aged children guideline*.

Outcome

School health service staff may offer healthy lifestyle brief intervention counselling to families to facilitate change. Appendix C outlines key targets for eating, physical activity and other behaviour goals which assist in conversations with families.

**BMI suggests Underweight:** Less than 5th percentile
- Refer the child to appropriate health care professionals for further assessment and/or intervention if concerned or if parent requests.
- Provide additional information if required. See Appendix C.
- For information on *Eating Disorders in Children* refer to ‘Related policies, procedures and guidelines’ and ‘Useful resources’ below.

**BMI suggests Healthy Weight:** 5th percentile to less than the 85th percentile
- No action required

**BMI suggests Overweight:** 85th to less than 95th percentile
- Make contact with the parent by phone or letter and inform them of the weight results prior to sending home the CHS 430 BMI form.
- When discussing results with the parent:
  - Inform the parent that the BMI is not diagnostic but that based on their child’s results, they are in the overweight range. This feedback should be given with sensitivity; it may be the first time that a potential concern has been raised.
  - Explore what weight range they consider their child to be.
Growth assessment school aged children

- Explore factors that may contribute to a higher than expected BMI. Refer to ‘Considerations when interpreting the BMI’ on page 9.

- Explore parent concerns, lifestyle factors and other factors that may contribute (e.g. ethnicity). Use CHS 426 Lifestyle counselling guide.

- Identify small achievable goals or lifestyle changes that can be made within the family environment to help make positive changes to their child’s future health and wellbeing. Reinforce that the aim is for the child to grow into their weight and not for weight loss.

- Reinforce positive nutrition, physical activity and screen time practices with verbal and written information, including CAH 0899 ‘Tips for keeping children healthy’ handout. Also see Appendix C.

- Using clinical judgement, combined with BMI result and lifestyle assessment, decide if referral to GP is indicated and/or other referral options listed below.

- Provide additional support as required.

- Depending on referral outcomes and/or strategies agreed by parent, seek permission to re-contact and agree a timeframe with the parent. Follow up is recommended within 12 months.

BMI suggests Obese: Equal to or greater than the 95th percentile

- It is recommended that the parent/carer is contacted in person informing them that their child’s results were found to be in the obese range, prior to providing a copy of the CHS 430 BMI results. A standard letter inviting the parent to make contact is available if this is not possible. This feedback should be given with sensitivity; it may be the first time that a potential concern has been raised.

- Where possible, arrange a face-to-face meeting to explain assessment results; explore eating and activity behaviours; discuss causes and consequences of overweight; and decide on interventions. This feedback should be given with sensitivity; it may be the first time that a potential concern has been raised. Use CHS 426 Lifestyle counselling guide.

- Consider above factors for ‘overweight’ when talking with parent.

- Refer to Medical Practitioner and/or dietitian for further assessment and treatment as a priority. Consider other suitable referral options (see below).

- If overweight is severe, consider referral to the PMH CLASP program via medical practitioner (see ‘Referral pathway’ and Useful resources section’ below)

- Reinforce positive nutrition, physical activity and screen time practices with verbal and written information including CAH 0899 ‘Tips for keeping children healthy’ handout. Also see Appendix C.

- Provide additional support and information as required.

- The NHMRC suggests that regular (3 monthly) BMI plotting on a percentile chart is the recommended process to track weight management progress for children. Ideally, this should be done under medical care.

- If the child is not under medical care, follow-up is recommended between 3 and 12 months (depending severity, referral outcomes and/or level of engagement and
Growth assessment school aged children

strategies agreed by parent). Document clearly when follow-up is planned to occur, including consent for follow-up BMI.

- For concerns regarding family engagement or neglect, consider making a report to Department for Child Protection and Family Support. Refer to Department of Health WA - Information sheet 8 Child obesity and child protection for guidance.

**Referral pathway**

Referral decisions will depend on the growth status of the child and the capacity and preferences of the family. Referral will also depend on availability of local services which are varied across the state.

The following are some suggested referral points:

- **Medical practitioner.**

- **Dietitian** - some local health services (hospitals or community health centres) have dietetic services available for children. The Dietitians Association of Australia website can help to locate private dietetic services.

- **Allied health professionals** including; physiotherapist, occupational therapist, clinical psychologist or paediatrician.

- **CLASP (Changes in Lifestyle Are Successful in Partnership) - PMH.** For children and adolescents with complicated and/or significant obesity and their families (Medical practitioner referral to CLASP is required. Consider mentioning CLASP on CHS663 when referring a child to a medical practitioner).

- **Better Health Program 7-13 years** - a multi-component healthy lifestyle program for overweight and obese children aged 7-13 years and their families, available in WA (starting in Perth only) after July 2014. It will be based in communities and free of charge for families. Phone 1300 822 953 or email info@betterhealthcompany.org

- **Quality parenting programs** E.g. Triple P (Statewide) Positive parenting programs. Note: Lifestyle Triple P is available in some areas.

- **Healthy lifestyle programs or activities.**

- **Community leisure and recreation services.**

- **Adult weight management programs** (helpful if the parent is concerned about their own weight).
Related internal policies, procedures and guidelines

<table>
<thead>
<tr>
<th>Related internal policies, procedures and guidelines</th>
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<tbody>
<tr>
<td><strong>Child and Antenatal Nutrition (CAN) Manual</strong></td>
</tr>
<tr>
<td><strong>Guidelines for Protecting Children</strong></td>
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</tbody>
</table>

The following documents can be accessed in the Community Health Manual: [Internet link](#) or [HealthPoint link](#)

- Eating disorders guideline
- Growth faltering guideline
- Growth in childhood guideline
- Overweight and obesity in adolescents guideline
- Overweight and obesity in primary school aged children guideline
- Overweight and obesity in young children guideline
- School health service policy
- Universal contact schedule 4-5 years (School entry health assessment) guideline

References


**Useful resources and forms**

**CACH Intranet**

CHS430A/B BMI Percentile charts for Girls/Boys- Triplicate (x 1- Health service, x 1-parent copy, x 1- referral)

CHS 425 Parent follow-up letter. For use when unable to contact parent

CHS 426 Lifestyle counselling guide. Health record

CAH 0899 Tips for keeping children healthy. Parent handout

CAH 0898 BMI assessments and percentile charts for school aged children Information sheet- staff use only

CAH 0901 Promoting school health assessments. Poster

CACH Newsletter items

CACH Feet diagram. To assist orientating children onto scales- laminate

**BMI resources**

[CDC BMI and Percentile calculator](http://www.cdc.gov/healthyyouth/healthyweight/assessing/bmi/bmi_calculator.htm) for Children and Adolescents

[Centers for Disease Control and Prevention](http://www.cdc.gov/healthyweight/assessing/bmi/index.html). About BMI for Children and Teens

**Parenting**

Positive parenting programs - Triple P

Raising Children Network

**Food and nutrition**


[Eat for Health](http://www.eatforhealth.com.au) Australian Dietary Guidelines

[National Health and Medical Research Council Obesity guidelines](http://www.nhmrc.gov.au)
<table>
<thead>
<tr>
<th>Resource</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Changes in Lifestyle are Successful in Partnership</strong></td>
<td>PMH program for weight and growth issues.</td>
</tr>
<tr>
<td><strong>CACH Child and Antenatal Nutrition (CAN) Manual</strong></td>
<td>chapter on nutrition for school-aged children</td>
</tr>
<tr>
<td>Department of Education.</td>
<td>Healthy food and drink</td>
</tr>
<tr>
<td><strong>Refresh.ED</strong></td>
<td>Food &amp; Nutrition Teaching Resources</td>
</tr>
<tr>
<td><strong>WA School Canteen Association</strong></td>
<td>Healthy lunch box ideas</td>
</tr>
<tr>
<td><strong>Go for 2&amp;5</strong></td>
<td>Fruit and veg recipes</td>
</tr>
<tr>
<td><strong>Food cents</strong></td>
<td>Food literacy and education program</td>
</tr>
<tr>
<td><strong>Livelighter</strong></td>
<td>Tools, tips, resources and recipes to help lead healthier lifestyles</td>
</tr>
<tr>
<td><strong>Good Food for New Arrivals</strong></td>
<td>provides resources for both service providers and families to improve</td>
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<tr>
<td></td>
<td>nutrition knowledge and access to healthy foods for newly arrived</td>
</tr>
<tr>
<td></td>
<td>humanitarian and refugee families.</td>
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<tr>
<td><strong>State Government of Victoria- Better Health Channel</strong></td>
<td>Healthy living/Conditions and treatments (eating disorders)</td>
</tr>
<tr>
<td><strong>Physical activity</strong></td>
<td></td>
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<tr>
<td>**Department of Health- Nutrition and Physical Activity and Sedentary</td>
<td>Guidelines. Pamphlets available- 0-5years; 5-12 years; and Families. To</td>
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<tr>
<td></td>
<td>order phone 1800 020 103</td>
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<tr>
<td><strong>Nature Play WA</strong></td>
<td>Resources for parents and families to encourage kids to get active</td>
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<tr>
<td></td>
<td>outdoors.</td>
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<tr>
<td><strong>Staff development</strong></td>
<td></td>
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<tr>
<td><strong>Talking with parents about children’s weight.</strong></td>
<td>On-line professional development resource. Better Health Company</td>
</tr>
</tbody>
</table>
Appendix A: Equipment

Stadiometer or height rule

The measurement of height requires a stadiometer or height rule which is a vertical metric rule, a horizontal head piece and a non-compressible flat even surface on which the child stands. The graduations on the stadiometer or height rule should be at 1 mm intervals. The stadiometer should be checked prior to each measurement session to ensure that both the headboard and floor are at 90 degrees.

There are a number of stadiometer or height rule models available on the market within varying price ranges. Using the guidelines above, local areas should purchase the model/s that best suit their requirements.

Ensuring the accuracy of stadiometer or height rule.

If local service areas select permanent wall mount height rules, then care needs to be taken to ensure they are mounted accurately and calibrated carefully.

Weight scales

Digital weighing scales should have a resolution of at least 0.1kg. The weighing scale must be placed on solid level ground such as concrete or wooden floor. Scales should be zero-balanced before each individual is measured. Measurement interval and labels should be clearly readable under all conditions of use. Accuracy of scales should be checked annually, see below.

Routine checking of stand-on scales

Key points

- Routine checking of scales must be conducted at least annually.
- Scales which are moved regularly do not require additional checking if handled with due care.
- Scales must be checked each time the battery is replaced, and wherever there is professional concern.
- Staff must comply with Area Health Service OSH guidelines for all manual handling aspects of the scales checking process and adhere to manutention principles to minimise risk of injury.

Note: Manufacturer’s recommendations should be followed with regard to transportation, servicing and calibration of scales.

Equipment

Standard weights: 2 x 10 Kg weights. Additional 10 Kg weights as required.

Procedure

<table>
<thead>
<tr>
<th>Steps</th>
<th>Additional information</th>
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<tbody>
<tr>
<td>1. Test the zero set according to manufacturer’s instructions.</td>
<td>This should read zero +/- 1 unit</td>
</tr>
<tr>
<td></td>
<td>If the scales lowest measure is to 0.01 of a kilogram (10 grams), the zero set should be 0.0 +/- 10 grams</td>
</tr>
</tbody>
</table>
2. Check the accuracy of the 10 Kg weight:
   - Place one 10 Kg weight on the scales.
   - This should read 10.00 Kgs +/- 50 grams.

3. Check tare function:
   - With the 10 Kg weight still on the scales, press ‘tare’ operation or ‘on/off’ button to zero the scales.
   - This should now read 00.00 Kgs +/- 10 grams.

4. Check accuracy of 20 Kg:
   - Remove the 10 Kg weight and press ‘tare’ or ‘on/off’ to reset.
   - Place two 10 Kg weights on the scales.
   - This should now read 00.00 Kgs +/- 10 grams.
   - This should now read 20 Kgs +/- 100 grams.

5. Check accuracy of 30 Kg:
   - With the two 10 Kg weights still on the scales, place a third 10 Kg weight on the scales.
   - This should read 30 Kgs +/- 150 grams.

6. Check accuracy of 40 Kg:
   - With the three 10 Kg weights still on the scales, place a fourth 10 Kg weight on the scales.
   - This should read 40 Kgs +/- 200 grams.

Note: Accuracy should be checked to the upper limit of weight range for clients regularly measured.

7. Where there is any discrepancy in readings, repeat the test.
   - If discrepancy persists on retest, forward the equipment to the manufacturer for calibration or repair.
   - Record date of check and attach to back of scales.
   - Record date of battery change and attach to back of scales.
Appendix B: Talking with parents about children’s weight

The online professional resource: Talking with parents about children's weight, which is also accessed at (http://www.talkingaboutweight.org/) produced by the Better Health Company, comprises of 10 modules and is available free of charge for health staff across Western Australia.

The training aims to provide information on the following:

- prevalence, causes and consequences of overweight and obesity in childhood
- how to define and measure overweight and obesity in childhood
- the rationale for raising the issue of weight with parents
- how to plot BMI’s on the growth charts
- helpful and unhelpful ways of talking about weight
- when and how the issue of weight may be raised with parents
- the characteristics of a helpful conversation with parents.

The resource also includes downloadable summary sheets, assessment tools, information sheets and referral options.
Appendix C: Key health messages for parents

Family change
- Make whole-of-family lifestyle changes
- Be a healthy role model for your children
- Adapt recommendations to your cultural and family values and beliefs
- Do not put children on a diet, or describe health behaviour changes as a diet, or focus on weight when promoting health behaviour changes.

Psychosocial wellbeing
- Model acceptance of all body sizes and shapes.
- Avoid negative comments about your own or others’ bodies.
- Emphasise health, fitness and enjoyment, rather than weight loss, as reasons for health behaviours.
- Emphasise your child’s achievement, talents and skills.
- Help your child develop social skills and coping strategies.

Food choices
- Provide a wide selection and the recommended quantities of foods consistent with the Australian guide to healthy eating.
- Provide a variety of vegetables every day
- Encourage consumption of at least five serves of vegetables each day.
- Provide a variety of fruit each week.
- Encourage consumption of at least two serves of fruit per day.
- Provide multigrain breads and cereals.
- Provide low-fat dairy products.
- Provide lean meats and fish.
- Use low-fat cooking techniques.
- Minimise availability and consumption of energy-dense foods.
- Minimise availability and consumption of sugar-sweetened beverages (for example, juice, soft drink, cordial).
- Provide water as your family’s main drink.

Eating habits
- Provide portion sizes consistent with The Australian guide to healthy eating.
- Minimise eating out and take-away foods.
- Provide breakfast and encourage daily consumption.
- Provide a healthy school lunch.
- Eat three meals and healthy snacks each day.
- Eat meals together at the table as a family as often as possible.
- Eat meals and snacks without distraction.
- Minimise non-hungry eating.
- Provide healthy food choices at appropriate meal and snack times, and allow the child to decide what and how much they will eat from what is provided.

Sedentary time
- Limit television and other screen time to less than two hours per day.
- Do not have televisions and other screen activities in children’s bedrooms.

**Physical activity**

- Provide opportunities for children to accumulate at least one hour (and up to several hours) of moderate to vigorous physical activity per day.
- Encourage a range of fun and interesting activities, including organised sports and activities, informal activities and active play.
- Encourage walking, riding and scooting as active transport options.
- Be active together as a family as often as possible.

**Sleep**

- Adequate quality sleep is linked to lower rates of overweight among children.
- Primary school aged children should aim to get 10 or more hours sleep per night.

Adapted from: *Clinical practice guidelines for child weight management in community health services. Children aged 5-12 years. Primary Health Branch, Victorian Government Department of Human Services. Melbourne, Victoria. 2009*
### Appendix D: Risk and Protective Factors for the Development and Maintenance of Childhood Obesity

#### GENETIC MAKEUP

**Risk Factors**
- Parental Obesity
- Ethnicity
- Conservative metabolism (tendency to store energy)
  - Certain rare endocrine disorders (e.g. Prader-Willi Syndrome).

**Protective Factors**
- ‘Active’ metabolism (tendency to expend energy)

#### CHILD DIETARY INTAKE

**Risk Factors**
- High intake of energy dense, nutrient poor foods (e.g. fast foods, soft drinks)

**Protective Factors**
- High intake of low GI foods (e.g. whole grains, legumes)
- High intake of dairy foods (e.g. low fat milk, yoghurt)
- Eating a healthy breakfast

#### FAMILY ENVIRONMENT

**Risk Factors**
- Family has few economic resources
- Parent lacks nutritional knowledge
- Parent does not recognise childhood obesity or is not concerned about it
- Parent has unhealthy eating habits (e.g. regular dieting)
- Parent has a sedentary lifestyle (e.g. relies on TV for recreation)

**Protective Factors**
- Parent monitors child food intake and activity patterns
- Parent reinforces healthy behaviours (e.g. through praise and modelling)
- Parent sets firm limits about food and activity

#### PARENTING

**Risk Factors**
- Restrictive child-feeding practices (i.e. parent rarely gives child choices about what to eat and how much)
- Permissive child-feeding practices (e.g. parent accommodates child’s neophobic responses)
- Coercive parenting style (e.g. parent shows anger when child misbehaves)
- Inconsistent parenting style (e.g. parents fails to follow through with discipline)
- Low self-efficacy (i.e. parent lacks confidence in managing child’s weight related behaviour)

**Protective Factors**
- Parent monitors child food intake and activity patterns
- Parent reinforces healthy behaviours (e.g. through praise and modelling)
- Parent sets firm limits about food and activity

#### EARLY GROWTH & DEVELOPMENT

**Risk Factors**
- High birth weight
- Early adiposity rebound

**Protective Factors**
- Breastfeeding (versus formula-feeding)

#### CHILD ACTIVITY PATTERNS

**Risk Factors**
- High levels of sedentary activity (e.g. >2hrs screen time per day)
- Poor sleep patterns (e.g. poor routines or sleep apnoea)

**Protective Factors**
- Regular physical activity (e.g. >60 minutes moderate-vigorous organised activity or energetic play per day)
- Regular physical activity (e.g. Fruit and vegetables are available and easily accessible in the home
- Child has access to safe outdoor playing areas
- Parent and child engage joint physical activities
- Parent offers transport to sporting venues

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*Note: The table provides an overview of risk and protective factors for the development and maintenance of childhood obesity.*
APPENDIX E: **Targeted** Growth Assessment Process

Teacher/parent/nurse identifies the need for a **targeted** growth assessment

Seek parental consent and engagement

**OUTCOME 1**
- Parent/carer acknowledges weight issue, is willing to make family behaviour change and provides consent.

**OUTCOME 2**
- Parent/carer does not acknowledge weight issue and is not ready to make family behaviour changes.

**Conduct growth assessment**
- Ensure equipment is accurately set up and calibrated
- Measure and record height
- Measure and record weight

**Calculate BMI and determine BMI percentile**
1. $BMI = \frac{Weight (kg)}{\left(Height (m)\right)^2}$
2. Use [CDC BMI and percentile calculator](https://www.cdc.gov/healthyyouth/healthyweight/bmi/index.htm) and/or
3. Plot BMI on gender specific BMI percentile chart CHS4.30A/B

**Explore child and family obesity risk factors**

**Determine indicated weight status category**
- Underweight
- Healthy weight
- Overweight
- Obese

Follow appropriate parent communication, documentation and referral pathways (next page)

- CHS 142 (Referral to Community Health Nurse) or other communication with nurse
- Progress Notes (CHS 412) if consent denied
- CHS 426 Lifestyle counseling guide
- CHS 30A/B
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<th>Parent Communication</th>
<th>HS Record Keeping</th>
<th>Follow up / Referral</th>
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<td><strong>UNDERWEIGHT</strong></td>
<td>• Discuss result with parent</td>
<td>• Complete and file CHS430/A/B</td>
<td>• Refer if parent concern or clinical judgement indicates (with parent consent)</td>
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<td>(Less than 5th percentile)</td>
<td>• Provide CHS430/A/B</td>
<td>• Document conversation on progress notes and/or electronic data systems.</td>
<td>• Follow up in 3–12 months if clinical judgement indicates and parent accepts</td>
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<td>• Provide appropriate handouts and links to resources.</td>
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<td><strong>HEALTHY WEIGHT</strong></td>
<td>• Provide CHS430/A/B</td>
<td>• CHS430/A/B and electronic data systems where required.</td>
<td><strong>None required.</strong></td>
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<td>(5th to &lt; 85th percentile)</td>
<td>• Reinforce positive nutrition, physical activity, screen time and body image practices in the form of Kindy Talks and newsletter items</td>
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<td>• Make handouts and links to resources available to all parents.</td>
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<tr>
<td><strong>OVERWEIGHT</strong></td>
<td>• Discuss results (refer to Talking About Weight online training for guidance)</td>
<td>• CHS 430/A/B</td>
<td>• Seek parent engagement and collaboration</td>
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<td>(85th to &lt; 95th percentile)</td>
<td>• Provide CHS430/A/B</td>
<td>• Document conversation on progress notes if required and record on electronic data systems</td>
<td>• Reinforce positive nutrition, physical activity and screen time practices with verbal and written information</td>
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<td></td>
<td>• Provide lifestyle counseling brief intervention. Use CHS 426 Lifestyle counseling guide</td>
<td>• Note on class list for easy future follow up or referral if new local intervention options become available.</td>
<td>• Consider and discuss referral options with parent for further assessment and treatment.</td>
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<td>• Provide additional support as required</td>
<td></td>
<td>• Assist parent to develop a plan</td>
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<tr>
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<td>• Provide appropriate handouts and links to resources</td>
<td></td>
<td>• Provide additional support as required</td>
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<td></td>
<td>• If parent becomes resistant to child’s growth assessment do not persist with</td>
<td></td>
<td>• Seek permission to re-contact and agree a timeframe with the parent or when they would like follow-up contact. Aim to make follow-up within 12 months (depending on referrals made and/or strategies agreed by parent).</td>
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<td>conversation. Offer contact details so parent may contact you later if they wish.</td>
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<td>Try to organise follow-up appointment if parent/carer does not make contact within</td>
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<td>12 months</td>
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## Growth assessment school aged children

### OBESE
(95th percentile or above)

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<td>• Discuss result (refer to <em>Talking About Weight</em> online training for guidance) Provide CHS430A/B Provide lifestyle counselling brief intervention. Use CHS 426 Lifestyle counselling guide</td>
<td>CHS 430A/B Document conversation on progress notes if required • Record on electronic data systems as required • Note on class list for easy future follow up or referral if new local intervention options become available.</td>
<td>• Refer to GP for further assessment and treatment as a priority. Consider referral to the PMH CLASP program via GP (see referral criteria under ‘Useful resources section’ of procedure) • Consider and discuss other referral options with parent • Reinforce positive nutrition, physical activity and screen time practices with verbal and written information Assist parent to develop a plan Provide additional support as required • Seek permission to re-contact and agree a timeframe with the parent on when they would like follow-up contact. Aim to make follow up within 12 months (depending on referrals made and/or strategies agreed by parent) • Carefully consider family engagement or neglect, and if contact should be made with CPFS. Follow guidelines.</td>
</tr>
<tr>
<td>• If parent becomes resistant to child’s growth assessment do not persist with conversation. Offer contact details so parent may contact you later if they wish. Try to organise follow-up appointment if parent/carer does not make contact within 12 months • Provide appropriate handouts and links to resources • Provide additional support as required.</td>
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Note on class list for easy future follow up or referral if new local intervention options become available.
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