

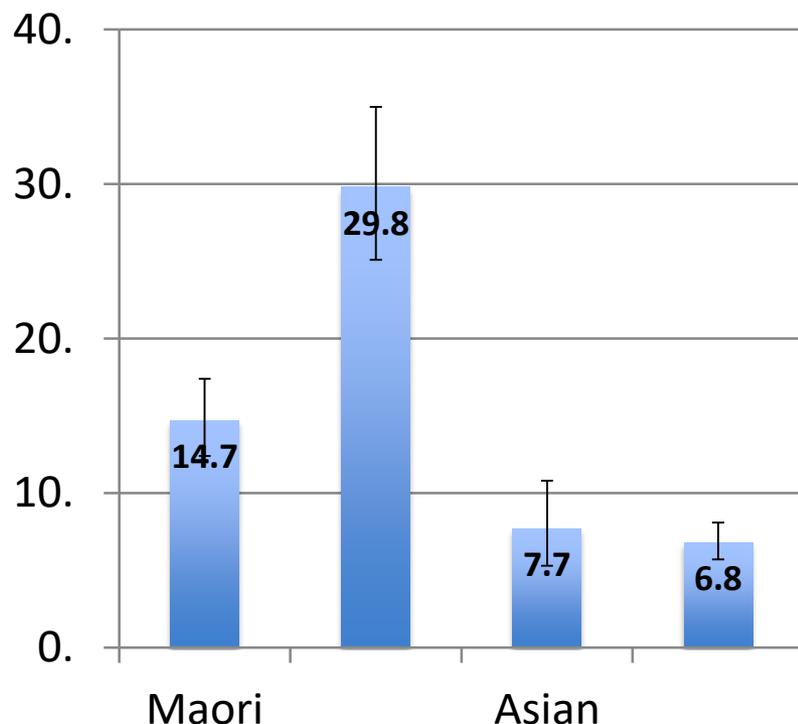
# Talking about obesity *where do you start?*

**Hayden McRobbie**

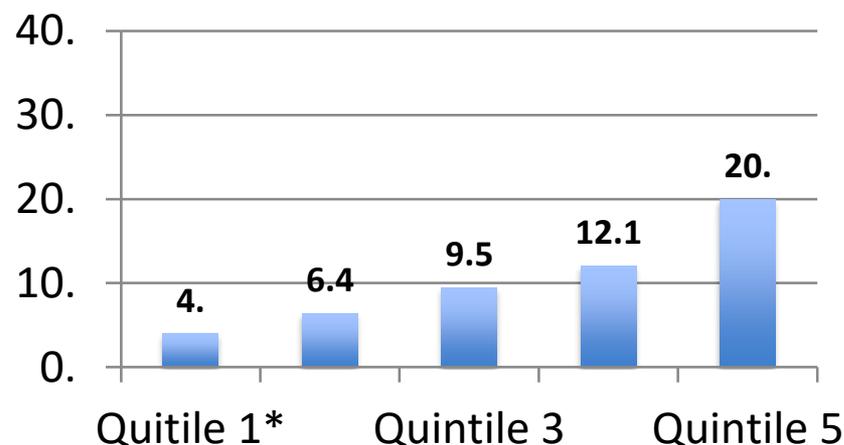
Childhood Obesity Target Champion, Ministry of Health, New Zealand  
Professor in Public Health Interventions, Wolfson Institute of Preventive Medicine, QMUL

# Childhood obesity in New Zealand

% children who are obese  
by ethnicity



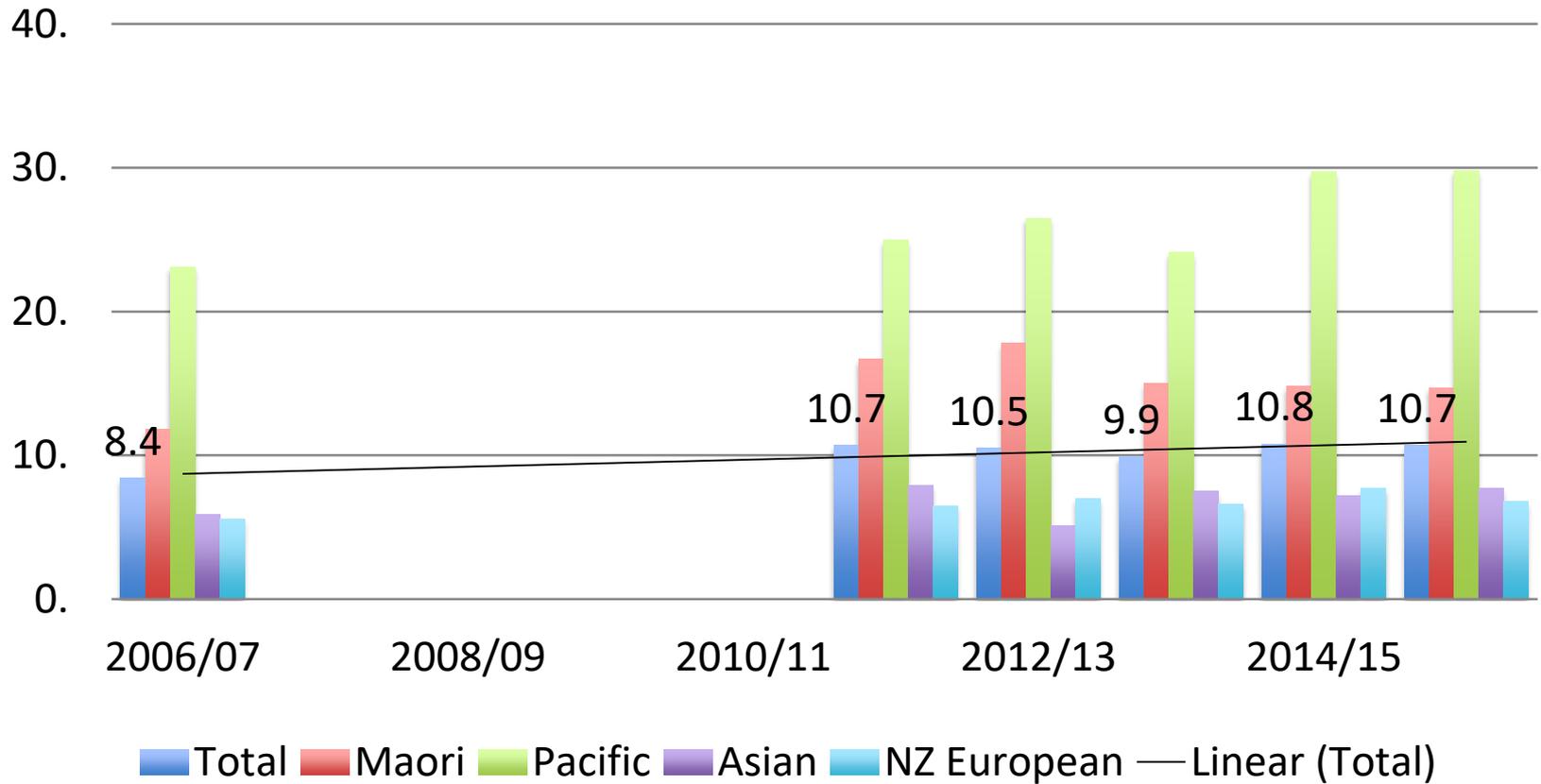
% children who are obese by  
deprivation



Maori vs. non-Maori: aRR=1.59 (1.25-2.02)  
Pacific vs. non-Pacific: aRR=3.87 (3.17-4.74)  
Most deprived vs. least deprived: aRR=3.02 (1.90-4.81)

\*least deprived  
aRR= adjusted rate ratio

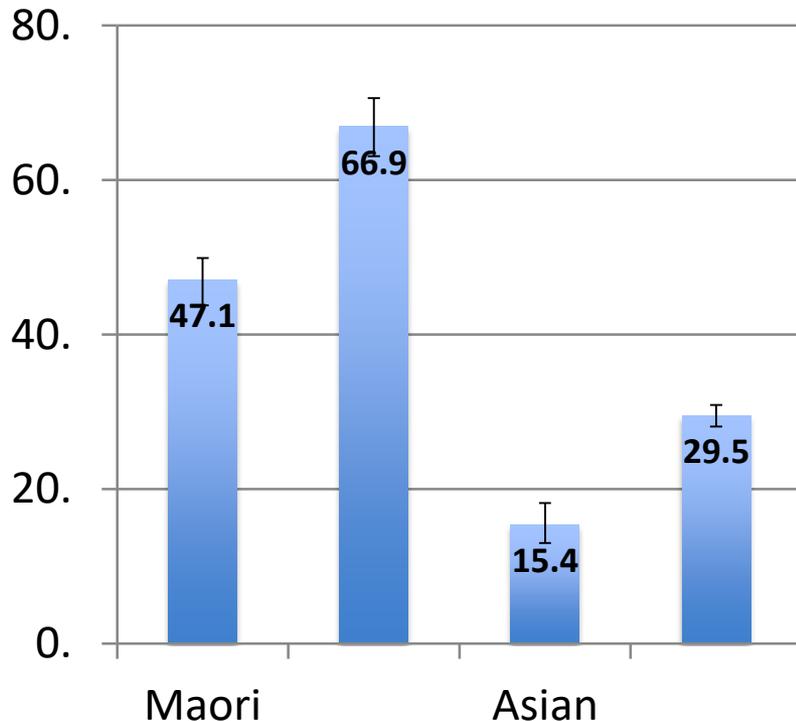
# Childhood Obesity Over Time



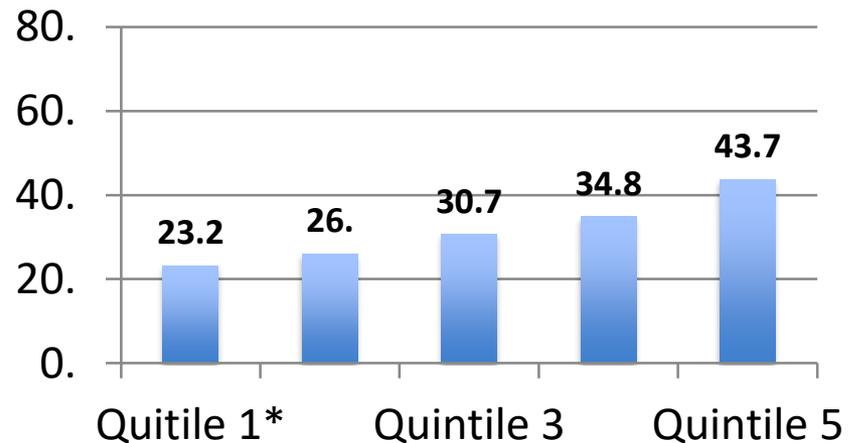
# Adult obesity in New Zealand

**% adults (15+) who are obese by ethnicity**

NZ Health Survey 2015/16



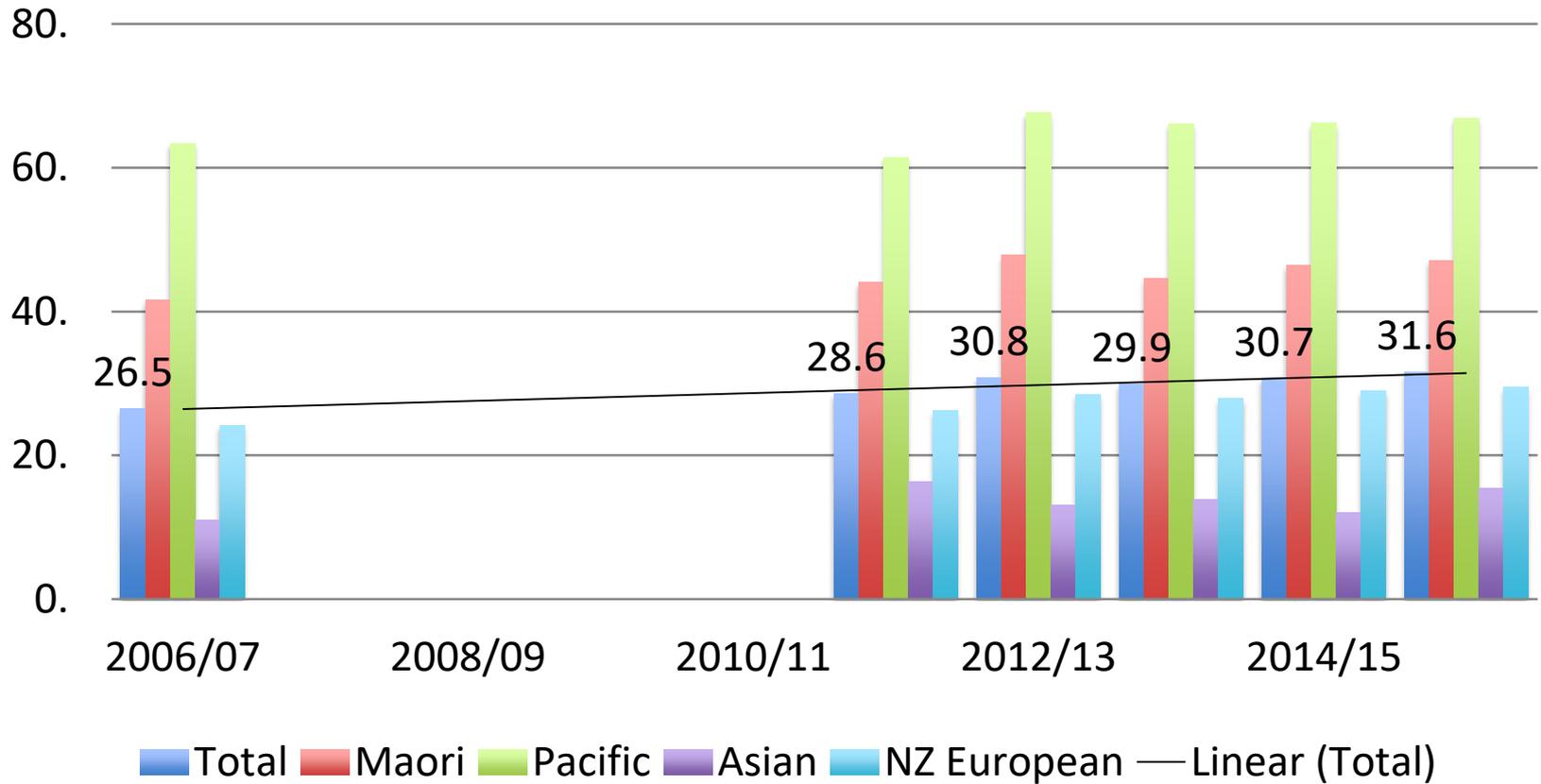
**% adults (15+) who are obese by deprivation**



Maori vs. non-Maori: aRR=1.69 (1.58-1.82)  
 Pacific vs. non-Pacific: aRR=2.38 (2.21-2.56)  
 Most deprived vs. least deprived: aRR=1.70 (1.50-1.94)

\*least deprived  
 aRR= adjusted rate ratio

# Adult Obesity Over Time



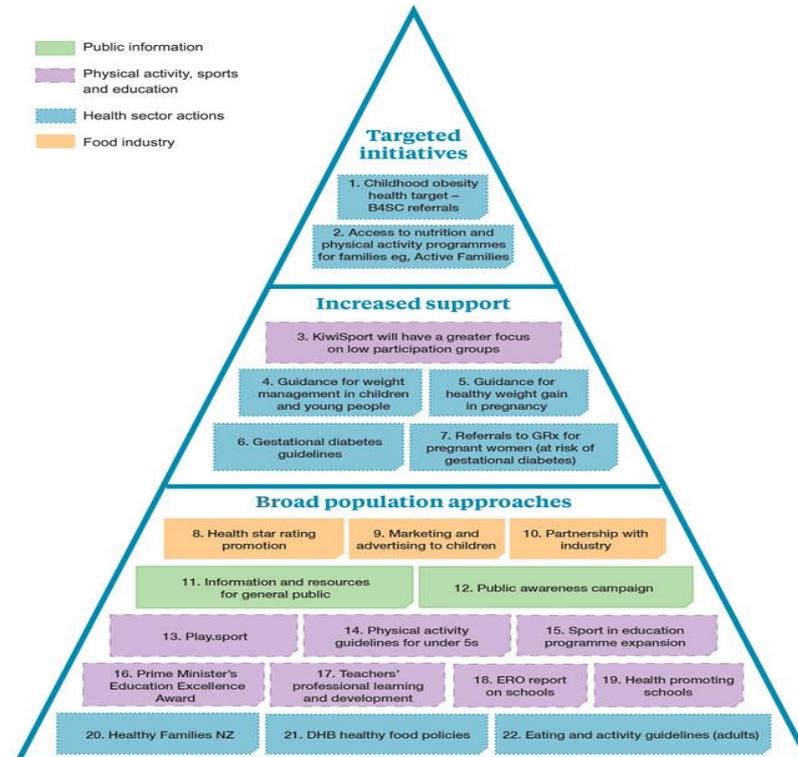
# Tackling Childhood Obesity

- No single intervention – need to address the obesogenic environment as well as a life-course approach.
- Three critical time periods in the life-course:
  - preconception and pregnancy
  - infancy and early childhood
  - older childhood and adolescence.

# NZ Childhood obesity plan overview

- 22 initiatives
  - **Targeted interventions** for those who are obese, increasing over time
  - **Increased support** for those at risk of becoming obese
  - **Broad approaches** to make healthier choices easier for all New Zealanders.
- Brings together initiatives across government agencies, the private sector, communities, schools, families and whanau.

The childhood obesity plan

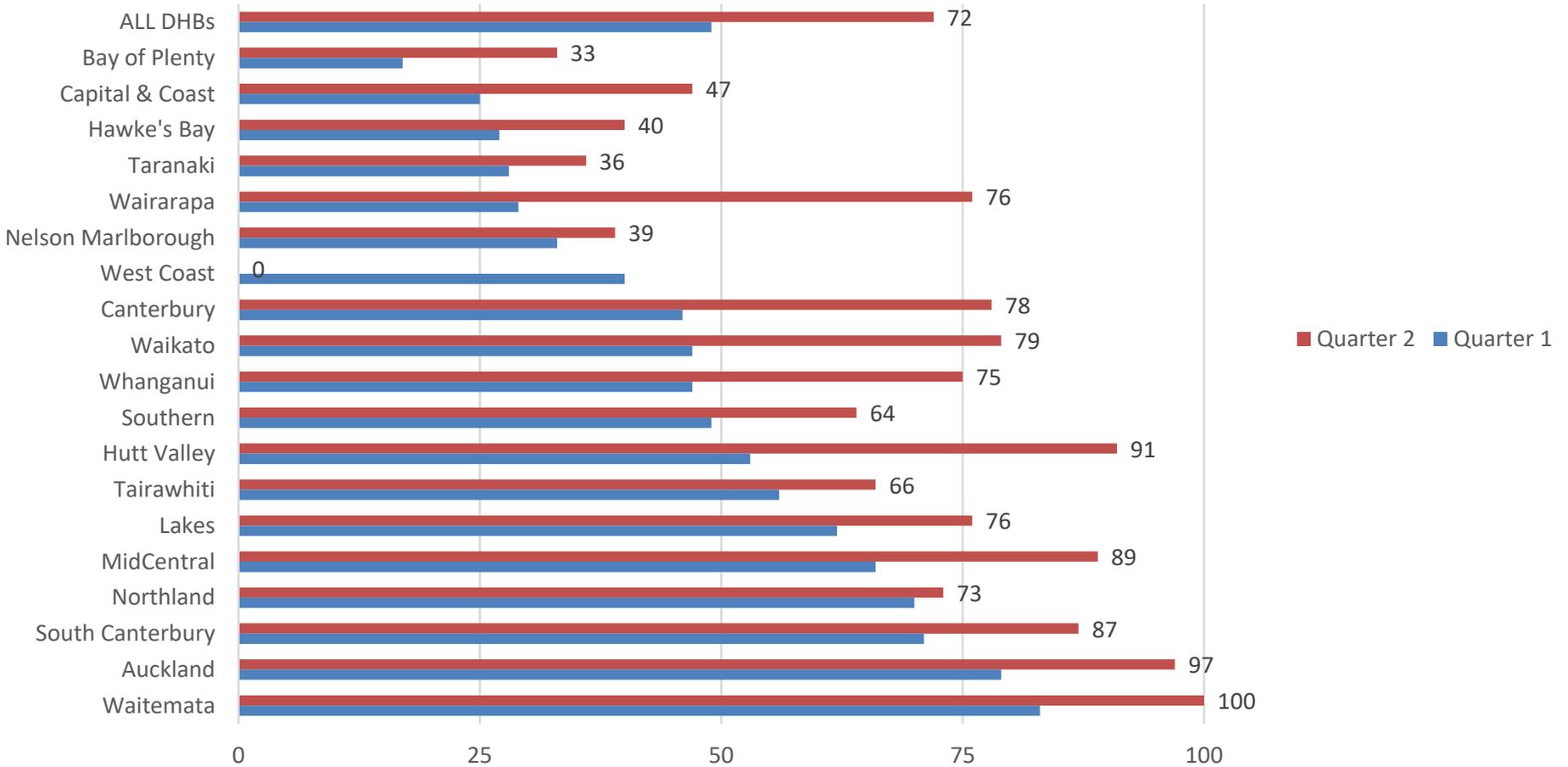


# Childhood obesity health target – Raising Healthy Kids

- A new health target has been implemented from 1 July 2016:
  - *By December 2017, 95% of obese children identified in the Before School Check (B4SC) programme will be offered a referral to a health professional for clinical assessment and family based nutrition, activity and lifestyle interventions.*
- The target was selected as the B4SC focuses on early intervention to ensure positive, sustained effects on health.
- The target defines obesity as a BMI above the 98<sup>th</sup> centile on the NZ-WHO growth chart.

# Health Target Performance

Chart Title



# Weight management

## IN 2-5 YEAR OLDS

### 1 MONITOR

Monitor growth.

Regularly measure height and weight to calculate Body Mass Index (BMI). Use New Zealand – World Health Organization age- and sex-specific growth charts.

Overweight

Obese



If trending towards overweight, provide the family or whānau with brief nutrition and physical activity advice.

If overweight or obese discuss long-term health risks with the family or whānau.

Proceed to stage 2:  
Assess



### 2 ASSESS

Take a full history for BMI above 91<sup>st</sup> centile.

Consider:

- co-morbidities
- family history of obesity, early cardiovascular disease, or dyslipidaemia
- precipitating events and actions already taken
- usual diet and levels of physical activity and sleep patterns
- current physical and social consequences of overweight
- signs of endocrine, genetic or psychological causes
- medications that may contribute to weight gain.

Include in a clinical examination:

- blood pressure with appropriate cuff size
- skin: intertrigo, cellulitis, carbuncles
- hepatomegaly
- enlarged tonsils
- assessment of short stature/poor linear growth
- abnormal gait, flat feet, lower leg bowing or problems with hips or knees
- dysmorphic features
- undescended testicle (boys).

Consider further investigations for BMI above 98<sup>th</sup> centile:

- lipid profile
- HbA1c
- overnight sleep study, using pulse oximetry if history suggests sleep apnoea.



### 3 MANAGE

Aim to slow weight gain so the child can grow into their weight.

Use the Food, Activity (including sleep) and Behaviour (FAB) change approach to address lifestyle interventions.

-  Food/nutritionally balanced diet
-  Physical activity and reduce sedentary time
-  Sufficient sleep
-  Behaviour strategies.

To support meaningful engagement and improved health outcomes, it is important that a mutually agreed weight management plan takes into account the broader social, environmental and cultural contexts of the child, family and whānau.

Refer to paediatric services if significant co-morbidities are identified or if an endocrine or genetic cause for obesity is suspected.

Agree a plan for review and monitoring.



### 4 MAINTAIN

Maintain contact and support and continue to monitor the child's height and weight to ensure they are adequately supported.

Reinforce healthy eating, physical activity, behaviour strategies and sleep advice.

Identify and promote local support services. Develop collaborative partnerships with Māori health providers, Pacific health providers, Whānau Ora providers and other community-based organisations as appropriate.



Reassess if progress is not sustained.

# 1 MONITOR

# Monitor Growth

Monitor growth.

Regularly measure height and weight to calculate Body Mass Index (BMI). Use New Zealand – World Health Organization age- and sex-specific growth charts.

**Overweight**      **Obese**

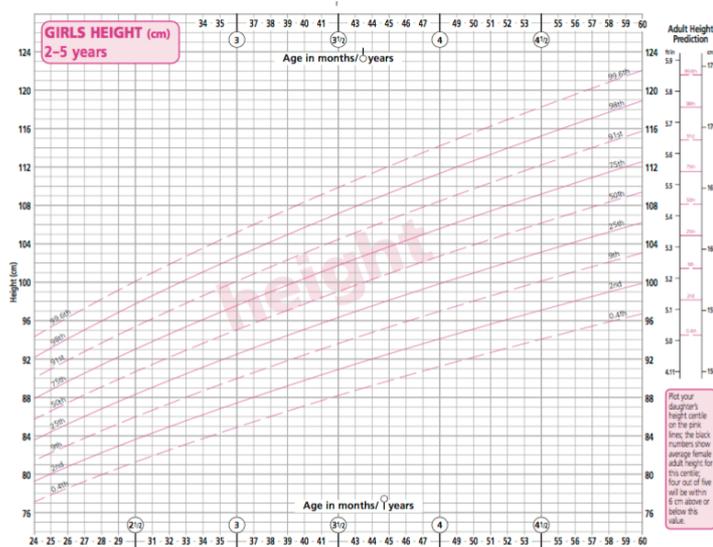
above 91<sup>st</sup> centile      above 98<sup>th</sup> centile

If trending towards overweight, provide the family or whānau with brief nutrition and physical activity advice.

If overweight or obese discuss long-term health risks with the family or whānau.

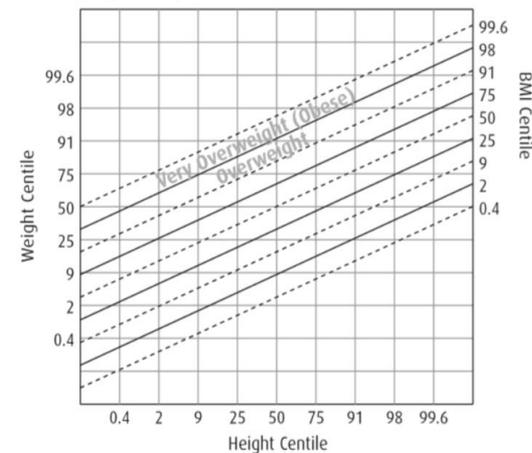
Proceed to stage 2:  
**Assess**

## NZ-WHO Growth Charts



## Weight-height to BMI conversion chart

$$\text{BMI} = \frac{\text{weight in kg}}{(\text{height in m})^2}$$





## 4 Year Old Weight Ruler



See hints below



- ☺ Sustaining Breakfast
    - porridge or equivalent
  - ☺ Water or Milk for drinks
    - A glass of water before main meals
  - ☺ Eat slowly (30 min for main meals)
    - talk more and TV off for meals
  - ☺ Healthy food in home
    - amount appropriate for age and don't insist everything must be eaten!
    - Only have healthy food in view or in cupboards
  - ☹ TV/Screen time
    - Less than 2 hours each day
  - ☺ Sleep
    - have a before sleep routine at the same time each night (teeth, bath, story, bed).
- Most 4 yr olds need 10 – 13 hours

- Parents are really important in showing how to eat well and stay fit!
- Play outside – aim at least 30 min each day, some of it with Dad or Mum or other adult.
- Rewards and Comfort – but not as food

- Have family discussions on how healthy living is going
- For children, keep weight the same till they grow into it
- 
-

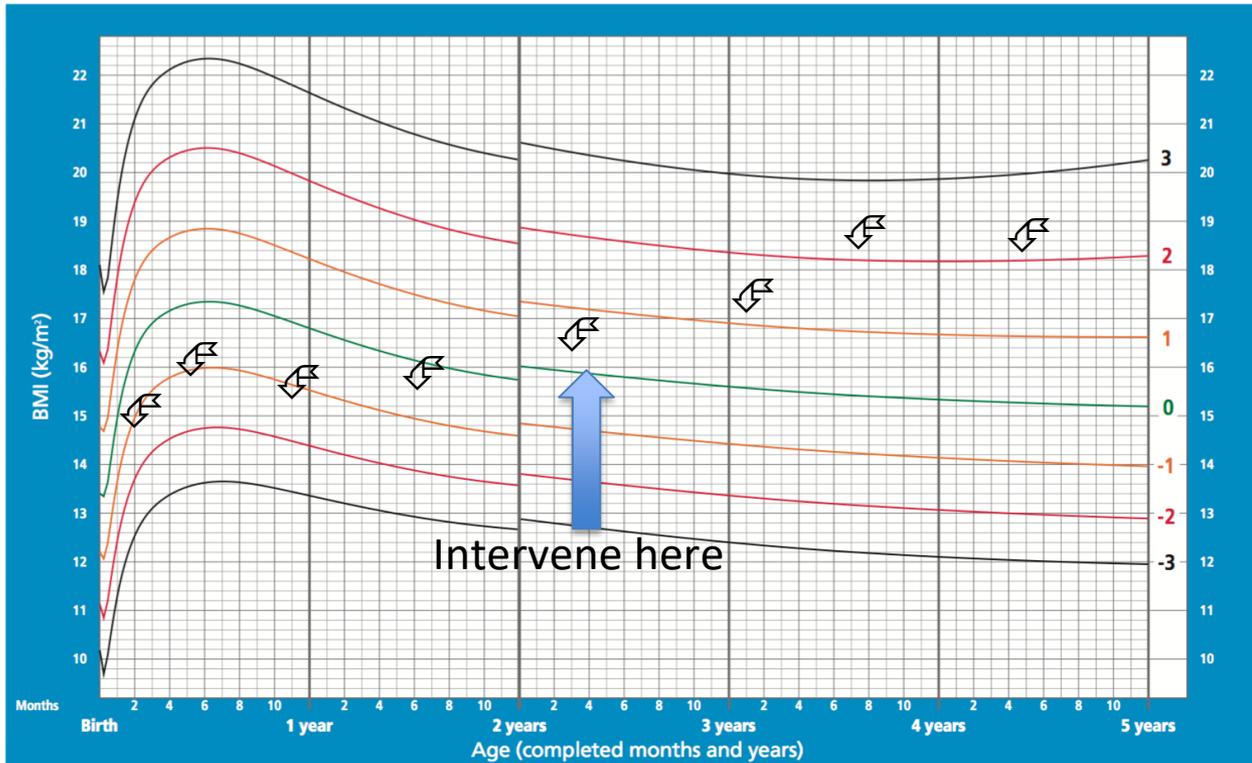
# Why measure and monitor growth?

- Growth is a marker of health in children
- Serial measurements of height, weight (and head circumference) as a child ages, are sensitive measures of their general health
- Growth surveillance assists parents and health professionals to
  - Identify when things are going wrong (failure to thrive or emerging obesity)
  - Guides intervention and progress

# Intervene Early

## BMI-for-age BOYS

Birth to 5 years (z-scores)



WHO Child Growth Standards

Z score (SD): +1.3      91<sup>st</sup> Centile  
                         +2.0      98<sup>th</sup> Centile

- A change of centile channel is an indicator that the child's growth trajectory needs to be watched and an early intervention is likely to be more straightforward and effective

# Canterbury Growth Referral Pathway

## Mandatory GP referral for BMI >98<sup>th</sup> centile

Under the new pathway, all children identified in a B4 School Check as BMI >98<sup>th</sup> centile must be referred to a General Practitioner for a full clinical assessment.

Previously, mandatory referral was for BMI >99.6<sup>th</sup> centile.

NOTE: Families of children that have received a B4 School Check between 01 July 2016 and 21 November 2016 and meet the new referral criteria and were referred to their GP, will also receive a letter offering the service of the Healthy Lifestyles Coordinator.

## New Healthy Lifestyles Coordination Service

Canterbury's revised referral pathway incorporates a new Healthy Lifestyles Coordination Service to assist practitioners to engage with families and support them to make a range of lifestyle changes.

As well as a referral to a GP, children identified as BMI >98<sup>th</sup> centile during a B4 School Check will also be referred to the Healthy Lifestyles Coordination Service.

The service aims to help families navigate the range of healthy lifestyle programmes available. A Healthy Lifestyles Coordinator will contact families referred to discuss suitable programme/s. This negates the need for separate referrals to community agencies.

## New resources for engaging with families

The pathways and referral forms have been updated on Community Health Pathways.

A series of new nutrition and activity tip sheets are available in the Patient Information drop down at the bottom of the Weight Management in Children pathway.

BeSmarter is a new resource designed to help health clinicians engage with families and support them to make a range of lifestyle changes. For more information about BeSmarter, including ordering details, see the Weight Management in Children pathway.

# Health Info Website

The screenshot displays the Health Info website interface. At the top left is the Ministry of Health logo. The main header features the 'Healthinfo' logo for Canterbury/Waitaha, with the tagline 'From your local health professional' and three colorful smiley faces. A search bar and a 'Send us your feedback' button are located in the top right. Below the header is a green navigation bar with links for Home, A-Z health topics, Look up your medication, and How to get medical help. A left-hand navigation menu lists various health topics, with 'Healthy eating & weight for children' highlighted. The main content area shows the article title 'Healthy eating & weight for children' with a 'Print' button, the Māori title 'Ngā kai hauora me te taumata hauora o ngā tamariki', and a list of related topics: 'Is my child a healthy weight?', 'Healthy & active children', 'Underweight children', 'Fussy eaters', and 'Iron & your child'. A footer section includes the Canterbury District Health Board logo, social media sharing options, and contact information.

Send us your feedback

SEARCH GO

Change your district

Home | A-Z health topics | Look up your medication | How to get medical help

Home > Child health >

**Healthy eating & weight for children** Print

*Ngā kai hauora me te taumata hauora o ngā tamariki*

In this section

Is my child a healthy weight?

Healthy & active children

Underweight children

Fussy eaters

Iron & your child

Page reference: 62690

**Canterbury**  
District Health Board  
Te Poari Hauora o Waitaha

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About HealthInfo  
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Disclaimer

# Dealing with responses from parents

‘My child exercises every day of the week with horse riding and running and as you should know muscle weighs heavier than fat.’

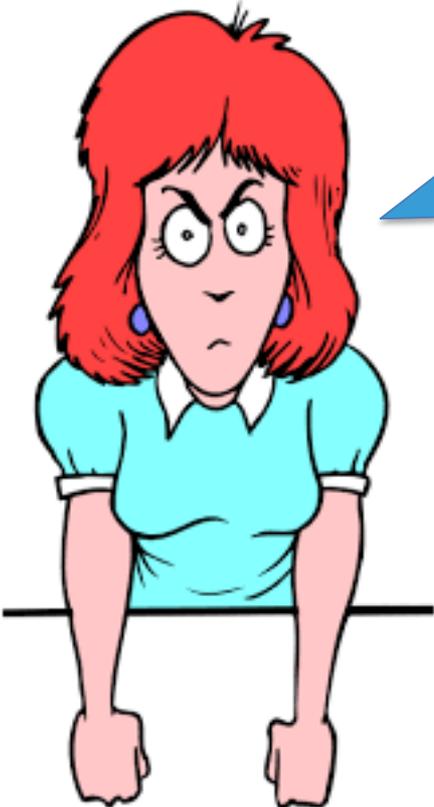


# Dealing with responses from parents

‘If you look at the rest of his activities and family members then his natural weight and body size is large.’



# Dealing with responses from parents



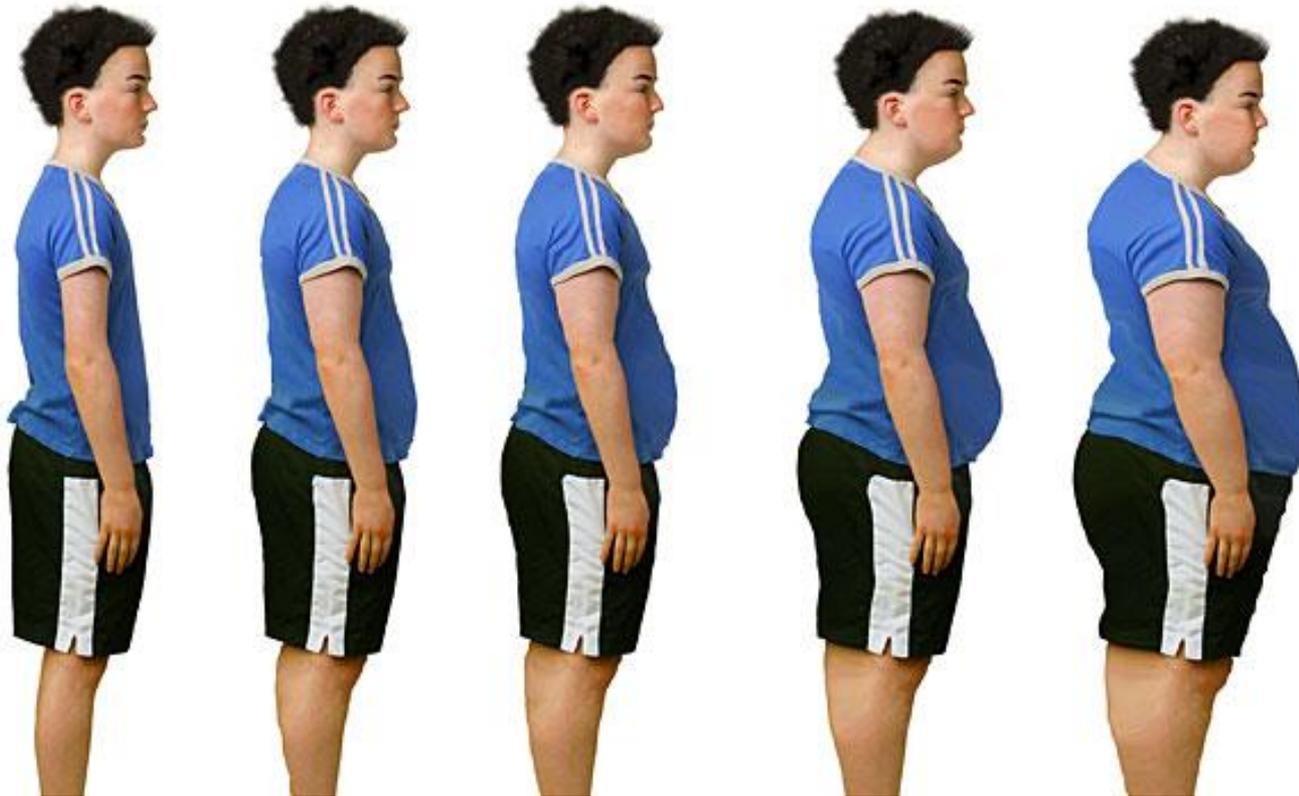
‘He is very short for his age  
and I feel he will even out as  
he grows.’

# Dealing with responses from parents



'There are much fatter children out there and my son isn't that bad!'

# What's 'normal'?



1970

2009

# Having the conversation

- Show concern, rather than professional detachment
- Be confident and caring
- Allow time for questions
- Provide written information to parents
- Value the child and respect the parents

# Change Talk

## Change Talk: Childhood Obesity

Kognito Health & Fitness

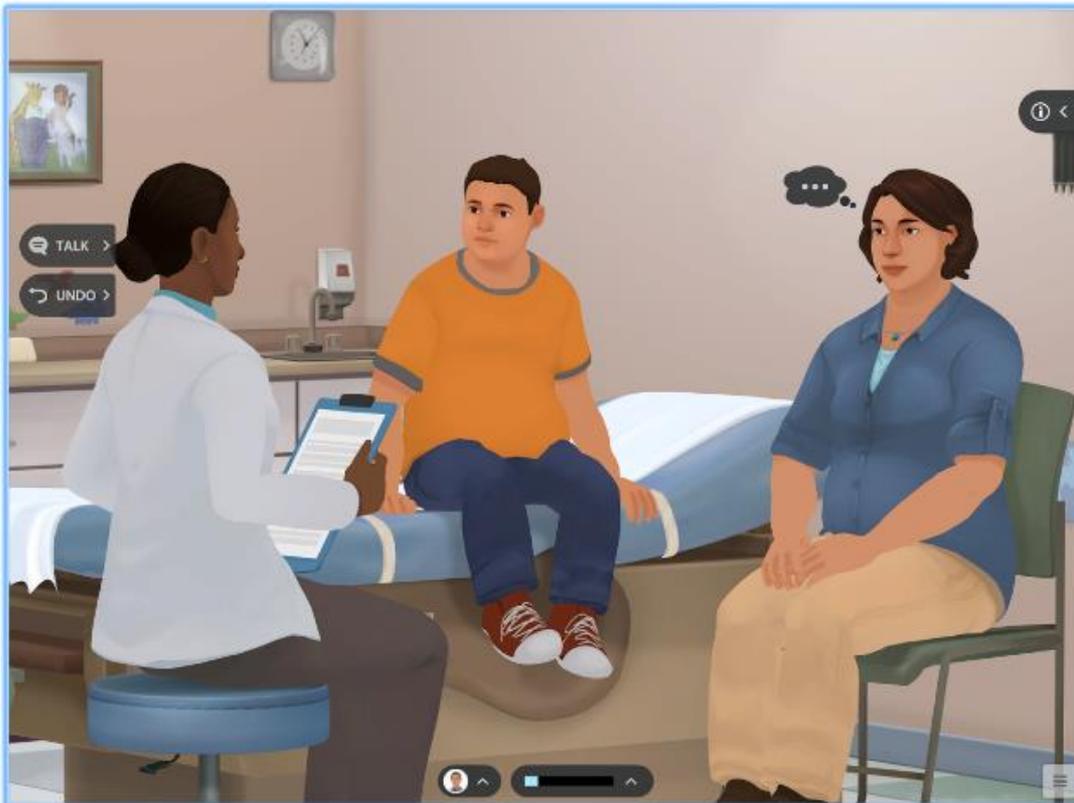
★★★★★ 29

3+

⚠ You don't have any devices

🔖 Add to Wishlist

Install



## 2 ASSESS

Take a full history for BMI above 91st centile.

### Consider:

- co-morbidities
- family history of obesity, early cardiovascular disease, or dyslipidaemia
- precipitating events and actions already taken
- usual diet and levels of physical activity and sleep patterns
- current physical and social consequences of overweight
- signs of endocrine, genetic or psychological causes
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### Include in a clinical examination:

- blood pressure with appropriate cuff size
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- hepatomegaly
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- dysmorphic features
- undescended testicle (boys).



Consider further investigations for BMI above 98th centile:

- lipid profile
- HbA1c
- overnight sleep study, using pulse oximetry if history suggests sleep apnoea.



# Practical Assessment in Primary Care

## History

- Pregnancy (obesity, diabetes, birth weight)
- Feeding (breast, bottle weaning)
- Early weight trajectory
- Current eating habits
- Developmental milestones
- Physical activity (& screen time)
- Sleep (enough of it, snoring)
- Medications (steroids)
- Family

## Examination

- Watch the child walk into the room
- Talk to the child
- Growth chart (height, weight, BMI)
- Dysmorphic features
- Blood pressure

# 3

## MANAGE

**Aim to slow weight gain so the child can grow into their weight.**

Use the Food, Activity (including sleep) and Behaviour (FAB) change approach to address lifestyle interventions.



Food/nutritionally balanced diet



Physical activity and reduce sedentary time



Sufficient sleep



Behaviour strategies.

To support meaningful engagement and improved health outcomes, it is important that a mutually agreed weight management plan takes into account the broader social, environmental and cultural contexts of the child, family and whānau.

Refer to paediatric services if significant co-morbidities are identified or if an endocrine or genetic cause for obesity is suspected.

Agree a plan for review and monitoring.



# Manage

## Food

- Nutritionally balanced diet
- Appropriate portion sizes
- Family meals
- Slower eating
- Avoid snacking

## Activity and sleep

- Play and physical activity
- Reduce screen time (esp TV)
- Sleep time
  - Infants 12-15
  - Toddlers 11-14
  - Preschoolers 10-13

## Behavioural strategies

- Change what is available at home
- Keep 'treats' out of site
- Increase easy accessibility to healthy options

# Tips

## Healthy eating tips for 2–5 year olds

**Eating a wide variety of healthy foods is essential for normal growth and development.**

Weight is a sensitive issue, even for small children. It is important your child does not feel they are being punished. The best way to do this is for the whole family/whānau to eat the same meals. It's easier to eat healthy meals and snacks if healthier foods are in your house. Here are some ideas to help you.

- Eat meals together as a family. Make sure the television and other screens are turned off.
- Make sure your child eats breakfast every day. It's a great way to start the day. Good breakfast choices include grain cereals, such as wheat biscuits and porridge, whole-grain toast, fruit and reduced-fat milk.
- Think about the size of meals. Could they be smaller? Reduce the amount you put on the plate over several nights so the whole family gets used to eating smaller meals.
- Children are smaller than adults so don't need adult portions. Try using a smaller plate.
- 2–5 year olds should aim for at least 2 servings of vegetables and 2 servings of fruit each day. Children over 5 years should try to have at least 3 servings of vegetables and 2 servings of fruit each day.
- Choose whole-grain breads instead of white breads.
- Use margarine instead of butter and spread thinly.
- Encourage your family to drink water or reduced-fat milk rather than soft drinks, cordials or sports drinks.
- Choose reduced-fat milk and yoghurt for everyone in the family aged 2 years or older.
- Reward your child with attention and hugs instead of food treats such as sweets.
- Avoid cakes, biscuits, sweet muffins, lollies and chocolate.
- Replace sour cream or coconut cream with reduced-fat unsweetened yoghurt, lite coconut cream, coconut milk or light evaporated milk.
- Choose sandwiches, filled rolls or savoury bread cases instead of pies, pastries, potato chips and sausage rolls.
- Fresh fruit, popcorn, a glass of reduced-fat milk or a small sandwich make great snacks.
- Choose home-made burgers and oven wedges instead of commercial burgers, pizzas and fried foods.



For more advice on the types of food children need to eat to be healthy, see *Eating for Healthy Children: From 2 to 12 years*, available from [health.govt.nz](http://health.govt.nz)

For more tasty, easy (and healthy) meal ideas and recipes, go to [myfamily.kiwi/foods](http://myfamily.kiwi/foods)

## Sleep tips for young children

### Why is sleep important?

Sleep is important for restoring energy and for growth and development.

There is increasing evidence that not enough, or poor quality, sleep can negatively affect children's behaviour, learning, health, wellbeing and weight.

### How much sleep does my child need in 24 hours?

The table below shows the recommended total hours of sleep (including naps) per day for children from birth to 5 years. Some children naturally sleep slightly less or more than the recommended time.

Age	Recommended (hours)
Newborn (0–3 months)	14–17
Infant (4–11 months)	12–15
Toddler (1–2 years)	11–14
Preschool (3–4 years)	10–13
5 year olds	9–11

Adapted from the National Sleep Foundation: How much sleep do we really need?

For more details, go to Sleep Tips for Young Children at [health.govt.nz](http://health.govt.nz)

It is not just the amount of sleep that is important but also the quality of that sleep. The following tips may be helpful.



### How can I improve my child's sleep?

- Have a regular bedtime routine. This might include a bath, brushing their teeth, a story then bed. Quiet activities are good before bed. Avoid active games, playing outside and screen use (eg, TV, internet, computer games) in the hour before bedtime.
- Have a regular bedtime and wake up time. It helps your child to understand when it is time to sleep.
- Have a comfortable sleep environment. The place where they sleep should be quiet, warm and dark (though a night light is okay).
- Have no distractions in the place where children sleep, including TV, computer screens and portable devices.
- A meal within 1 to 2 hours of going to sleep is not recommended. However, a light snack may help some children.
- Avoid giving your child food and drinks containing caffeine as this can affect their sleep.
- It is normal for young children to have naps during the day. As they get older, they will need less sleep and fewer naps. If your child has a nap after 4 pm (except for newborns and infants), it may be harder for them to get to sleep at night.
- It is important for children to be active throughout the day. Activity can also help your child to sleep. Time spent in bright sunlight, such as being active outside, can also help children to sleep, but don't forget to be sunsmart! Avoid lots of activity in the hour before bedtime.
- Being unwell can also affect your child's sleep. If your child snores a lot or stops breathing for short periods while asleep, discuss this with your GP.

These tips were adapted from the Australian Sleep Foundation's Sleep Tips for Children.

## Tips to help 2–5 year olds be more active

**Being active will help your child achieve and maintain a healthy body weight. Being active has many other health benefits and can be fun for the whole family.**

- Walk, run and play with your child. By being physically active yourself, you are setting a good example.
- If your child is not usually active, start with something fun like a trip to the local playground. Walking there adds extra steps into the day.
- Instead of short car trips, try walking, biking or scooting with your child. Start by doing this once a week and add more trips over time.



- Encourage your child to play outside as much as possible.
  - Try to do something fun and active as a family each week. Some ideas are walk along the beach, roll down a grass bank, play tag, fly a kite at the park or take a trip to the local swimming pool.
  - Limit the amount of time your child spends watching TV or in front of a screen to less than 1 hour a day.
- For more low- or no-cost family activity ideas, visit the [myfamily.kiwi/activities](http://myfamily.kiwi/activities) webpage or Activities for under 5s on our [health.govt.nz](http://health.govt.nz) website.

**Find out more from the Ministry**  
*Food and Nutrition Guidelines for Healthy Children and Young People (Aged 2–18 years): A background paper*

# Interventions

- Focus on helping kids grow into a healthy weight
  - Family-based (e.g. active families)
  - Parent centred (Triple P Healthy Lifestyle Group Intervention)

# Be Smarter Tool

FX006

## basics for healthy kids

## be smarter

be bodywise

## goal sheet

	Not yet	Sometimes	Mostly	Always
<b>b</b> reakfast every day				
<b>e</b> at 5+ a day				
<b>s</b> leep 10-12 hours				
<b>m</b> atch servings to hand size				
<b>a</b> ctivity 60 minutes daily				
<b>r</b> educe sugary drinks				
<b>t</b> akeaways less than once a week				
<b>e</b> at together as a family				
<b>r</b> educe screen time < 2 hours				

Name \_\_\_\_\_ Date \_\_\_\_\_

Goal \_\_\_\_\_

*Tick your goals here:*

	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Week 1							
Week 2							
Week 3							
Week 4							

bodywise@waikatodhb.health.nz

Today you were seen by: \_\_\_\_\_






PATIENT NAME:

\_\_\_\_\_

DATE:

\_\_\_\_\_

**I recommend the following:**

-  **Enjoy - FIVE** or more  
vegetables & fruits every day
-  **Power down** - no more than  
**TWO** hours of screen time a day
-  **Play actively** - at least  
**ONE** hour each day
-  **Choose healthy** - **ZERO**  
sugar-sweetened drinks

## ▶ 4 MAINTAIN

**Maintain contact and support and continue to monitor the child's height and weight to ensure they are adequately supported.**

Reinforce healthy eating, physical activity, behaviour strategies and sleep advice.



Identify and promote local support services. Develop collaborative partnerships with Māori health providers, Pacific health providers, Whānau Ora providers and other community-based organisations as appropriate.



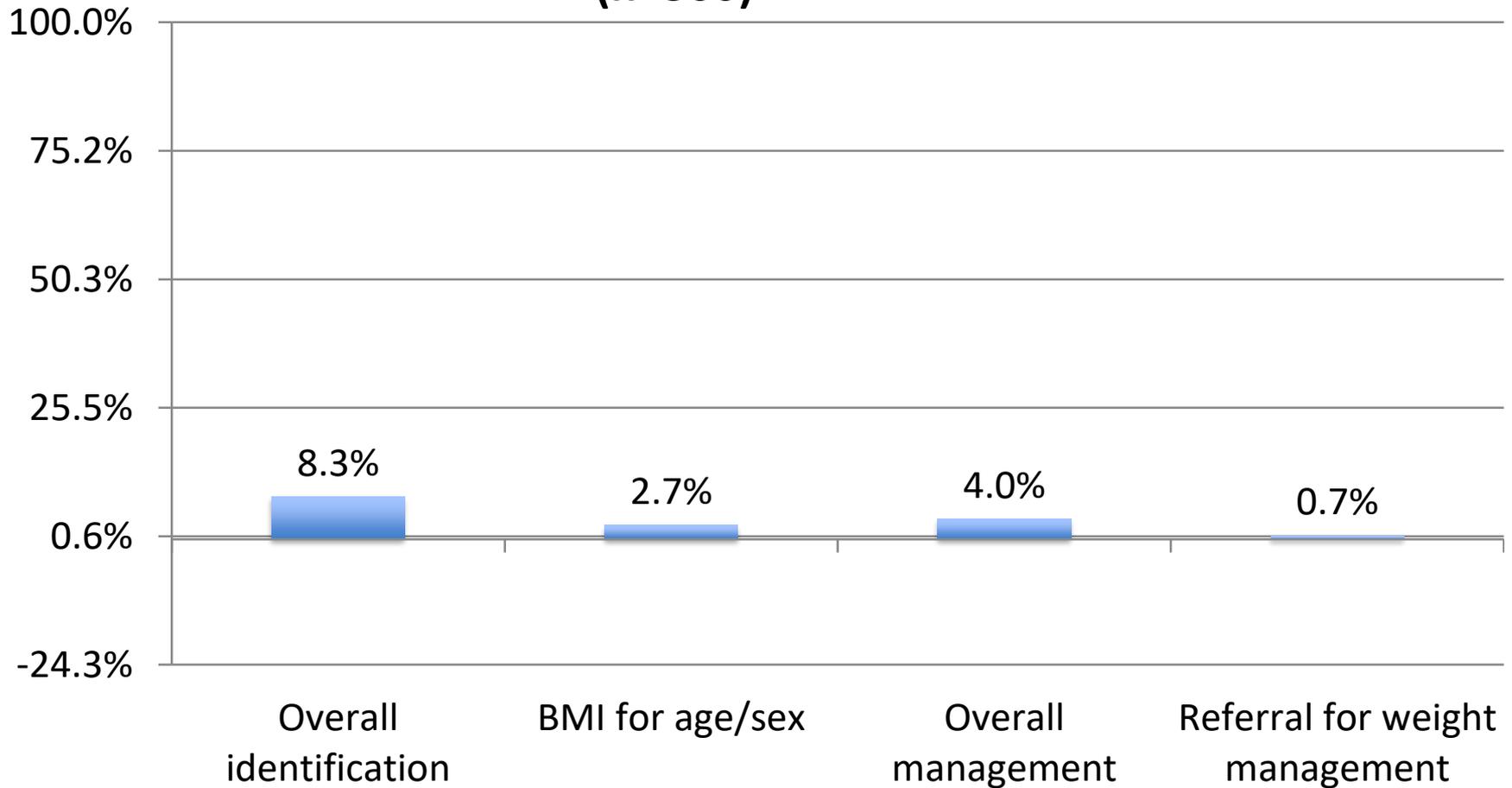
**Reassess**  
if progress is  
not sustained.

# Maintain

- Review opportunistically
- Address comorbidities
- Accept setbacks – maintain positivity
- Encourage family activities and sport
  - Link with local Regional Sports trust
- Encourage cultural initiatives
  - e.g. Kapa-Haka
- Support communities
  - Healthy Families NZ
  - Iron Maori
  - Community gardens/Kai Atua

# Healthcare system performance

## Management of overweight/obese hospitalised children (n=300)



# Adult Obesity

- **Don't ignore the issue**
- **Motivate a weight loss attempt**
- Healthcare professional advice to lose weight was associated with increased odds of
  - Wanting to weigh less (OR=3.71; 95% CI: 2.10-6.55)
  - Attempting to lose weight (OR=3.53; 95% CI: 2.44-5.10)



# Making an offer if support

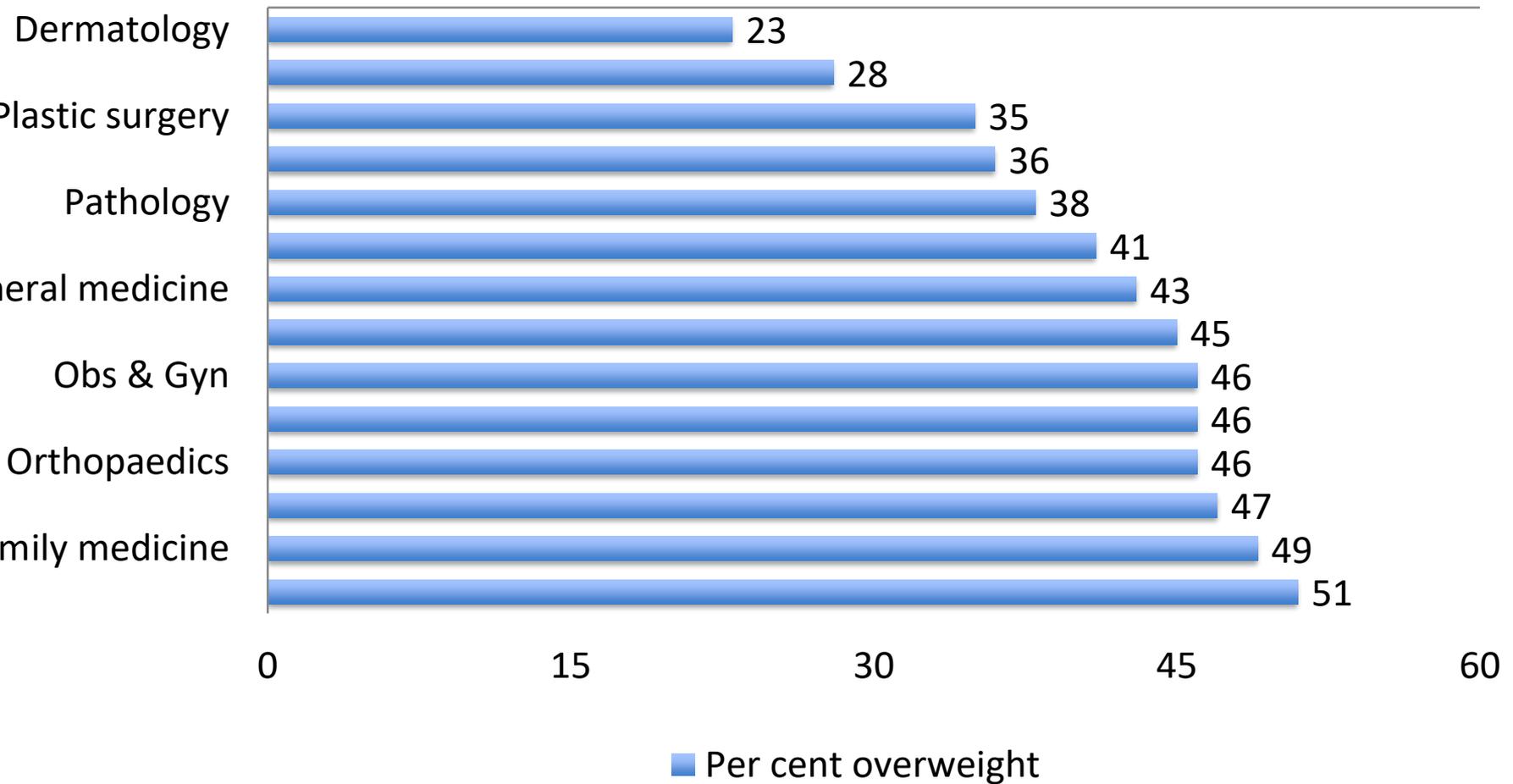
- Intervention (n=940)
    - Physician offered referral to a weight management group
  - 772 (72%) agreed to attend
  - 379 (40%) attended
  - Mean weight change at 12 months: **2.43 kg**
- Control (n=942)
    - Physician advised the patient that their health would benefit from weight loss.
  - 82 (9%) attended weight management group
  - Mean weight change at 12 months: **1.04 kg**

adjusted difference = **1.43 kg** (95% CI 0.89-1.97)

# The Conversation

- **HCP:** While you are here, I'd like to have a brief discussion about your weight. From the measurements we have taken, your BMI is >30 which puts you into the obese category and increases your health risk.
- **Patient:** Oh?
- **HCP:** I know weight management can be challenging but I've got some information here which I think you might find helpful. Are you willing to have a look at them?
- **HCP:** Okay
- **Doctor:** Great, I'll also let your GP know that we are encouraging you to manage your weight as they will also be able to give you some support. It would be a really good idea to have a chat to them in the next 3 months about your weight to get more support, okay?
- **Patient:** Sure
- **HCP:** So I'll give this (pamphlet) to you to keep now and I really encourage you to go talk to your GP about weight management.
- **Patient:** Thanks

# Overweight healthcare professionals?



# What do patients think?

- Survey of 600 overweight or obese adults

Patients estimation of doctors weight	Normal (n=118)	Overweight (n=312)	Obese (n=170)
Trust* advice on weight control	76%	85%	85%
Trust advice on diet	77%	87%**	82%
Trust advice on physical activity	79%	86%	80%

\* Rated 'a great deal' or 'a good amount' of trust

\*\*Significantly greater than normal weight (p=0.04)

# Conclusion

- The solution to obesity is multi-faceted
- Health care professionals have an important role to play
- Although the conversations can be difficult, they are worthwhile

Raising  
Healthy Kids



[hayden\\_mcrobbie@moh.govt.nz](mailto:hayden_mcrobbie@moh.govt.nz)