

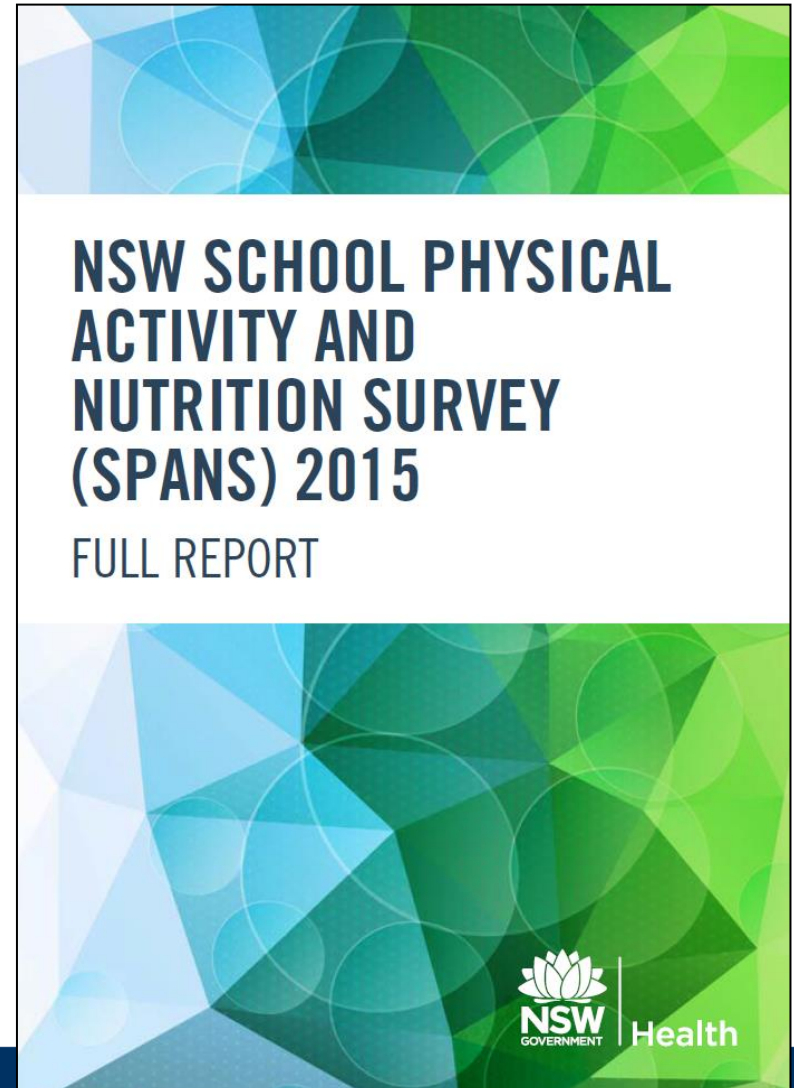
# But what about food?

## Dietary changes for weight management

Alicia Grunseit, Dietitian, The Children's Hospital  
Westmead

# SPANS 2015








- Cross-sectional population survey of NSW school children 5-16 years
- 7,556 children surveyed
- 84 schools





# PRIMARY SCHOOL CHILDREN












Positive difference

Negative difference

		BMI category			
		Thin	Healthy weight	Overweight	Obese
	Met recommended daily fruit intake	76%	77%	80%	75%
	Met recommended daily vegetable intake	5%	5%	6%	5%
	Eat breakfast daily	87%	86%	80%*	76%*
	Drank +1 cups of soft drink every day	6%	5%	6%	12%*
	Ate takeaway meals/snacks from fast food outlets $\geq 1$ /week	20%	19%	21%	28%*
	Met recommended daily physical activity level	24%	25%	17%*	16%*
	In the healthy fitness zone	71%	73%	44%*	21%*












# DIFFERENCE BY BMI IN 2015: ADOLESCENTS IN SECONDARY SCHOOL

 Positive difference  
 Negative difference

		BMI category				
		Thin	Healthy weight	Overweight	Obese	
	Met recommended daily fruit intake	68%*	81%	80%	81%	
	Met recommended daily vegetable intake	9%	11%	10%	7%	
	Eat breakfast daily	68%	62%	53%*	50%	
	Drank +1 cups of soft drink every day	12%	10%	7%	15%	
	Ate takeaway meals/snacks from fast food outlets $\geq 1$ /week	27%	24%	21%	25%	
	Met recommended daily physical activity level	12%	12%	10%	14%	
	In the healthy fitness zone	67%	69%	37%*	11%*	
	Met recommended daily limits on screen time	Week day	41%	37%	33%	28%
		Weekend	19%	17%	15%	18%
	Driven to school	23%	23%	26%	27%	
	Met recommended sleep time	School night	76%	74%	75%	73%
		Non-school night	41%*	57%	56%	49%
	Brush teeth twice a day	67%	71%	62%*	52%*	

\* significant difference between children in the thin, overweight and obese, compared with healthy weight BMI category

# SOCIO-DEMOGRAPHIC DIFFERENCES IN 2015: ADOLESCENTS IN SECONDARY SCHOOL

		Locality		SES			Cultural background				
		Urban	Rural	Low	Middle	High	English speaking	European	Middle Eastern	Asian	
	Met recommended daily fruit intake	78%	86%*	81%	77%	81%	81%	80%	80%	69%*	
	Met recommended daily vegetable intake	9%	14%*	12%	9%	10%	11%	13%	10%	9%	
	Eat breakfast daily	61%	57%	55%*	56%*	68%	86%	74%	56%	78%	
	Drank +1 cups of soft drink every day	9%	11%	13%*	11%*	7%	10%	9%	16%	7%	
	Ate takeaway meals/snacks from fast food outlets ≥1/week	27%	13%*	23%	24%	24%	22%	16%	26%	34%*	
	Met recommended daily physical activity level	11%	13%	12%	11%	12%	12%	18%	12%*	6%*	
	In the healthy fitness zone	57%	62%	52%*	58%	66%	61%	59%	39%*	40%*	
	Met recommended daily limits on screen time	Week day	34%	40%	33%	33%	41%	36%	48%	41%	30%
		Weekend	15%	22%*	19%	14%	17%	17%	8%	21%	18%
	Driven to school	27%	14%*	28%	22%	20%	22%	28%	48%*	24%	
	Met recommended sleep time	School night	74%	75%	75%	74%	75%	74%	75%	80%	77%
		Non-school night	55%	56%	56%	55%	55%	56%	37%*	63%	50%
	Brush teeth twice a day	69%	65%	65%*	65%*	74%	67%	75%	61%	79%	

\* significant difference between children from:  
 - rural areas compared with urban areas; low and middle SES backgrounds compared with high SES backgrounds;  
 European, Middle Eastern and Asian cultural backgrounds compared with English-speaking background

Mother's weight at conception and weight gain during pregnancy

Poor role modeling from parents

Genetics: parents give the genes and the environment to foster weight gain

Poor Sleep, high screen time, lack of PA

Early feeding practices

**Common Factors associated with OVERWEIGHT & Obesity in Children**

Child's weight and rapid weight gain

Inadequate protein and fibre  
High carbohydrate intake

Poor meal planning - resorting to takeaway for dinner or canteen for school lunches

Little to no vegetables

Grazing all day

Not eating breakfast or eating a poor breakfast

Not eating together as a family

# What issues can be addressed in an appointment?

# 8 Healthy Habits

Information is relevant for children aged 2 years and older



# 8 Healthy Habits: Core messages for anticipatory guidance developed for NSW

See this and other resources at:  
[pro.healthykids.nsw.gov.au](http://pro.healthykids.nsw.gov.au)

Available in English and in Arabic,  
Burmese, Chinese (simplified and  
traditional), Farsi, French, Hindi,  
Karen, Korean, Nepali, Swahili and  
Vietnamese



healthykids  
for professionals  
Weight management resources  
for health professionals

For more healthy habit tips visit  
[makehealthynormal.nsw.gov.au](http://makehealthynormal.nsw.gov.au)  
For health professional resources visit  
[pro.healthykids.nsw.gov.au](http://pro.healthykids.nsw.gov.au)

31/07/2019 1:00:29

Available for free in 13 community languages



# Water as the Main Drink

Suggest:

1. Water only at school – No juice or cordial
2. Don't keep soft drink in the house
3. Use flavoured milk instead of soft drink as a treat



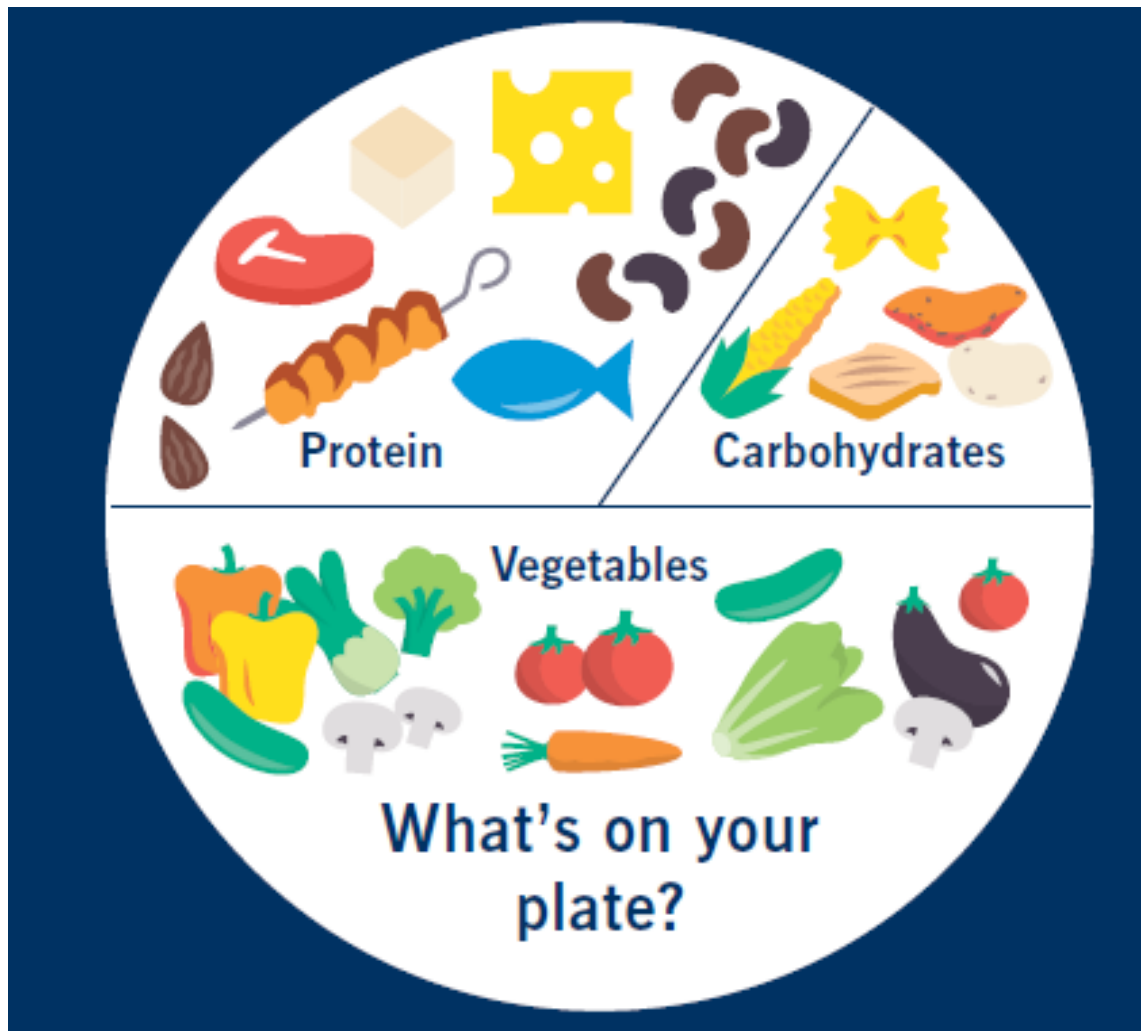
# Protein at each meal and snack

- Protein plays an important role in satiety
- Include source at each meal and snack
- Sources include dairy, lean meat, nuts, eggs
- Ask quick questions such as “what is usually for afternoon tea?” and make suggestions to include protein
- Aim for regular meals and snacks – no grazing

# Aim for ½ plate vegetables

- Contain little or no calories
- Important for fibre, vitamins and minerals
- Often part of the Australian Guide to healthy eating that is missed
- Always have on plate even if a child is fussy





# Take-away food

- Aim to reduce to 1 x week
- Make healthier choices:
  - ✓ Small meal size
  - ✓ No sugar drinks
  - ✓ Grilled options
  - ✓ Watch portion- add vegetables
- Discuss healthy quick, cheap meals which are better than take-away e.g. toasted cheese sandwich with carrot/cucumber sticks on side



- **To local weight management services**
- **To your local dietitian or other appropriate services**
- **Go4Fun**
- **Get Healthy**


# Refer....

## Referral forms for secondary services

Secondary services are available for children from the local health area who are above a healthy weight. If age (7-13 years) and clinically appropriate, children should also be enrolled in Go4Fun. Most clinics are multidisciplinary and may include a nurse, paediatrician, dietitian, exercise physiologist or physiotherapist and a clinical psychologist. The clinic frequency is varied.

Hornsby Healthy Kids 


Westmead Dietitian Service 

Nepean Blue Mountains Family Metabolic Health service (Kingswood) 

John Hunter Children's Hospital Service 

Healthy Families (Camperdown & Belmore) 

Information 

Growing Healthy Kids Service (SWS LHD) 

Information 

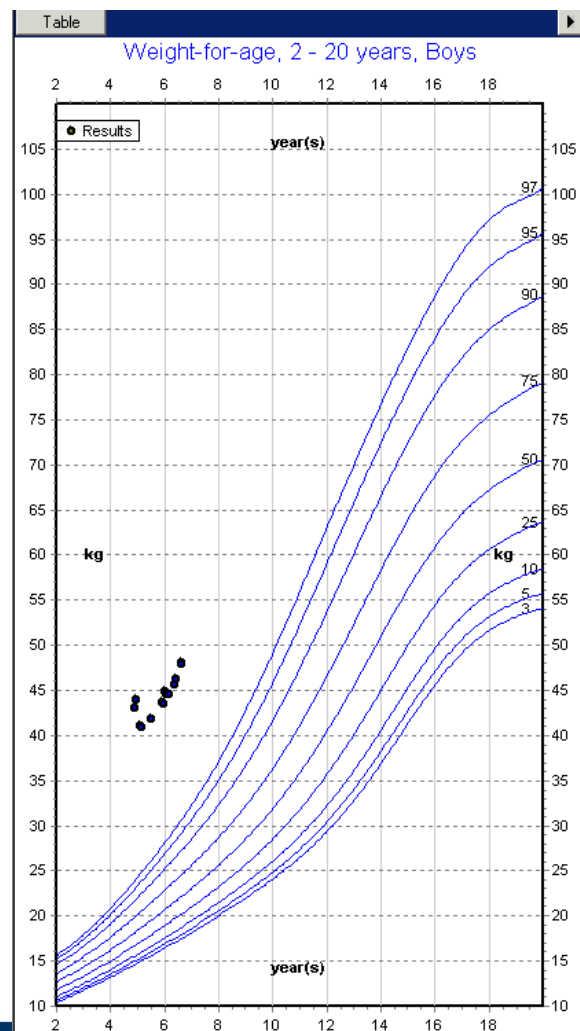
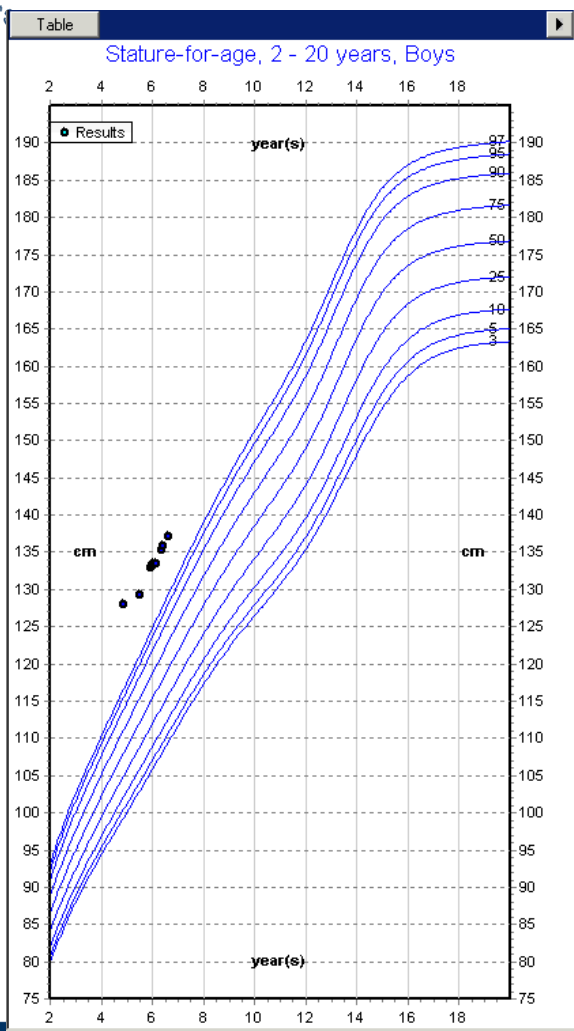
## Referral forms for tertiary service

Currently there is one multidisciplinary tertiary clinic for children well above a healthy weight located at the Children's Hospital Westmead. The clinic is available for children aged 2-16 years with a BMI Z score > 2.5. If age (7-13 years) and clinically appropriate, children should also be enrolled in Go4Fun. Multidisciplinary clinics are held weekly and include a nurse, paediatrician, dietitian, physiotherapist and clinical psychologist.

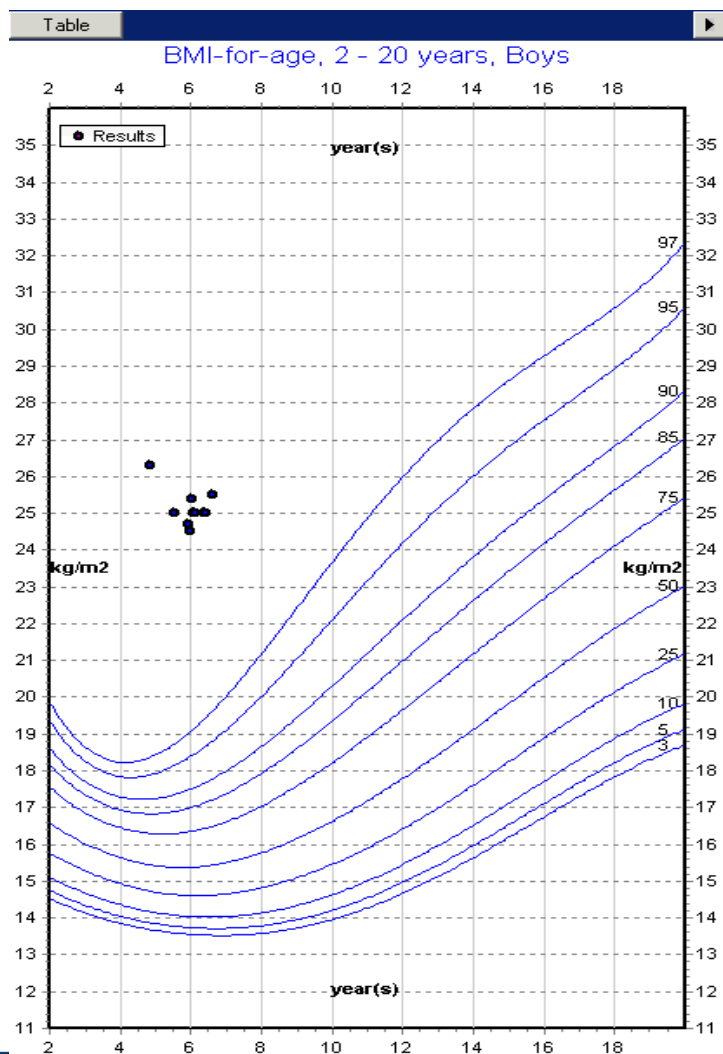


Sydney Children's Hospital Network weight management clinic 

# Case Study – Peter, 6yrs



# BMI – Peter, 6yrs





# Case Study – Peter, 6yrs

Weight: 47.9kg >>97<sup>th</sup> centile

Height: 137.1cm >>97<sup>th</sup> centile

BMI: 25.5kg/m<sup>2</sup> >>97<sup>th</sup> centile Z Score: 2.77

W/Ht:0.54

Very sedentary lifestyle. Come home from school, sits down to have afternoon tea and play video games.

Mo knows Peter supposed to eat more veges, therefore will sometimes force feed, resulting in vomiting and sometimes replace with mashed potato or rice.

Consumption of juice + soft drinks instead of water

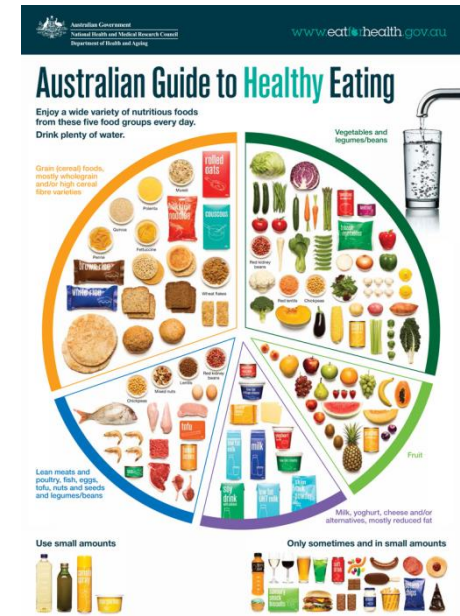
Bed-time around 9pm after watching TV after dinner

4 + packaged snacks in the lunch box + money given for canteen



# Slido

- Where to start?
  - a) 8 Healthy Habits
  - b) Australian Guide to Healthy Eating
  - c) Go 4 Fun
  - d) Get Healthy Helpline



# First Steps: Peter, 6yrs

## Refer to 8 Healthy Habits:

1. Water as main drink – no soft drink or juice
2. 60 minutes physical activity after school – suggest no video games until 6pm (this will limit screen time). Suggest going home via park, after school care, sports team, play outside.
3. Only 1 packaged snack in Lunchbox and include a protein snack for recess – cheese stick, yogurt or milk popper
4. Offer vegetables – no pressure to eat but keep pasta/ rice/ bread to only  $\frac{1}{4}$  plate
5. Bedtime 8pm – think about routine (no screens)

Check Progress – weigh whole family and use BMI charts

Consider referral to other services

# **Very low energy diets: what are they and when should they be used in childhood obesity?**

# VLED use in Adolescents

- VLED should only be considered in treatment of severe obesity in adolescents (BMI above 35).
- VLED effective in quick weight loss
- Quick weight loss aids motivation
- Short term – usually 12 weeks
- Support required – ideally see patients fortnightly
- Transition to higher protein healthy eating diet
- Encourages increased vegetable intake



Nestlé Health Science  
**OPTIFAST.**

Opti**slim**

# Very Low Energy Diet (VLED)



- Meal replacement for 3 meals per day
- PLUS 1 low carbohydrate meal per day – 100-120g protein vegetables
- At least 2 cups low carb vegetables per day
- At least 2L water per day
- Intensive period 8-12 weeks then transition off if appropriate
- Weight loss 1kg – 1.5 kg/ week if followed properly
- Ketosis means they should not feel hungry
- Meal replacements mean eating around friends/family is altered

**Breakfast**



**Morning tea**



**Lunch**



**Afternoon tea**



**Dinner**

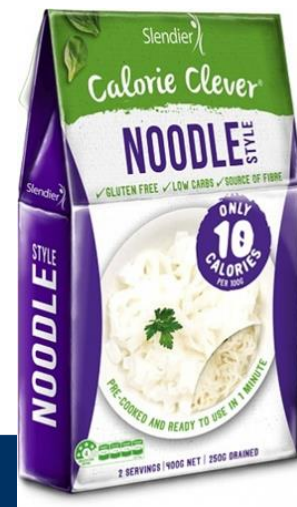


**Supper**



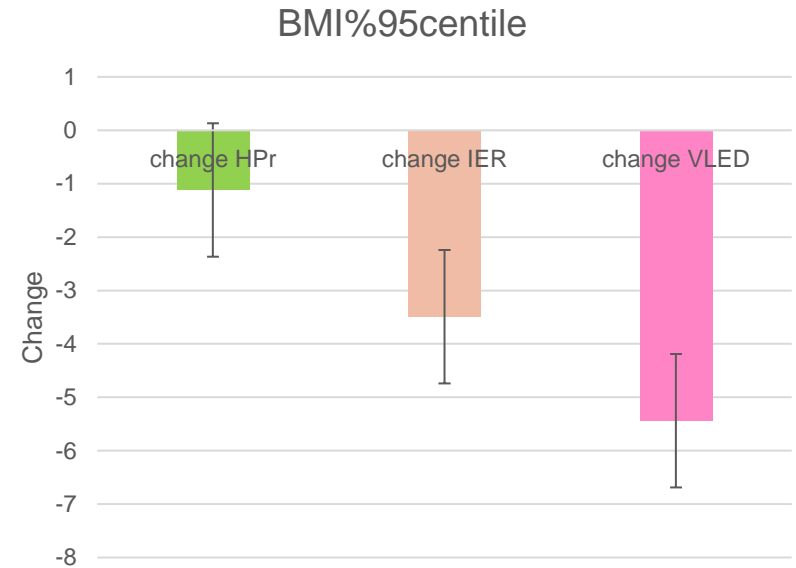
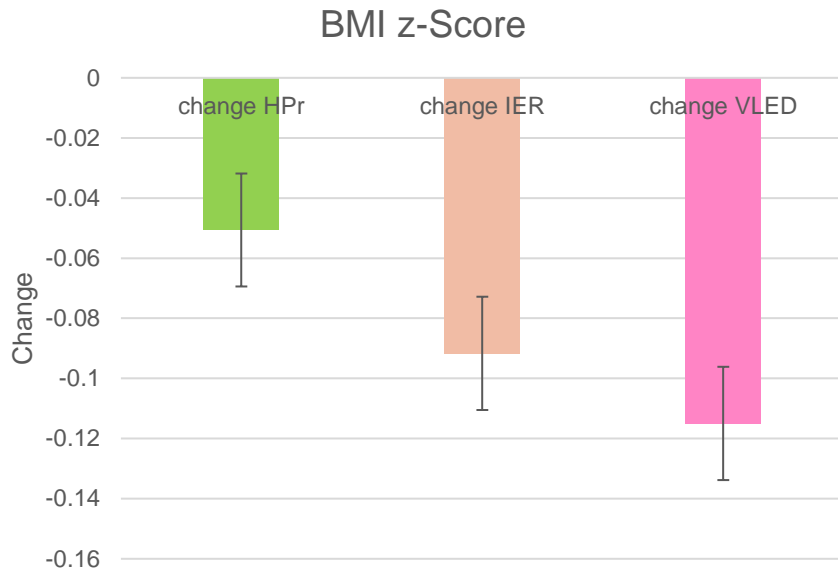


## Another way to look at vegetables ....





## Outcomes by Dietary Intervention



BMI %95 centile = BMI expressed as a percentage of the 95<sup>th</sup> percentile

## Recommendations for clinical practice

- VLED should only be considered in treatment of severe obesity in adolescents (BMI above 35)
- VLED should be implemented by trained health professional
- Dietitian required to ensure nutritional adequacy
- Ongoing support needed to prevent weight regain

# Case Study – Jennifer

- 15 year old girl. Aboriginal background.
- Lives with foster carer. Carer also looks after 5 younger children
- Weight – 151.2 kg ( well above 97<sup>th</sup> centile). Height- 178.7cm (above 97<sup>th</sup> centile).
- Polycystic ovary syndrome, Insulin Resistance, Obstructive sleep apnoea, ADHD
- Hard to engage. Rated herself 6/10 for motivation for weight loss. Unable to give clear reasons why she wants to lose weight
- Started gym 2x week for 30 mins with aunty
- Made small changes to diet – trying not to ‘pig out’. Skips breakfast most days and will eat a lot of hot chips/ chocolate on weekend with friends. Also helps herself to pantry when at home.



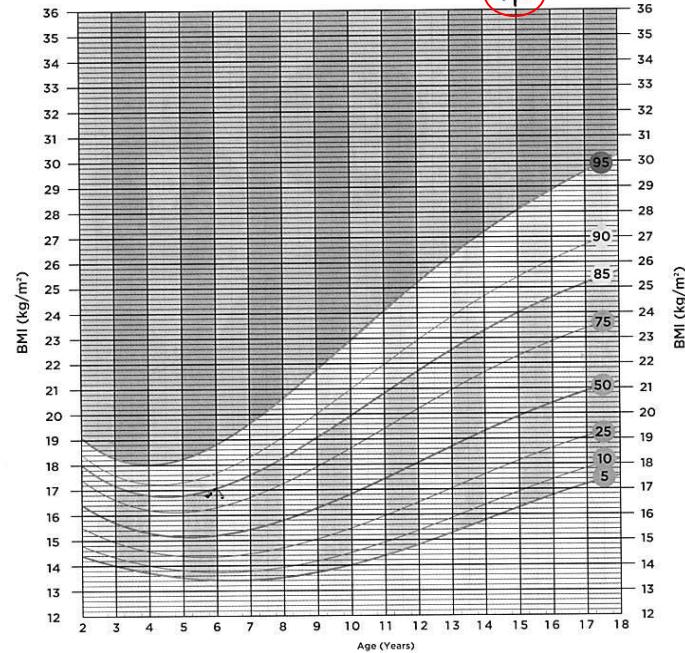
# Case Study Jennifer

Girls: 2 to 18 years

Name: Jennifer Record number: \_\_\_\_\_  
DOB: \_\_\_\_\_

Body mass index (BMI)-for-age percentile chart

BMI = 47 kg/m<sup>2</sup>  
↑



Weight: 151.2kg  
Height: 178.7cm  
BMI: 47 kg/M2

Below a healthy weight  
< 5th percentile  
(underweight)

Healthy weight  
5th percentile to < 85th percentile

Above a healthy weight  
85th percentile to < 95th percentile  
(overweight)

Well above a healthy weight  
95th percentile and above  
(obesity)

Source: Centers for Disease Control and Prevention (CDC) (2000). The BMI for age chart takes the age, height, weight and sex of the child into consideration. The CDC charts are appropriate for children aged 2 to 18 years old.



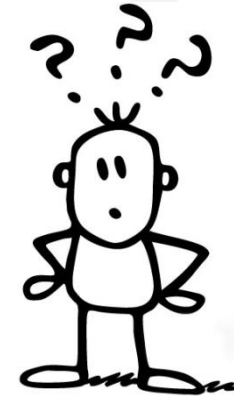
# Slido

- Which dietary option would suit Jennifer?
  - a) 8 Healthy Habits
  - b) VLED
  - c) 5:2 diet
  - d) Focus on exercise only



## Case Study – Jennifer

- Weekly weight
- How can her family support her?
- Consider food and drink when at school and out with friends
- Think of interesting ways to use vegetables
- If doing VLED – how would you transition off it? Remember slow transition and increase exercise
- Do you need to refer to anyone?



# Summary

- Start with small dietary, family wide changes
  - Water as the main drink
  - Protein at each meal and snack
  - Aim for ½ plate vegetables at meals
  - Encourage healthy take-away- what quick and easy meal can they have instead?
- Consider a VLED in adolescents with BMI over 35, with dietetic support
- Refer to local services

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