



**18th Canadian Collaborative  
Mental Health Care Conference (2017)**

*Connecting People in Need with Care*

June 2 and 3, 2017 | Delta City Centre, Ottawa, Ontario

***Weight Matters: Improving Care for Youth with Eating  
Disorders and Obesity***

*Dr. Wendy Spettigue, Dr. Mark Norris*

*Dr. Annick Buchholz*

# PRESENTER DISCLOSURE

- **Presenters:**
  - Dr. Wendy Spettigue
  - Dr. Mark Norris
  - Dr. Annick Buchholz
- 
- **No Conflicts of Interest to declare**



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# Pediatric Research into Eating Disorders and Obesity (PREDO)

PREDO is a team of researchers and clinicians at CHEO dedicated to the research, treatment and prevention of Eating Disorders and Obesity. Dr. Wendy Spettigue is an Associate Professor of Psychiatry at the University of Ottawa, and a Child and Adolescent Psychiatrist on the ED team at CHEO. Dr. Mark Norris is Associate Professor of Pediatrics and an AH specialist on the ED team. Dr. Annick Buchholz is a psychologist specializing in the treatment of EDs and Obesity and current co-director of the Children's Healthy Active Living team at CHEO.



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# LEARNING OBJECTIVES

1. Participants will learn of the crucial role of nutrition in mental health, the dangers of dieting, the concept of “healthy weight” and set point, what “healthy eating” should look like in an adolescent, and the psychological and medical effects of insufficient nutrition.



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# LEARNING OBJECTIVES

2. Participants will learn how the effects of insufficient nutrition can mimic and cause serious mental illnesses, and will be given case examples of how to assess, identify, talk to and treat these patients.



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# LEARNING OBJECTIVES

3. Participants will learn the medical and psychosocial complications associated with obesity, the effects of weight bias, and an evidence-based mental health approach to weight management designed to provide clinicians with tools to properly help and support young patients who are obese, including tips on how to talk to obese and overweight youth without causing feelings of shame or eating disorders.



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**Please feel free to ask questions! We will also leave time at the end for discussion.**



# Weight Matters: Improving Care for Youth with Eating Disorders and Obesity

**Wendy Spettigue, MD**

**Mark Norris, MD**

**Annick Buchholz, PhD**

Pediatric Research into Eating  
Disorders and Obesity team,

Children's Hospital of Eastern Ontario,  
Ottawa



# Improving Care for Youth with Eating Disorders: Part 1

**By Dr. Mark Norris,  
Adolescent Health Physician,  
Eating Disorders Program,  
Children's Hospital of Eastern  
Ontario**

# We live in a culture where...

- 80% of 10 year old girls are afraid to be fat
- The number one “magic wish”, of girls between the ages of 10-14 is to lose weight.



+

# We live in a culture where..

- Dieting, bingeing, self-induced vomiting, diet pills, laxative abuse are seen in more than 27% of girls aged 12 – 18 years
- 50% of all 4<sup>th</sup> grade girls are on a diet



# Body Image in Youth today..



- 40 – 50% of girls age 11 to 15 say they need to lose weight
- 61% of Grade 7 & 8 students were trying to lose weight (almost all were normal weight)





# What is Healthy Eating?

The manner by which this information is delivered is as critical as the message itself.



# What is Healthy Eating?

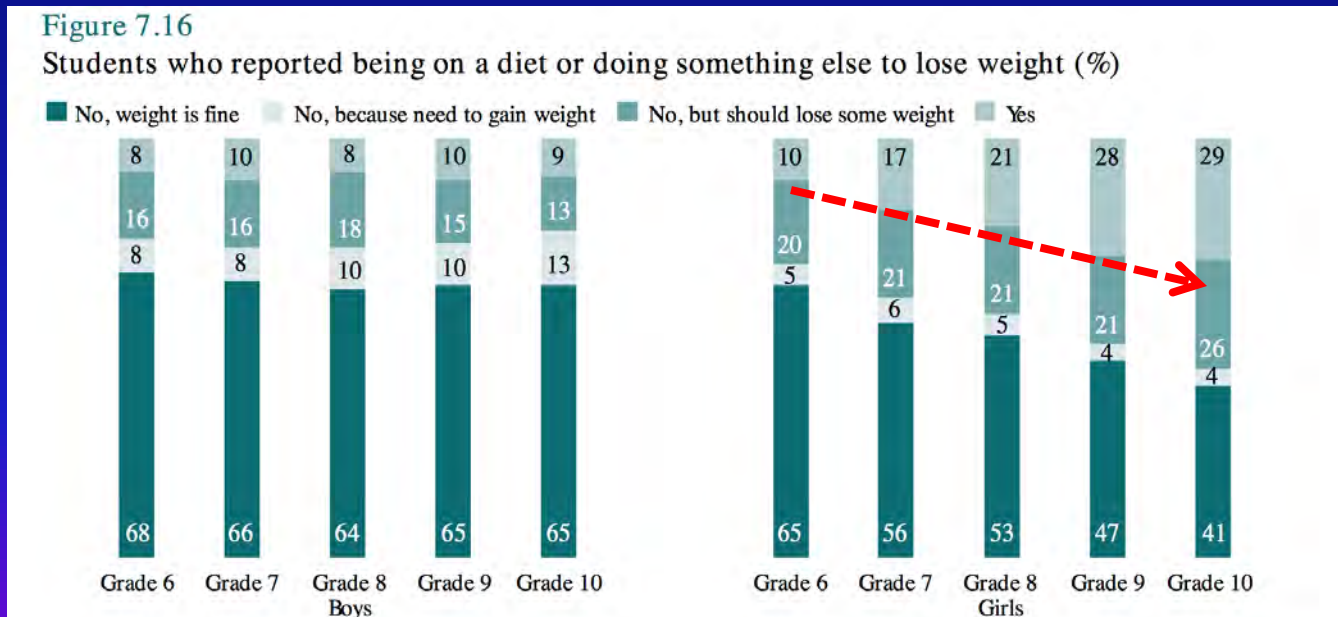
- Everything in moderation
- No bad foods – “sometimes foods” very different message to a developing brain than “this is bad for you”
- Try to avoid anxiety around food and eating – want to promote “normalized eating”
- Encourage variety as best as possible
- The importance of getting the right ‘dose’ of nutrition to be healthy – i.e portion sizes but also timing of delivery

# The Challenge with Diets

- Billion Dollar Industry
  - Culture and Climate
  - Gateway for EDs for many children and youth
  - Many Others...
- 
- Want to avoid actions and behaviours that lead to preoccupation with weight/ size or shape.

# Statistics on Weight Behaviours in Youth

- **30 – 50%** of girls age 11 – 15 years say they need to lose weight



# What is a Healthy Weight?

- Individualized
- Regular (ideally annual) visits helpful in determining a growth trajectory
- Opportunities for reflection, discussion, education, anticipatory guidance at every step
- A consistent approach to measurement is very important

# What is a Healthy Weight?

- We are all built differently.
- The importance of prior growth history, set point and also family history
- Energy intake vs Energy expenditure
- The body will work to protect any weight that is accrued



# Challenges of working with Obese Youth from the Perspective of an AH physician

- Weight loss not the ultimate goal
- Critical to engage the teen and family
- The role of shame
- Physical activity is healthy – want to encourage ways that it can be incorporated and be fun;
- The role of screen time
- Nutrition and Weight Messaging

# Picky Eating

- What is Picky Eating? When to worry?
- What does Picky eating look like?
- What drives picky eating?
- What do we know of outcomes for picky eating?

# ARFID

- Eating or feeding disturbance as manifested by persistent failure to meet appropriate nutritional and/or energy needs leading to one or more of the following:
  - Significant weight loss (or failure to achieve expected weight gain or faltering growth in children)
  - Significant nutritional deficiency
  - Dependence on enteral feeding or oral nutritional supplements
  - Marked interference with psychosocial functioning

# Why worry?

- Anorexia nervosa has the highest mortality of any psychiatric illness.
- Eating disorders are often very difficult to treat; recovery can sometimes take years.

# Eating Disorders affect the whole body



- Brain, thinking, cognitions
- Hair
- Dental Disease
- Heart
- Fluids/ electrolytes
- Muscles, bones
- Kidneys
- GI system
- Hormones
- Skin



# Eating Disorders can.....

- Result in heart arrhythmias which, in severe cases can be fatal.
- Result in structural brain changes
- Cause osteoporosis (poor bone health)
- Delay puberty
- Stop/ Stunt Growth

# When to Worry?

- Changes in Growth percentiles
  - When the concern is restriction/ inappropriate energy consumption, weight and height may be affected
  - When the concern is weight gain, it is important to be sensitive to your own weight bias (if present) and how messages are delivered.

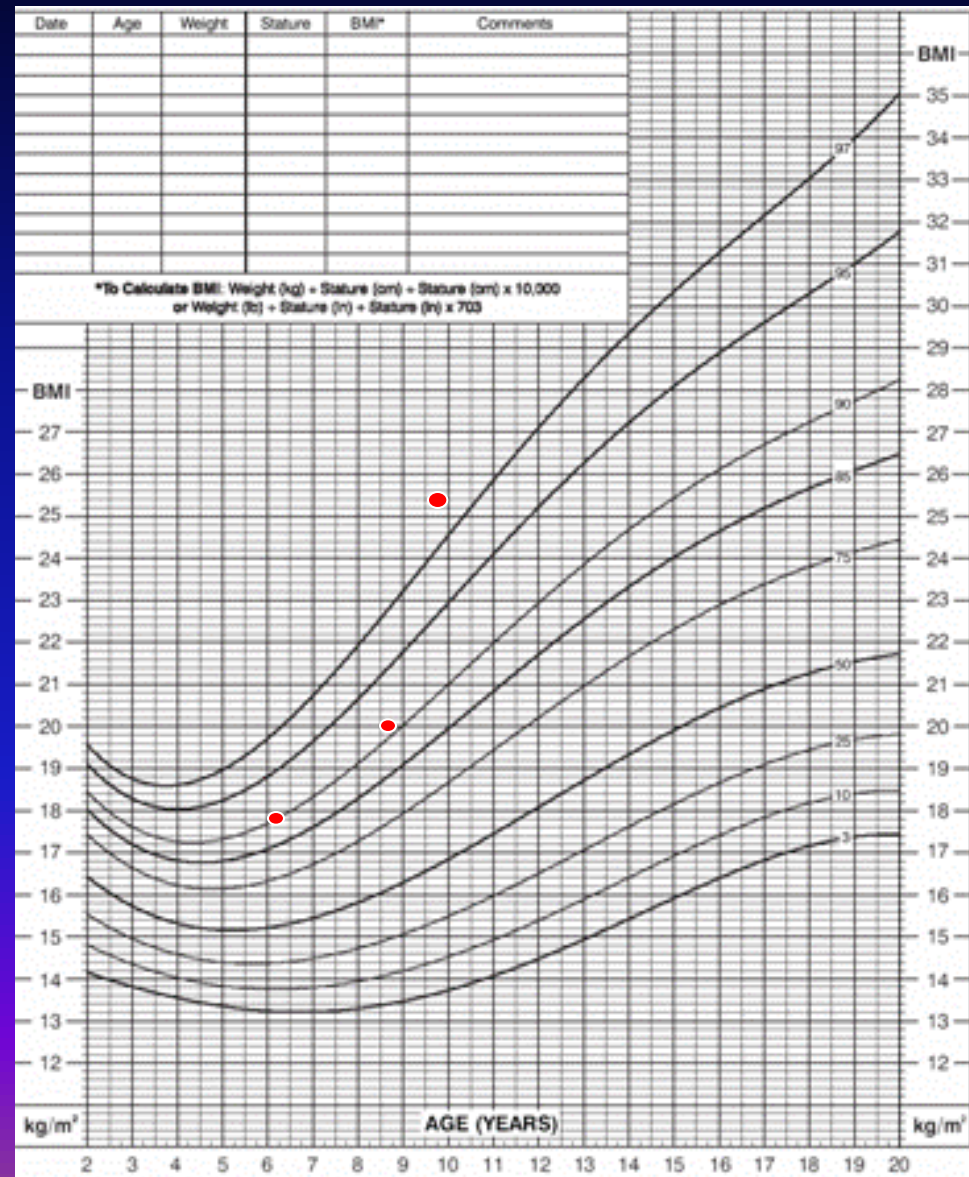
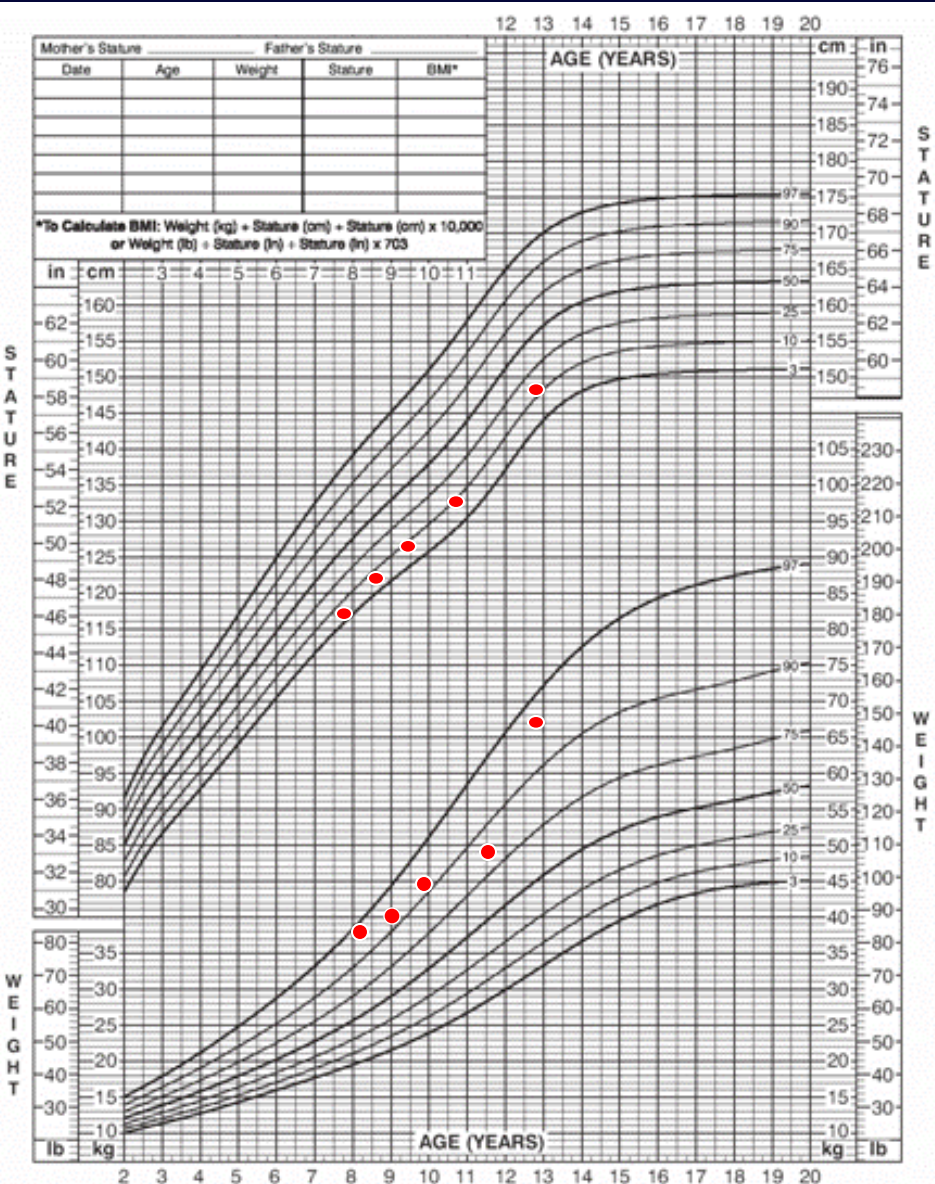
# When to Worry?

- Important to monitor weight fluctuations and change at all times but especially during puberty.
- Timing of puberty is variable for each individual
- Energy demands increase substantially during this time. Weight should increase.
- Not every child can keep pace. Growth stunting an early and recognized complication in some.
- Structure is important at every step of the way (i.e. not every child in Grade 5 can pack their own lunch).



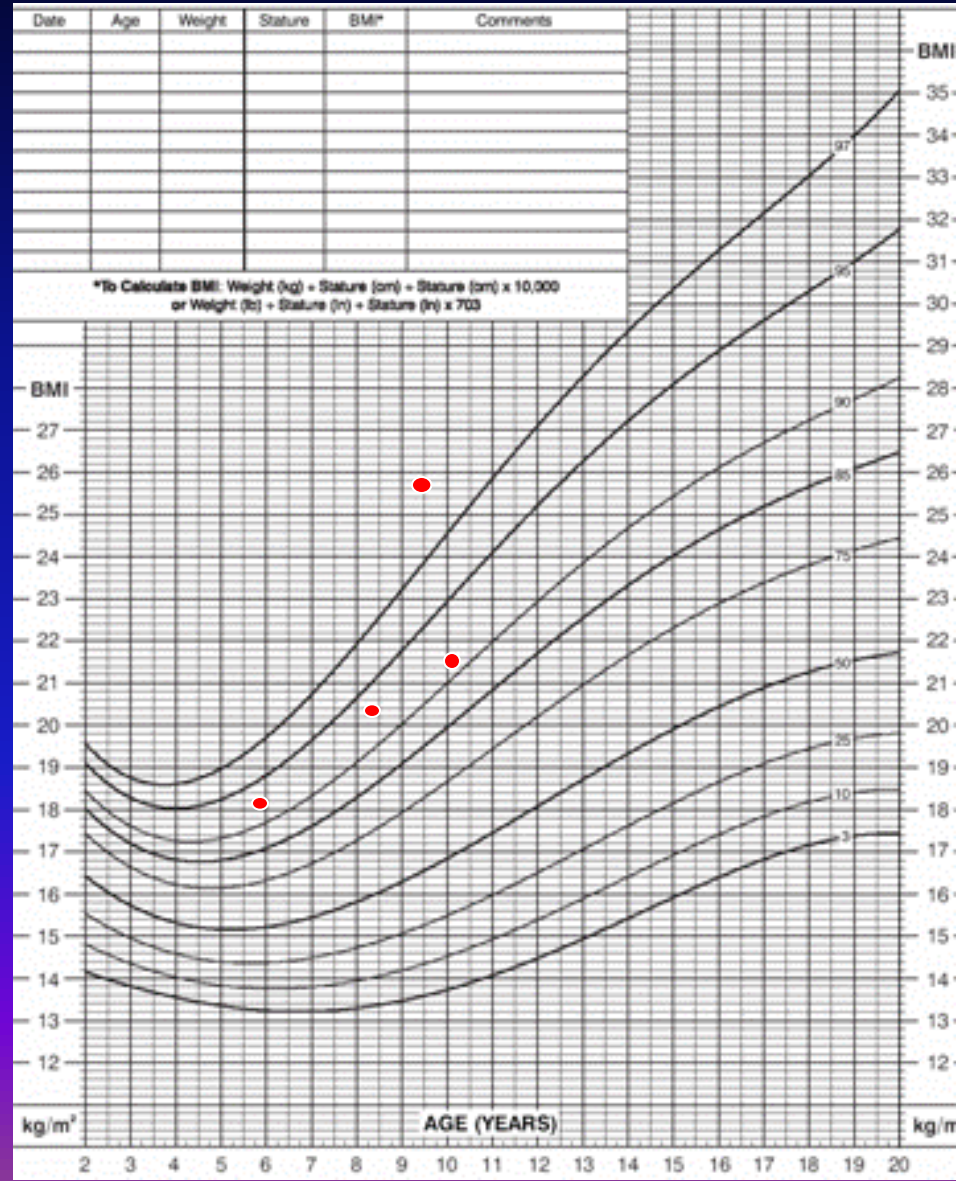
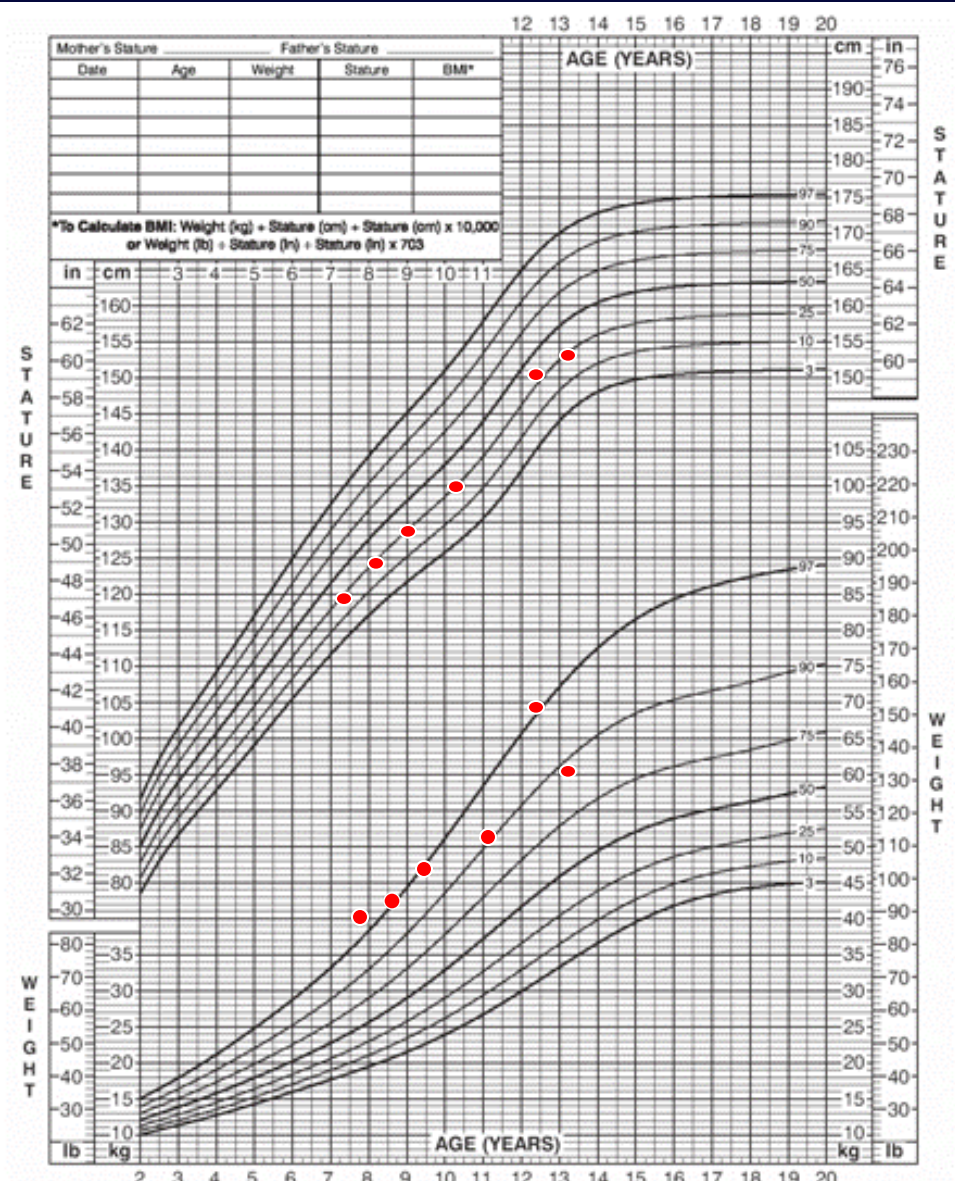


# Growth curve 2 example





# Growth curve 3 example



# Important Points

- Sustained or progressive weight loss OR weight gain (or change in growth percentiles) in any Child or Adolescent, should be addressed.
- Absolute Weight should NOT be considered the sole determinant of physical health
- Nutritional History is important but not always reliable



# Important Points

- Eating Disorders don't "fall from the sky" – often one or multiple triggers that occur in a vulnerable child or adolescent.
- Early targeted interventions are ideal.
- Engaging Family critical in almost all cases.

# Screening for EDs and DE

- Our team has developed a new very simple validated screening tool that helps to screen for disordered eating and EDs.

# The Yo-DES

1. Over the past 3 months, has your weight and/or shape influenced how you think about (judge) yourself as a person? (YES or NO)
1. Over the past 6 months, have you fasted (skipped at least 2 meals in a row) or eaten what other people would regard as an unusually large amount of food (e.g. a quart of ice cream) given the circumstance? (YES or NO)

# The Yo-DES

- **Presence of Eating disorder - YES to BOTH questions**
- 77.6 Sensitivity
- 76.8 Specificity
- 21.8 PPV
- 97.6 NPV
- 3.34 + LR
- .29 - LR

# Frustrations in Treating Youth with EDs:

- Parents get frustrated when PCPs minimize the problem
- Youth get frustrated when they think adults 'don't get it' and can't help
- PCPs get frustrated at the complexity of the problem, difficulties treating and lack of access to specialized services
- CHEO only accepts 'severe' cases, but then we get frustrated that treatment didn't start sooner....

# What Would Help?

- Better education for the public
- Access to information and resources for families: [www.canped.ca](http://www.canped.ca)
- Providing information about EDs to PCPs
- Improved access to specialized services and clinicians:
  - [wspettigue@cheo.on.ca](mailto:wspettigue@cheo.on.ca)
  - [mnorris@cheo.on.ca](mailto:mnorris@cheo.on.ca)
  - 613-737-7600 x

# Improving Care for Youth with Eating Disorders: Part 2

**By Dr. Wendy Spettigue,  
Psychiatrist,  
Eating Disorders Program,  
Children's Hospital of Eastern  
Ontario**





# Case Example: Emma

# Emma cont'd:

- 16 y.o. girl brought by her mother to see the family doctor
- Mom very concerned: she seems depressed: sad, withdrawn, not eating well
- Alone with you, Emma is a bit shut down and not very forthcoming, but she is able to tell you her mood has been low x 5 months, since break-up with boyfriend, and getting worse

# Emma cont'd:

- Some passive SI
- Stressed, worried by schoolwork (Gr.11)
- You know her to be a bit shy and quiet, so there's likely some social anxiety too
- Poor sleep
- Poor concentration
- Poor appetite; thinks she might have lost some weight but not sure

# Emma cont'd:

- Just to make sure that you aren't missing an ED, you ask Emma how she feels about her weight. She shrugs her shoulders and says it's "fine"
- You ask her if she has ever tried to make herself throw up after eating. She says no, never.

# Emma cont'd:

- Today: height: 5'6"; weight 115 lbs
- You have only seen Emma once in the past 3 years, and that was for Strep throat
- Physical exam normal, HR 64, BP 116/78

# Fortunately you have a BMI calculator available:

- You enter Emma's height and weight:  
BMI (Body Mass Index) = 18.6

Underweight:  $< 18.5$

Normal weight: 18.5 - 24.9

Overweight: 25 - 29.9

Obese:  $\geq 30$ "



# Emma cont'd:

- You meet with Emma and her mother, and explain that Emma is suffering from a significant Depression, with all of the classic symptoms of depression
- You recommend that she start on an SSRI; you choose escitalopram 5 mg/day x 2 weeks, then 10 mg/day; you also recommend counselling and resources



# Emma cont'd:

- You note possible side effects of SSRIs, including risk of SI; you ask mom to monitor closely, and get Emma to agree that she will tell parents if she is feeling suicidal
- You also do some bloodwork to rule out other possible causes of Depression, such as a thyroid disorder or vitamin deficiency

# Unfortunately:

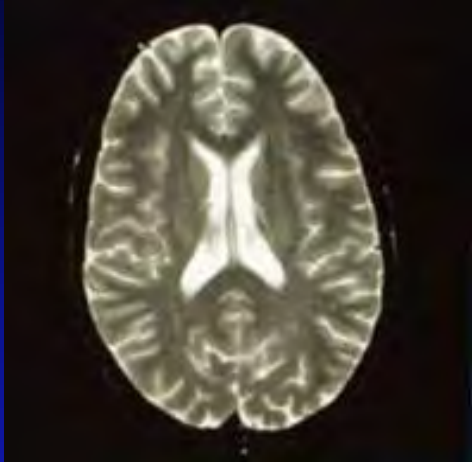
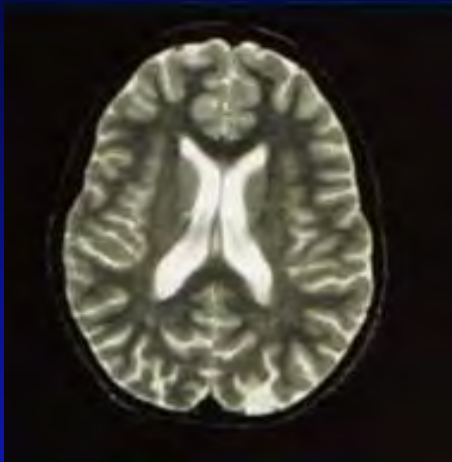
- Emma presented two weeks later to the ER with active SI
- The psychiatrist on call just happened to have experience on the ED team; met with Emma and diagnosed a serious eating disorder. Emma was only 80% of her healthy weight at that time. In the ER, lying HR = 63, standing HR = 105

# What you should know about Eating Disorders

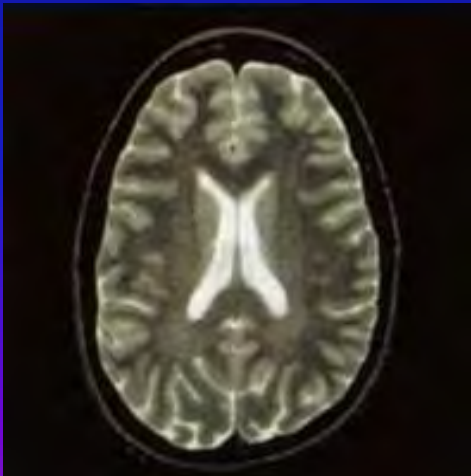
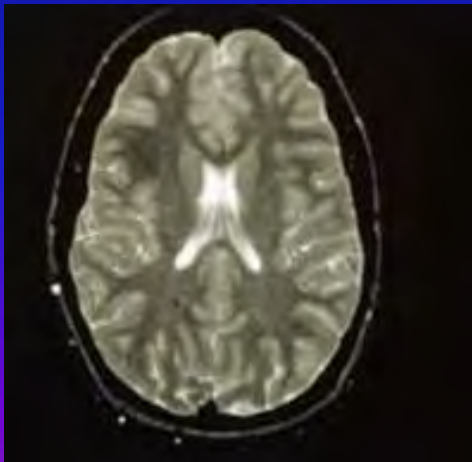
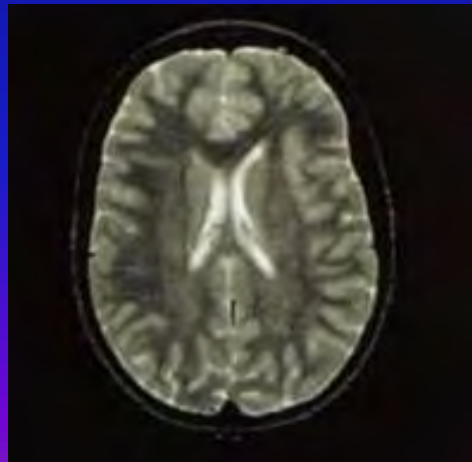
**Insufficient Nutrition has  
Serious Effects on the  
Brain, Resulting in  
Psychiatric Symptoms:**

# Structural brain changes MRI Findings - *Katzman et al, 1996*

## Adolescent Females With AN



## Adolescent Females Controls



14 years

15 years

16 years

# Effects of Insufficient Nutrition on the Brain:

- Irritability
- Emotional lability and dysregulation
- Insomnia
- Difficulty concentrating
- Restlessness and/or low energy
- Depression; suicidality
- Increased obsessiveness and rigidity; decreased flexibility; loss of humour
- Marks may or may not drop
- Social withdrawal and isolation



# Starvation Affects Personality





# In Dogs as Well As People:



# In other words:

- Depression and anxiety lead to EDs, which in turn cause depression and anxiety/obsessiveness/OCD

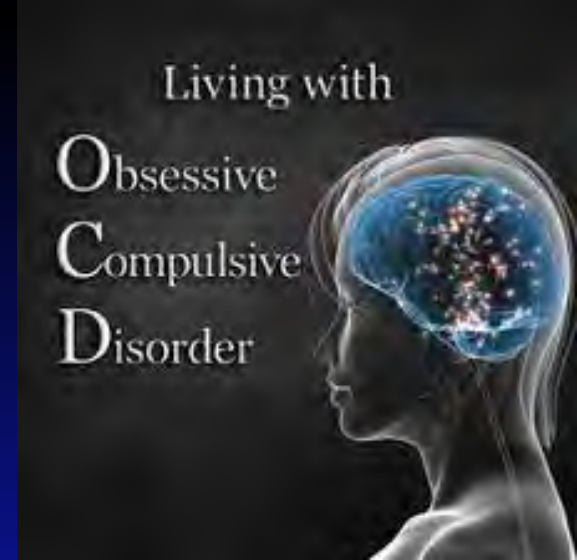
# A.N. is often caused by weight loss

- The obsessive thoughts in Anorexia Nervosa may in fact be a side effect of dieting or weight loss. In other words, a patient doesn't start out trying to have an ED, and may not even have been trying to lose weight. But once the patient has lost a significant amount of weight, obsessive thoughts may develop, telling the patient to 'keep going' (the "snowball effect")

# The illness is in control:

An ED is best thought of as a form of Obsessive Compulsive Disorder:

The patient has obsessive thoughts associated with a fear of weight gain: “I’m fat! I’m eating too much! I’m gaining too much weight! I have to lose weight!”



time irrational dirty  
counting compulsive  
compulsion behavior habits  
nervous washing intrusive  
Obsessive distressed  
psychotic impulses germs  
safety paranoid hoarding  
suffer anxiety disorder  
OCD hands crazy

# The illness is in control:

- As in OCD, the patient can't tolerate the severe anxiety associated with those obsessive thoughts, and is compelled to have symptoms directed at weight loss.
- Eating or gaining weight causes the thoughts to get louder/stronger and is associated with anxiety, agitation and guilt
- Losing weight, or symptoms that cause weight loss, is associated with temporary relief

# Individual Therapy:





“You’re fat” “you’re eating too much”  
“Don’t eat that!” “You’re gaining too  
much weight”



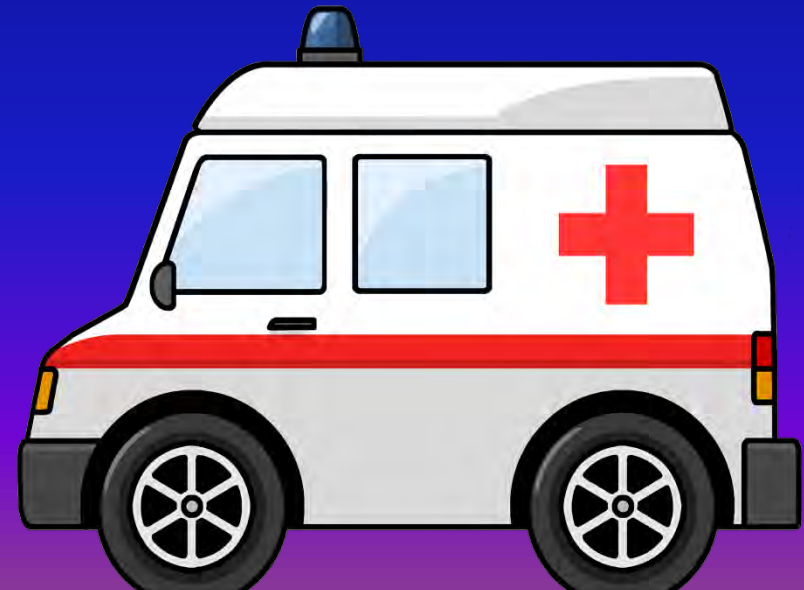
# What happens:

- If she has AN, she keeps losing weight.
- If she has BN, she has symptoms (eg. restricting), gets ravenously hungry, then has to binge. The binge leads to guilt, anxiety and purging. She vows not to ever give in to hunger again, skips the next meal, and the cycle continues.



# What Happens Next:

- Parents are frustrated. She feels hopeless. She doesn't want to starve forever or die, but she can't eat or gain weight, or can't stop bingeing and purging. She feels trapped and becomes suicidal. She is taken to the ER.





# Let's Turn Back the Clock

And see Emma again

# Emma:

- This time, while meeting with Emma, you explain that while depression and stress can indeed take away appetite, unfortunately this causes a 'vicious circle' because not getting enough nutrition only makes mood and anxiety worse

# Emma cont'd:

- You ask what is the most you have ever weighed? She replies that last year she weighed 140 lbs, but she knows that was too much for her height, and by the time the depression started she was 130 lbs
- You ask what caused her to lose the 10 lbs, and she says it was a combination of trying to eat healthier and stress from her relationship with her boyfriend



# Emma cont'd:

- Now, having attended this talk, you take out your calculator and determine Emma's current percentage of Healthy Body Weight (HBW):

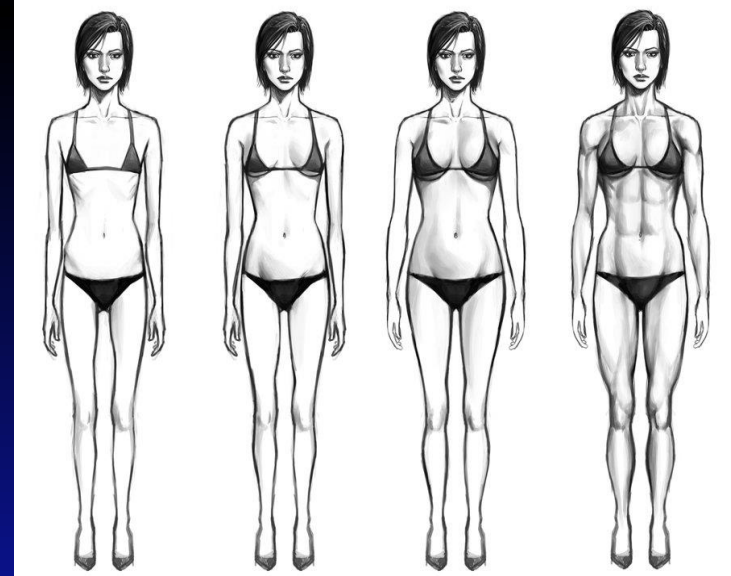
# Calculating %HBW:

- Emma's weight: 115 lbs
- Healthy weight: 140 lbs
- % HBW:  $115/140 \times 100 = 82\%$



# HBW:

- Healthy = 100%
- 'Close enough' >96% and menstruating
- Girls get periods at 93-96%
- SSRIs work: >90%
- DSM IV Dx AN: < 85%
- Very ill but IF medically stable can be treated aggressively (with FBT) as an outpatient: 80-88%
- Admit to hospital: <80%
- ICU: <65%



# Emma cont'd:

- Oh dear. By the time weight gets down this low, Emma is going to be suffering from some significant effects of low nutrition, including depressed mood, obsessive thinking, insomnia, poor concentration, etc
- Also, SSRIs don't work at such a low weight
- Also, the obsessiveness caused by low weight can turn into AN, which is basically a form of OCD

# Emma cont'd:

- You realize that nothing can get better until the nutrition improves

# Emma cont'd:

- You explain to Emma that even if she started to lose weight due to low mood and low appetite, one effect of weight loss can be obsessive thoughts telling you to lose more weight, saying 'don't eat that, you're eating too much, you're gaining too much weight.' Has she had any thoughts like that?
- She nods.
- You do your regular physical examination, but this time you add orthostatic vitals



# It is Crucial to Meet with Emma and Her Mother Together:



# Emma cont'd:

- You meet with Emma and her mother. You explain that Emma is suffering from depression, anxiety and an eating disorder. You explain that this causes a terrible vicious cycle, because although the depression and stress caused her to lose her appetite and lose weight, the effect on the brain of not getting the dose of nutrition it needs is more depression and anxiety, so everything gets worse

# Emma cont'd:

- Another effect of insufficient nutrition in some people is increased obsessiveness, and this turns into an eating disorder. An ED is like a form of OCD, only the obsessive thoughts tell you not to eat, and so you feel compelled to restrict your intake or try to lose weight.

# What to Say to Emma and her Mother:

“Because it is a side effect of starvation, the ED actually gets louder and louder as Emma loses weight, so it won’t let her eat or gain weight, and makes her feel scared and guilty if she does. So she will just keep having symptoms and losing weight until she dies of starvation. That’s why AN has the highest death rate of any psychiatric illness, even depression

# What to Say:

- “We now have a whole combination of problems:
  - Antidepressants don’t work on a brain that isn’t getting enough food
  - The only way to fix the depression and anxiety is to treat the starving brain with more food; food is the medicine that Emma needs
  - But, the ED won’t let Emma choose to eat more; whenever she tries to, she’ll be tortured by loud obsessive thoughts telling her she is eating too much and gaining too much weight”

# What to Say to Emma's Mom:

- “Her only hope is if you save her from the illness. If we just tell her to eat, the ED won't let her. That's why individual therapy won't work. The only way to save her is for parents to step in and take charge of her nutrition, and make taking it not optional.





# What to Say to Emma's Mom:

- “It’s like someone with diabetes who needs insulin shots every day but is terrified of needles. We wouldn’t say, ‘that’s ok darling, you don’t have to take your insulin’.” We empathize with the fear, but taking the insulin can’t be optional. The same is true with EDs.



# What to Say:

- “She will need supervised meals. This means eating breakfast before she can go to school, and having supervised lunches, either at school or home.
- It will take a lot of food to reverse the effects of starvation, so Emma will need 3 meals and 2-3 snacks per day, enough for her to gain weight.”

# You Add:

- It is crucial that we get her weight back up to where it needs to be, or else she can never be happy and healthy
- I will see her every week to weigh her and plot her weight, to make sure it goes up

- “Once her brain and body has been renourished, she will still likely need treatment for depression and anxiety, so at that time she can be treated with an antidepressant (such as Prozac, Ciprolex, Zoloft or Luvox).
- For now, renourishing Emma’s body and brain has to be the priority. If school is causing too much stress or getting in the way of her being able to eat enough, we may need to take some school away.”



**CONCLUSION**

# Key Messages:

- The crucial importance of nutrition to mental health must not be ignored!
- Dieting in youth is very dangerous
- The right 'dose' of nutrition is crucial to a young person's health and well-being
- Youth need to be at their body's healthy weight to function well and reach their potential; you can't tell if they are at a healthy weight by looking at them

# Key Messages:

- Weight loss/insufficient nutrition can mimic mental illness, including depression, anxiety, OCD, and mood dysregulation
- Medication can't work and patients can't get better unless they are eating enough to gain weight and get up to their healthy weight





# Key Messages:

- **Healthy weight can't be determined by a BMI calculator.** Emma was 5'6" and her body's healthy weight was 140 lbs (BMI 22.6), which was her weight 8 months ago. At 115 lbs she was significantly undernourished and suffering the effects of starvation. This can't be ignored. It would be like hearing that a child is only getting 3 hours of sleep every night and ignoring it.

1. Patients can be medically stable and lab tests could be normal but they may still have a serious eating disorder
2. Patients may have a normal or high BMI ( $> 25 \text{ kg/m}^2$ ) but they may still have a serious eating disorder
3. Focus for recovery is restoring nutrition: starvation has devastating consequences on the body and brain
4. Eating disorders overwhelm the brain in a similar way to OCD: the illness, NOT the patient, is in control
5. Families do not cause eating disorders but families are an essential part of the treatment team

**THE END**

# Helpful Resources cont'd:

- Eating Disorders: A Parents' Guide, by Rachel Bryant-Waugh and Bryan Lask (Brunner-Routledge, Revised 2004)
- Eating With Your Anorexic: How My Child Recovered Through Family-Based Treatment and Yours Can Too, by Laura Collins (McGraw-Hill, 2005)
- The Parent's Guide to Eating Disorders, 2<sup>nd</sup> Ed. By Marcia Herrin and Nancy Matsumoto (Gurze, 2007)

# Helpful Resources cont'd:

- B.C. Children's Hospital Meal Support video available through the CHEO ED Program, or online at [www.canped.ca](http://www.canped.ca)

# Helpful Websites:

- [www.canped.ca](http://www.canped.ca)
- [www.empoweredparents.com](http://www.empoweredparents.com)
- [www.empoweredkidz.com](http://www.empoweredkidz.com)
- [www.treatingeatingdisorders.com](http://www.treatingeatingdisorders.com)
- [www.MaudsleyParents.org](http://www.MaudsleyParents.org)
- [www.AroundTheDinnerTable.org](http://www.AroundTheDinnerTable.org)
- [www.eatingwithyouranorexic.blogspot.com](http://www.eatingwithyouranorexic.blogspot.com)
- [www.something-fishy.org](http://www.something-fishy.org)
- [www.FEAST-ED.org](http://www.FEAST-ED.org)





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*Dr. Wendy Spettigue, Dr. Mark Norris*

*Dr. Annick Buchholz*





uOttawa

## Part 3: Weight Matters: Improving Care for Youth with Obesity

*Dr. Annick Buchholz, C. Psych.*

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Centre for Healthy Active Living (CHAL);  
Pediatric Research on Eating Disorders and  
Obesity (PREDO) Unit



[www.cheo.on.ca](http://www.cheo.on.ca)

# The CHAL Team

Dr. Stasia Hadjiyannakis – Pediatric Endocrinologist

Dr. Annick Buchholz – Psychologist

Dr. Laurie Clark – Psychologist

Lori-Anne Marks – Registered Nurse, Case Manager

Jane Rutherford – Exercise Specialist

Anna Aylett – Registered Dietitian

Shaun Reid – Child & Youth Counsellor

Jolianne Paul – Social Worker

Melanie Gervais – Administrative Assistant

Charmaine Mohipp - Psychometrist

# The Psychosocial Realities

What is it like for children and youth living at higher weights?



# Health-related outcomes: Quality of Life

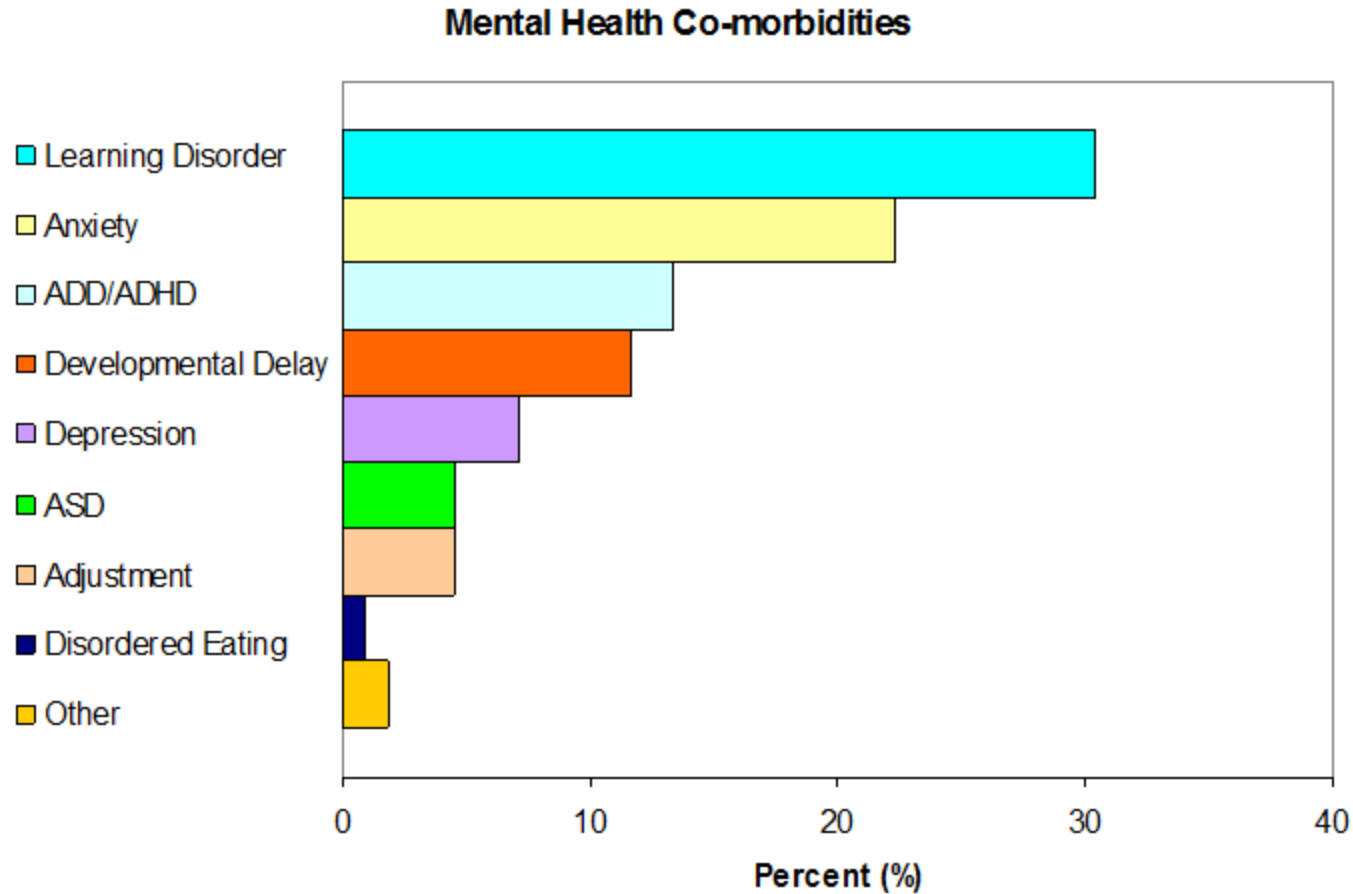
Physical

Emotional

Social

School

# Mental Health Status



# Kids Become Prejudiced Against Heavier People Around Age 4



Heavier Alfie was less likely to do well in school, to be happy with the way he looks, or to get invited to parties

They rated heavier Alfie as more likely to be naughty and as having fewer friends than Thomas to play with



# Teasing and Bullying in Adolescence

Adolescent reports of why peers are teased/ bullied, and observed frequency ( $N = 1555$ )

Reason for teasing	Primary reason students are teased	Observed sometimes, often, very often
	%	%
Being overweight	40.8	78.5
Gay/lesbian	37.8	78.5
Ability at school	9.6	61.2
Race/ethnicity	6.5	45.8
Physical disability	3.3	35.8
Religion	1.2	20.8
Low income/status	0.8	24.9



# A Weight Obsessed World



# Societal Pressures

- In Western Society the media is a powerful influence and pressure on youth today.
- Body image messages are ever present and typically state:
  - Thin women are beautiful, successful and happy
  - Muscular, lean men are handsome and successful





# Mixed Messages in the Media

**The New Baconator™**  
*Careful. It can sense fear.*



**The Baconator™ is coming soon!**  
Order it alone, or as part of the New Wendy's®  
#4 Combo. Just make sure you're prepared...

The Baconator™ is a mountain of mouth-watering taste that's always fresh and made to order. We put six strips of hickory smoked bacon on top of a 1/2 lb.\* of hot, juicy beef with melted American cheese, ketchup, and mayo for a full-flavored hamburger that won't be denied! We're bringing on The Baconator™

**Fresh, never frozen. That's right.™**



033651V \*Net weight before cooking.  
KPI © 2007 Oldemark LLC.



# The Diet Industry Culture

## Familiar Claims:

- “Lose weight quickly”
- “Reset your genetic code”
- “Eat all you want – Lose up to 30 pounds in 3 weeks”
- “Scientifically sound”, “Based on proven studies”

Private weight loss industry in the US estimated at  
**\$58.6 billion annually**  
*(Marketdata Enterprises, 2009)*

# The Negative Spiral



Culture of Valuing Thinness

High Body Self-Consciousness

Low Body Esteem

High Weight Preoccupation

Dieting Practice

Weight Loss Strategies

Increased overeating

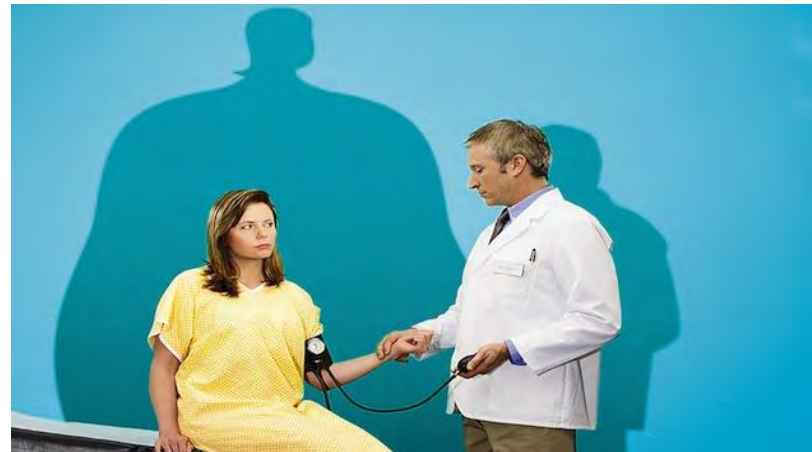
Emotional eating

Binge Eating

Shame, guilt, anger, sadness

Increased weight over time

# Weight Bias



# Weight Bias

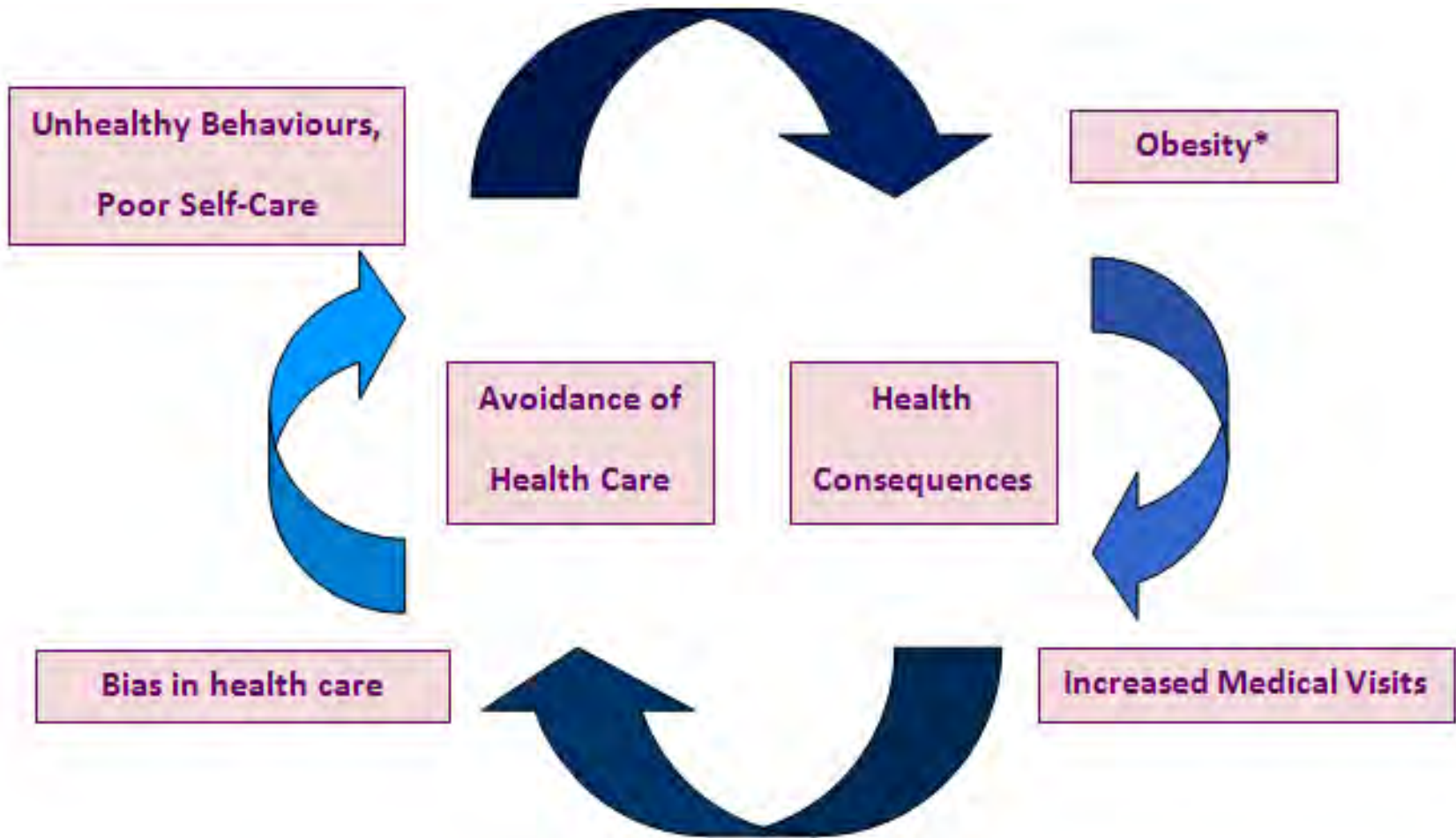
## Documented in Studies of:

- Nurses
- Medical Students
- Psychologists
- Dietitians
- Fitness Professionals
- Physicians





# Cycle of Bias & Obesity





# Key Principles

# The 4Ms of Pediatric Obesity

## Mental

- Anxiety
- Depression
- Body image
- ADHD
- Learning disorder
- Sleep disorder
- Eating disorder
- Trauma

## Mechanical

- Sleep apnea
- MSK pain
- Reflux disease
- Enuresis
- Encopresis
- Intertrigo

## Metabolic

- IGT/T2DM
- Dyslipidemia
- Hypertension
- Fatty liver
- Gallstones
- PCOS
- Medication
- Genetics

## Milieu

- Parent health/disability
- Family stressors
- Family income
- Bullying/Stigma
- School attendance
- School support
- Neighbourhood safety
- Medical insurance
- Accessible facilities
- Food Environment
- Opportunities for physical activity

## Key Principles

**Obesity Management is About Improving Health and Well-being, and not Simply Reducing Numbers on the Scale**



Key Principles

**Weight bias can be a barrier  
to weight management**

# Who is Healthier?



Or



Key Principles

**A Child's 'Best' BMI May Never  
Be His or Her 'Ideal' BMI**



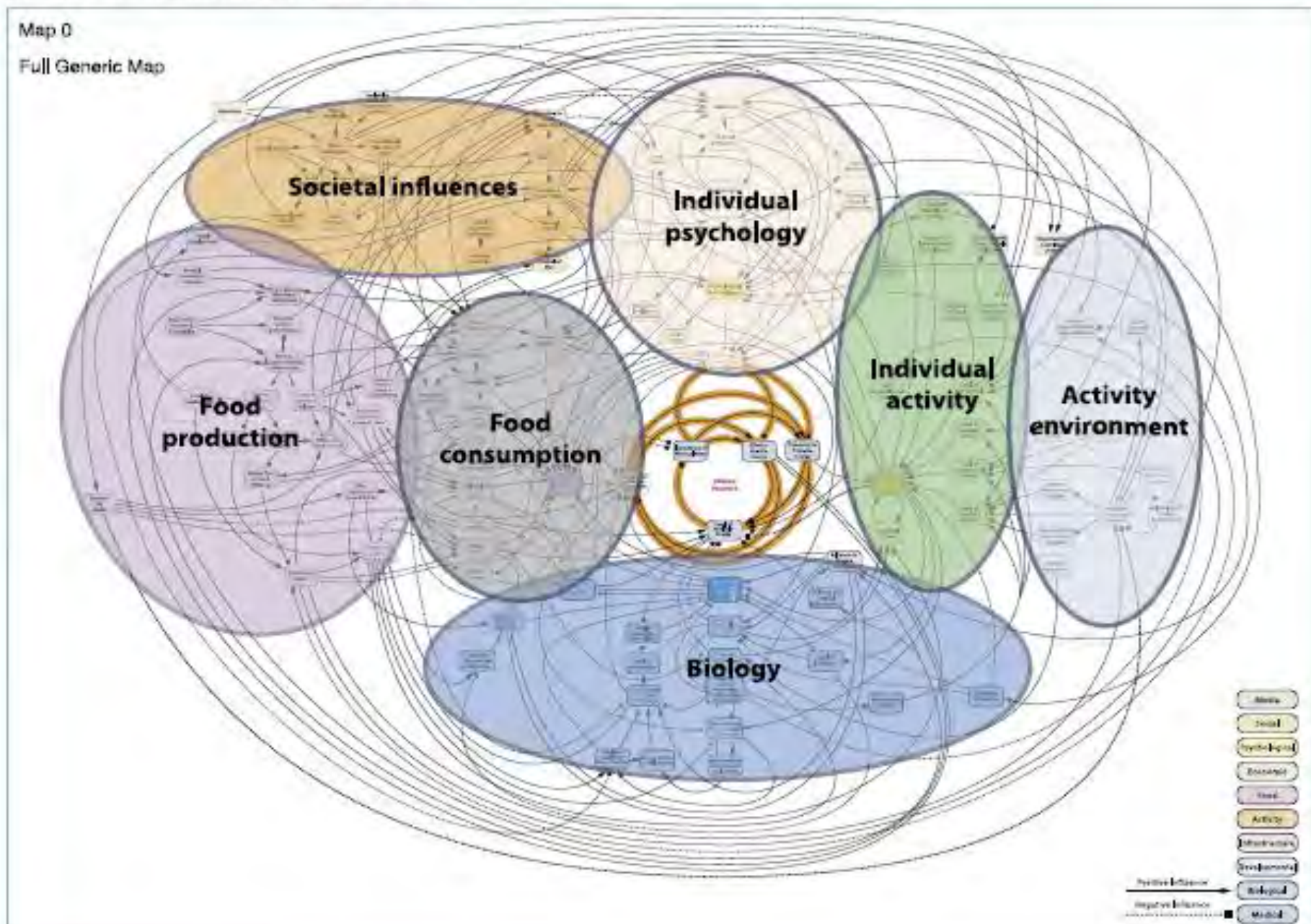
# Expected Change in BMI (6-12 months)

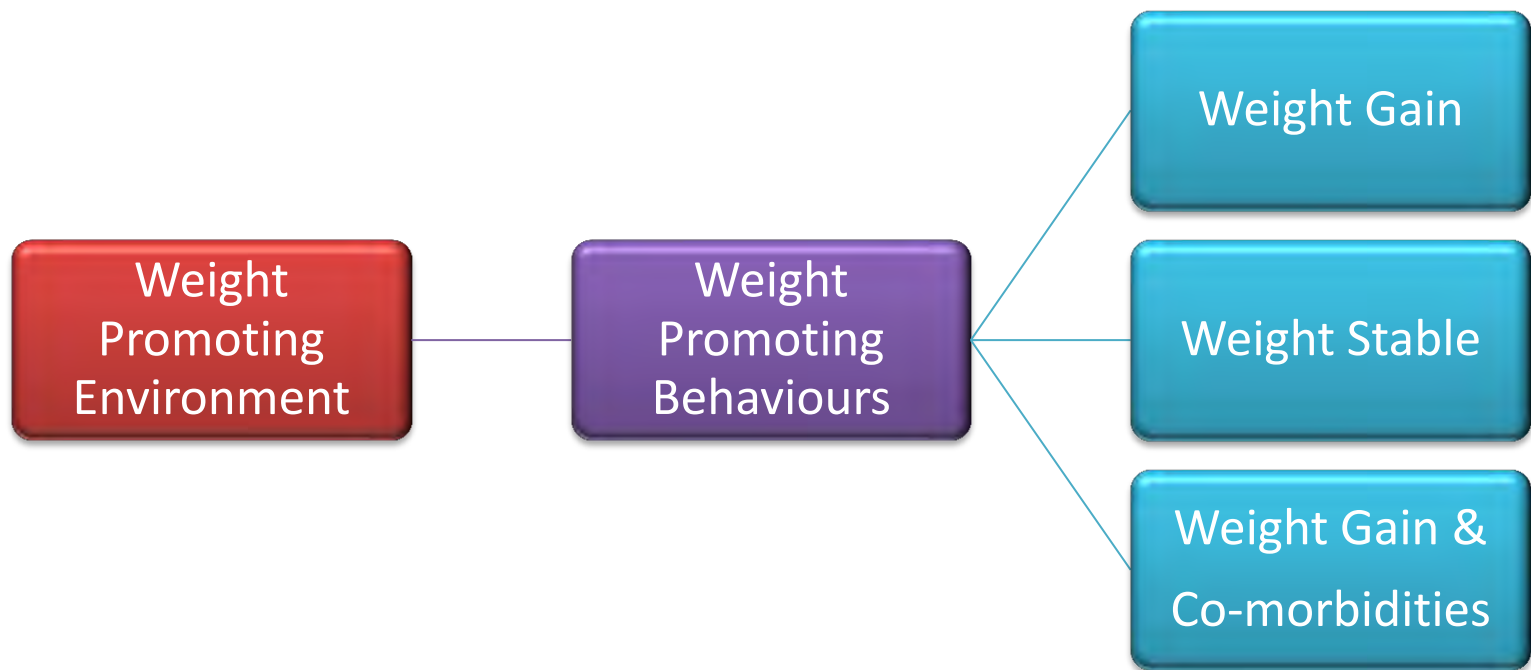
	Lifestyle	Medication (orlistat)	Surgery
$\Delta$ BMI (kg/m <sup>2</sup> )	-1.9-3.3	-0.85	-8.5

# Key Principles

**Success is different for every child and family**

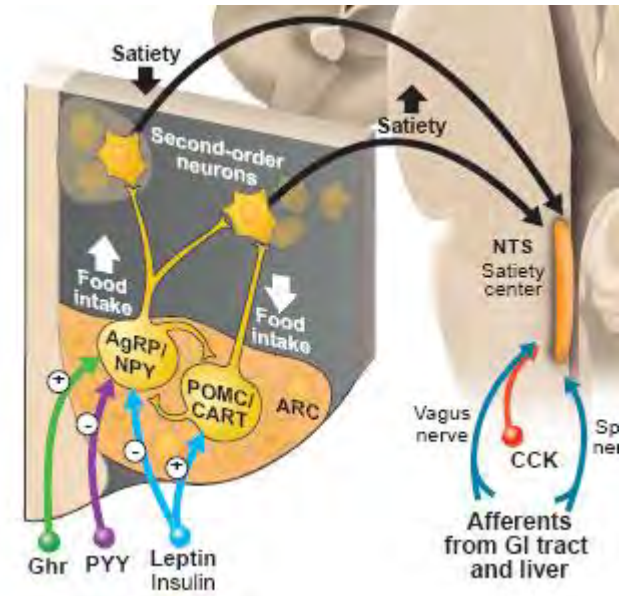
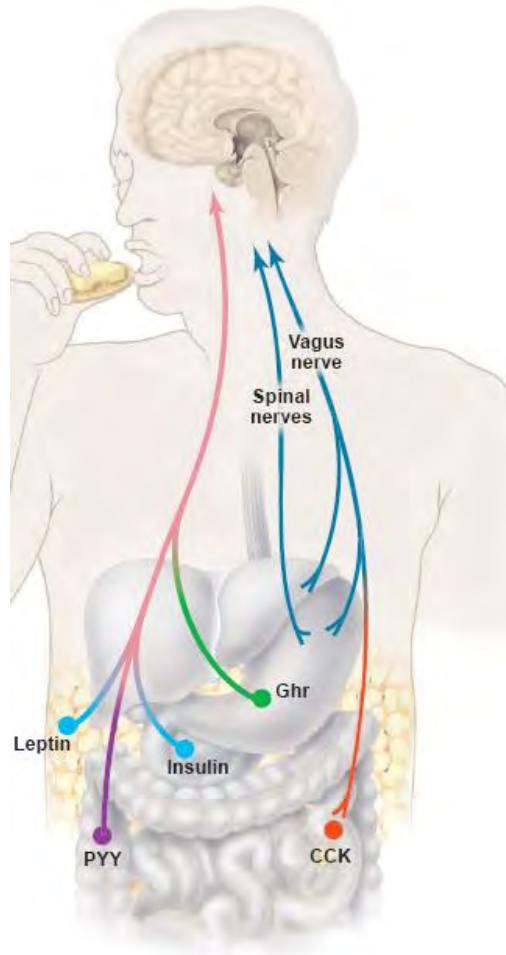
**Figure 8.1: The full obesity system map with thematic clusters (see Section 4 for discussion).** Figure highlights broader determinants of health such as drivers of food production and components of the physical activity environment.





**Sensitivity to weight promoting environments and behaviours modified through genetic and pre-natal programming**

# Neuroendocrine Control of Energy Balance





# Health Management



Jeff

12 yo, BMI 22 kg/m<sup>2</sup>

Excels in school, has many friends. Active with school sports teams. Has supportive parents. Sleeps 10 hours a night. Has no biochemical or clinical evidence of weight related health complications.



Aaron

12 yo, BMI 22 kg/m<sup>2</sup>

Plays 3 hours of video games a night, is being bullied at school, and has few friends. Skips breakfast. Sleeps 8 hours a night. Lives with his mom and has no contact with his dad.

# Benefits of Health Behaviours

- Changes in health behaviours can result in substantial health benefits including improvements in:
  - Lipid profile
  - Blood glucose control
  - Blood pressure control
  - Fitness
  - Sleep
  - Body image
  - Self-esteem
  - Coping



# Body Image

- Strong psychological correlate of disordered eating and obesity.
- The most important self-esteem domain in boys and girls, and men and women.



# Key Points

- Healthy, beautiful and strong bodies come in all shapes and sizes
- It is important to recognize one's own beliefs about weight management and health
- Weight management is about improving health and well-being, not simply reducing numbers on a scale
- Eating and weight-related problems are not the fault of the parents or the child

# Pediatric Research on Eating Disorders and Obesity (PREDO)

## **Eating Disorders Program, especially:**

*Dr. Wendy Spettigue*

*Dr. Mark Norris*

*Dr. Stephen Feder*

*Dr. Julie Perkins*

*Dr. Julie Perkins*

*Dr. Clare Roscoe*

*Dr. Megan Harrison*

*Dr. Nicole Obeid*

## **Centre for Healthy Active Living, especially:**

*Dr. Annick Buchholz*

*Fatima Kazoun, Research Associate*

*Charmaine Mohipp, Research Associate*

*Dr. Laurie Clark*

*Dr. Stasia Hadjiyannakis*

## **CHEO's Centre for Healthy Active Living and Obesity Research Group, especially:**

*Dr. Gary Goldfield*

## **PREDO:**

Nicole Hammond, Research Coordinator

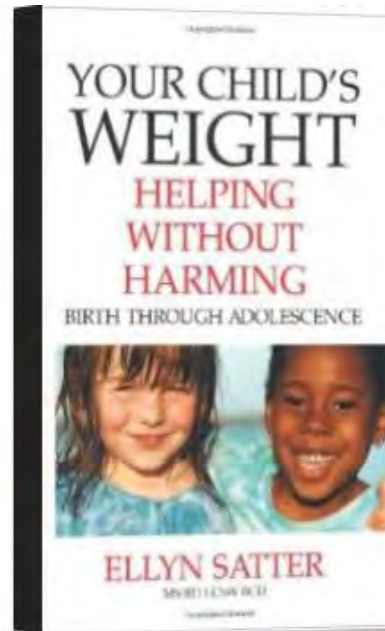
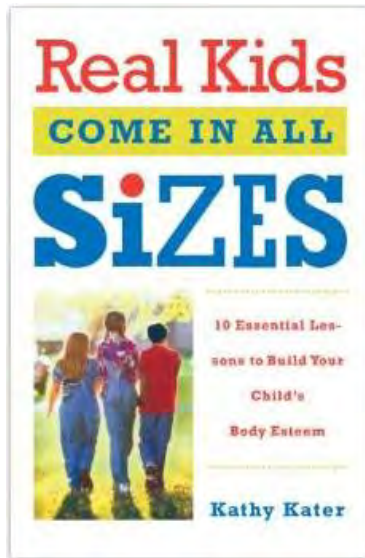
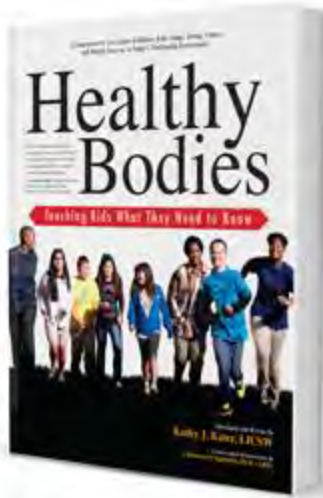


Thank you!





# Resources



Every Body is A Somebody: Facilitator's Guide (Revised Edition 2004). The Body Image Coalition of Peel.