

The Overweight/Obese Child

BACKGROUND

- One third of paediatric population is overweight and 20% are obese
- Aetiology is multifactorial
 - ✓ Genetics
 - ✓ Sedentary lifestyle
 - ✓ Reduction in exercise
 - ✓ Dietary habits – high fat fast foods, large portion sizes, sugar-containing soft drinks
- BMI centiles should be used to diagnose obesity (UK 1990 BMI charts)

DEFINITIONS

- Overweight = BMI > 91st centile
- Obesity = BMI > 98th centile
- Severe obesity = BMI > 99.6th centile
- Very severe obesity = BMI > 3 SDs above the mean
- Extreme obesity = BMI > 4 SDs above the mean

CONSEQUENCES OF CHILDHOOD OBESITY

- Cardiovascular risk factors
 - ✓ Increased BP
 - ✓ Adverse lipid profiles
 - ✓ Changes in left ventricular mass
 - ✓ Hyperglycaemia and hyperinsulinaemia
- Asthma
- Foot abnormalities
- Type 1 & 2 DM
- Non-alcoholic fatty liver disease
- Idiopathic intracranial hypertension
- Psychological distress
- Obesity in adulthood

REFERENCES

- NICE Guidelines CG198 November 2014: *Obesity*
- SIGN guidelines 115 January 2010: *Management of obesity*

HISTORY

- Why are they concerned about weight now?
- Obesity in parent or siblings
- Eating patterns
- Physical activity levels
- Impact on child – bullying, low self-esteem

EXAMINATION

- Height & weight centiles
- BMI centile & BP
- Waist circumference
- Pubertal staging
- Dysmorphic features
- Abdominal palpation for hepatomegaly
- Urinalysis (glucose/protein)

INVESTIGATIONS

- None required in 95%
- Short stature/striae/high BP: Measure morning/evening cortisol
- Short stature/lower limb pains: TFTs, hip X-ray
- Small hands/voracious appetite/developmental delay: FISH or DNA methylation test for PWS

TREATMENT

- Family support
- Assess willingness and motivation to change
- Increase physical activity
- The “Perfect Meal Plan”

TAKE HOME MESSAGES

- Obesity is caused by an imbalance in energy consumption and expenditure
- 20% of children affected
- Therapy involves the entire family
- Leads to adult obesity

REFERRAL

- Obese children with complications:
 - ✓ Sleep apnoea
 - ✓ Orthopaedic issues
 - ✓ Hypertension
 - ✓ Type 2 DM
 - ✓ Hepatomegaly & liver dysfunction
 - ✓ Raised ICP
- Dysmorphic features
- Significant learning issues
- History of low sugar or hypotonia as a newborn
- Menstrual irregularities
- Height < 9th centile or slow growth velocity

LIFESTYLE ADVICE

- Eliminate treats high in fat, sugar and salt
- No eating in front of the TV
- Three healthy meals per day
- Reduce portion sizes
- Reduce screen time to < 2 hours per day
- Increase physical activity to 60 minutes per day

THE PERFECT MEAL PLAN

- Turn off TV
- Sit down together
- Serve plates from central location to control portion sizes
- Meals should last > 20 mins
- Avoid soft drinks

MEDICATION & SURGERY

- Orlistat is recommended only in severely obese children > 12 years old with physical or psychological comorbidities
- Treatment should be started in a specialist paediatric setting
- Bariatric surgery can be considered in post pubertal adolescents with very severe to extreme obesity