Childhood Obesity in the UK - Dietetic Approaches

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One in five children in Reception is overweight or obese (boys 23.2%, girls 22.1%) (PHE)

One in three children in Year 6 is overweight or obese (boys 36.0%, girls 32.4%) (PHE)
Childhood obesity is a complex problem. A life course, whole systems approach is needed to address it.
Early Life Risk Factors

• Infancy
  • Birthweight
  • Early Growth
  • Milk Feeding
  • Complementary Feeding
Breastfeeding Protects

Systematic Reviews

Arenz 2004
Owen 2005
Harder 2005
Yan 2014
Horta 2015
Woo-Baidal 2016
INFANT FEEDING

• Formula Fed
• Grow Faster
• Rapid weight gain
• Increases risk of obesity
• Possibly through upregulating effects on appetite
Complementary Feeding

When

What

How
Critical period for development of dietary and behavioural habits
Healthy Dietary Patterns linked to a lower risk of Obesity (IDEFICS study Europe)
DIETARY RISK FACTORS

- Energy (KCAL)
- Nutrients
- Foods and drinks
  - Sugar sweetened beverages
  - High Milk Intake
- Portion size
- Dietary patterns
EARLY CHILDHOOD

• Is a critical time when healthy habits are formed
• Is important for healthy growth and development
EARLY INTERVENTIONS

• Infants
  • Milk Feeding
    • Mother’s Milk
    • Breast or bottle
    • Infant Formula
  • Complementary Feeding
    • Transition to family foods
MILK FEEDING

• Encourage mothers to breastfeed
  • Offer advice
  • Signpost to other services (Lactation counsellors, Health Visitors)

• Support mothers during difficult periods
  • Reassure using growth charts to show healthy patterns

• Help mothers to interpret infant cues
MILK FEEDING

• **Support** mothers who are unable or choose not to breastfeed

• **Advise** on formula preparation

• **Help** mothers to interpret infant cues and lower the risk of overfeeding

  • **Discourage:**
    • Bottle emptying regardless of satiety signals
    • Bottle propping
    • Addition of other foods to infant formula
    • Extended bottle use
RESPONSIVE FEEDING

• Responsive or cue based feeding
  • Helps to optimise growth
  • Reduces the risk of obesity
• Applies to breast and bottle fed infants
• Extends to complementary feeding and beyond
Obesity

Obesity: working with local communities

NICE 2006, 2013...

https://pathways.nice.org.uk
NICE Obesity Guidelines

- Multi-component interventions targeting:
  - Diet
  - Physical Activity
  - Behaviour Change
  - Family Involvement
EARLY INTERVENTIONS

- HENRY
- MEND 2-4
- Planet Munch
  - Randomised Controlled Trial evidence
HENRY

• Workshops, programmes, resources and online help

• Questionnaire evaluation:
  • Increased fruit and vegetable intake and family physical activity
  • Decreased energy-dense food and sugar-sweetened drinks

• Moving to Randomised Controlled Trial evaluation
PLANET MUNCH

• Developed at the UCL GOS Institute of Child Health
  • Meets all NICE guidelines
• Effective at reducing obesity and associated risk factors
  • Based on RCT Evidence
Session Format

24 x 2 Hour Sessions

- Art
- Music & Movement
- Snack
- WaistWise & Funbursts
- Intro
- Exercise & Stretch
- Goodbye
Planet Munch

Cousin Carrot

The Dudes from The Roots

Butternut Posh

Lucy Lettuce
UBER CITY

Baron Trans-Fat

Count Calorie

Choc O’holic
TRIAL RESULTS

Reduced risk of obesity (BMI, blood pressure, waist circumference)

Improved diet and physical activity

Sustained up to 2 years

Well-liked by families and Children’s centre staff

(Lanigan, 2013)
HEALTH RISKS

Psychosocial
- Poor self-esteem
- Depression
- Eating disorders

Neurological
- Pseudotumor cerebri

Pulmonary
- Sleep apnoea
- Asthma
- Exercise intolerance

Cardiovascular
- Dyslipidaemia
- Hypertension
- Coagulopathy
- Chronic inflammation
- Endothelial dysfunction

Gastrointestinal
- Gallstones
- Steatohepatitis

Renal
- Glomerulosclerosis

Musculoskeletal
- Slipped capital femoral epiphysis
- Blount’s disease
- Forearm fracture
- Flat feet

Endocrine
- Type 2 diabetes
- Precocious puberty
- Polycystic ovary syndrome (girls)
- Hypogonadism (boys)

Ebbeling, 2002
AIMS

• Early childhood
• Slow growth rate
• Later adiposity rebound
AIMS

• Later childhood
  • Maintain or reduce weight
  • Lower the risk of early onset adult disease
    • Diabetes
    • Fatty liver
    • Mobility
    • Mental Health
TREATMENT OPTIONS

• One to one consultations
• Multi-disciplinary clinics
  • Paediatrician, Dietitian, Physical Activity, Psychologist
  • Few available
  • Limited to high risk children
  • Long waiting lists
HOLISTIC ASSESSMENT

• General Health
• Size and growth
• Parental weight
• Milk Feeding
• Diet
• Physical Activity
• Social situation
MEDICAL CAUSES

• Conditions that cause overeating and excess weight gain
  • Cushing’s syndrome
  • Prader Wili
  • Genetic causes
• Refer if concerned
DIETARY ASSESSMENT

Fruit & Vegetables

Beans, pulses, fish, eggs, meat & other proteins

Starchy Food ~1/3

dairy or alternatives
Physical Activity

- Time spent active
  - Intensity
- Sedentary behaviour
  - Watching TV
  - Devices
  - Sleep time
Physical activity for early years (birth – 5 years)
Active children are healthy, happy, school ready and sleep better

Every movement counts

Aim for at least 3 Hours across everyday

Move more. Sit less. Play together


gov.uk/government/publications/start-active-stay-active-infographics-on-physical-activity-for-early-years-and-young-children
LIFESTYLE PROGRAMMES

• Moderate risk
• Preschool children
  • Planet Munch
• School aged children
  • MEND (MyTime Active)
NHS SERVICES

• High risk
• Hospital Based
  • LEAF
    • 2-6 years
  • Co-co
    • 2 - 18
THE LEAF PROGRAMME

• Lifestyle, Eating and Activity for Families

• Eligible:
  • Children aged 2-6 years at high risk or with severe obesity
  • Have worked with a key professional for 6 months without success
THE LEAF PROGRAMME

- Initial home visit
- Clinic visit with team assessment
- Participate in 6 group sessions
  - Family Hubs e.g. Childrens’ Centre
- Followed up in clinic
- Referred back to community
  - Ongoing support provided
THE LEAF PROGRAMME

• Group session topics:
  • What makes a healthy person
  • Energy balance principles
  • Portion size
  • Hunger cravings, fullness cues
  • Barriers, identifying triggers
  • Shopping, budgeting, recipes
  • Keeping active, moving forward
THE LEAF PROGRAMME

- Evaluation
  - Improved BMI
  - Benefits for risk factors
    - Blood profile, cholesterol
    - Diet, reduction in energy from drinks
  - Positive feedback from participants
THE COCO CLINIC

- Bristol Children’s Hospital
- Complex tier 3 and 4 service
- Referral criteria
- Age 2-17 years, living in Bristol, North Somerset and South Gloucestershire
- BMI > 40
- BMI >99.6th centile and co-morbidity
• Multi-disciplinary Team: Consultant, dietitian, psychologist, social worker, specialist nurse
• Management mainly dietary advice
  • Includes calorie controlled plan
• In older children possibly include:
  • Slim fast, Orlistat
• Pathway 12-18 months
SUMMARY

- Childhood obesity is a serious problem
- Starts in early childhood
- Is difficult to reverse
- Is associated with serious diseases in childhood and adult life
- Prevention is better than cure
- But a life-course approach is needed
- Including prevention and treatment options
CONCLUSIONS

• Obesity services for children are seriously lacking in the UK
• Action is urgently needed
• To protect the short- and long-term health of our children
• There is no one size fits all solution
• We all need to work together on this

Don’t be part of the problem – be part of the solution!
THANK YOU FOR YOUR ATTENTION!

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USEFUL WEBSITES

• NHS Choices

• https://www.nhs.uk/live-well/eat-well/

• British Dietetic Association

• https://www.bda.uk.com/foodfacts/home

• British Dietetic Association Paediatric Specialist Group Resources

• www.fbsresources.com