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INFLUENCE OF PARENTAL ATTITUDES IN THE DEVELOPMENT OF CHILDREN EATING BEHAVIOUR

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MECHANISM OF REGULATION

.....“There is evidence for existence of some innate, automatic mechanism...that regulate appetite.”

In 1-3 years infants energy intake regulation is effective if there is a wide offer of plain foods.

Clara Davis, 1939

Beside the theory of self-regulation there is evidence that:

- eating behavior can be learnt
- it is possible to modify energy intake by a repeated offer

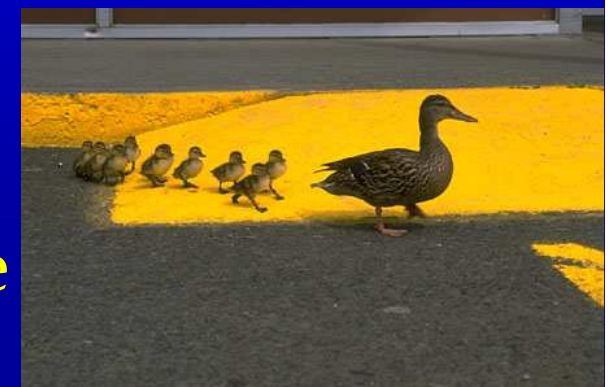
ONE OF THE MECHANISMS OF TASTE DEVELOPMENT: MERE EXPOSURE

The more exposure we have to a stimulus, the more we will tend to like it.

This is the way that specific preferences grow in different culture.

Infants receive first stimulations with breastfeeding.

Maternal habits influence food choice



BI-DIRECTIONAL INFLUENCES IN FAMILY ENVIRONMENT

PARENT CHARACTERISTICS & SOCIAL CONTEXTS

Parents' weight status

Perceived responsibility
for child feeding

Food preferences

Parent's
dietary intake

Food available at home

Food accessibility

Eating locations
ambient temperatures
and lighting

Family meals vs
eating away from table

Feeding practice

Portion size

Temperature and
smell of foods

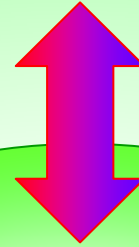
Time of consumption,
ambient sounds

Family income

CHILD BEHAVIORS

Dietary intakes
Eating and life style

Weight



- Parents use feeding practices, which have evolved over thousands of years, to promote “healthy diet”.
- However in current eating environments, characterized by too much inexpensive palatable, energy dense food, these traditional feeding practices can promote overeating and weight gain.

Despite parents good intentions, they use many feeding practices that are associated with negative outcomes like for examples:

- Offering food frequently and as a first response to child stress, giving palatable and preferred foods
- Monitoring and control over eating:
 - Restriction: limiting access to foods such as sweets and fatty snacks
 - Pressure to eat: it attempts to increase the intake of “healthy” foods, typically fruits and vegetables

CHARACTERISTICS
THAT CAN INFLUENCE
PARENTAL BEHAVIOR

CAN MATERNAL CHILD-FEEDING STYLE BE PREDICTED?

Mother reported using more restrictive feeding practice when they were:

- worry with their own weight and eating
- invested in weight and eating issues
- perceived daughters as overweight
- concerned about daughters' weight
- daughters were heavier

Mother reported using more pressure in child feeding when:

- daughters were thinner
- mothers perceived daughters as underweight

Francis LA Hofer SM, Birch LL Appetite 2001; Health Psychol. 2005

PARENT PERCEPTION OF HEALTHY INFANT AND TODDLER GROWTH

- However, evidence suggests that parents are not very accurate at identifying their child's weight status (*Carnell, Edwards, Croker, Boniface, & Wardle, 2005; Gray et al., 2007; May et al., 2007*).
- Parents of infants prefer growth at higher percentiles and are averse to growth at lower percentiles.

Laraway KA, Birch LL Clin Pediatr . 2009

PARENTAL CONTROL

PARENTAL CONTROL

*Birch LL, Fisher JO, Pediatrics 1998. Heird AmJ Clin Nutr 2002
Rhee, 2008; Ventura & Birch, 2008*

Some evidences indicate that stringent parental controls may:

- potentiate preferences for high-fat, energy-dense foods
- limit children's acceptance of a variety of foods
- have negative effects, in the long run, on children quality diet by reducing preferences for promoted foods
- disrupt regulation of energy intake by altering children's responsiveness to hunger and satiety
- contribute to positive energy balance by interfering with children's ability to self-regulate energy intake

- Parents may have been imposing such control because the child had a tendency to overeat.

Brown R Health Education Res 2004

- For Duke RE et al (*Appetite 2004*) parental control appears not always to be simply a reaction to child's lack of self-control or overweight, but may be present before, particularly with presence of cultural factor as:
 - Parental body dissatisfaction
 - Parental history of eating disorders
 - Mother early return to work

MATERNAL RESTRICTION

WHAT ARE THE EFFECTS OF RESTRICTING CHILDREN'S ACCESS TO FOODS ON CHILDREN'S INTAKE?

It is a strategy for fostering healthier diets,
health weight status among children

Is it effective ? NO.....

Fisher JADA 2000, Fisher & Birch LL AJCN 1999

EFFECTS OF RESTRICTING ACCESS TO FOODS ON CHILDREN'S INTAKE

Fisher JADA 2000, Fisher & Birch LL AJCN 1999. Birch, Fisher, Davison AJCN,2003. Benton D, 2004. Keller K et al. Int J Obes 2006

SHORT TERM

- Make restricted foods more attractive
- Increased attention for food

LONG TERM

- Increased intake of both healthy and unhealthy foods
- Increased eating in the absence of hunger
- No ability to self-regulate diet
- Negative self evaluation
- Restrained eating
- Greater weight gain from 5 to 11 years in girls

Eating behaviors similar to overweight adult with emotional overeating and symptoms of binge eating disorders



PRESSURE TO EAT

- Appears to be counter-productive, reducing children's ability to regulate their energy intake
- Pressuring children to eat over time, is not effective in promoting intake of a food and negatively affect children's intake and responses to food they pressure to eat
- Parenting practices to address under-nutrition (pressure to eat) may promote overeating and obesity

Johnson & Birch 1994; Galloway Appetite 2006

CONTROL AS A USE OF FOOD TO MODIFY BEHAVIOR

- Those children whose parents reported a greater use of food as a tool for behavioral modification reported a higher levels of body dissatisfaction.
- Using food to change behavior detaches food from its role in satiating hunger and promotes a more problematic relationship with eating.

Ogden J, 2003

REWARD

Promise of a reward is a tactic for encouraging consumption where a child is resistant, but it decrease children's liking.

“Eat up your peas and you can watch TV”



Peas are used negatively as an undesirable means to a desirable end



Peas equal pain

“You have been such a good girl, you can have some chocolate cake”



Cake is used in a positive context to reward a good behavior



Cake equal pleasure

CHILDREN'S DIET IS INFLUENCED BY PARENTS' DIET

- Children model themselves on their parent's:
 - eating behaviors
 - life style
 - eating related attitudes
 - body dissatisfaction
- There is a strong association between a parent's and their child's food (fruits and vegetables) and snack intake and their physical activity

Cooke L, 2004

- A positive parental role model may be a more effective means to facilitate changes, than parental control, over child's food intake.
- The parents eating behavior is the most important source of information for their children.
- Fruits and vegetables consumption is higher in children and adolescents who eat at the same time as their parents

Brown R, Health Education Res 2004

PEARLS FOR PRACTICE

“do as I do” rather than “do as I say”

- Children with increased self-regulation of diet at an early age may better withstand the current food surplus environment.
- The AHA recommends that parents choose meal times, promote social interaction and parental role modelling for eating behaviors during meal times and promote adequate portion sizes
- Parents also should limit video and television watching to less than 2 hours daily and promote at least 1 hour of physical activity per day.

- Thus, the goal is to modify parental feeding practices and lifestyle.
- Paediatricians should survey both children nutritional and behaviours habits and suggest parents effective age related strategies.

