

# The Satter feeding dynamics model of child overweight Evidence basis

Population-wide surveys show increasing percentages of children whose BMI plots in excess of diagnostic cut-off percentiles. Those trends indicate that environmental influences are disrupting children's ability to regulate energy balance and grow consistently. Restoring that regulatory ability requires establishing the <u>Satter</u> <u>Division of Responsibility in Feeding (sDOR)</u>.

### Perspective

The Satter feeding dynamics model (fdSatter) of child overweight is competency-based. It is grounded on well-supported evidence that children have a powerful and resilient ability to maintain energy balance and grow in a predictable fashion, *provided* the feeding relationship is appropriate.

*Evidence*: Satter, Ellyn, Your Child's Weight: Helping without Harming

Chapter 2: "Feed and parent in the best way" Chapter 10: "Understand your child's growth" Appendix C: "Children and food regulation, the research." Satter, Ellyn, *Child of Mine: Feeding with Love and* 

Satter, Ellyn, Child of Mine: Feeding with Love and Good Sense

Chapter 2: "Children know how to eat and grow"

# Definition

The fdSatter definition of child overweight is not high weight *per se*, but weight *acceleration*: Abnormal upward weight divergence for the *individual* child. The child is compared only to *himself*, not to statistical cut-off points established for the purpose of population-wide evaluation.

*Evidence*: Satter, Ellyn, *Your Child's Weight: Helping without Harming* Chapter 10: "Understand your child's growth"

# **Exploring disruptions**

To explore weight acceleration, fdSatter considers disruptions in parenting, the feeding relationship, child development and the child's psychosocial and medical history. To do this exploration, the feeding dynamics question is: *Not*, how do we get this child to lose weight?

*But rather*, what has happened and continues to happen in this child's environment to undermine his considerable ability to regulate energy balance and grow predictably?

*Evidence*: The principles of conservation of growth govern standard growth charts. It is normal for children to grow in a predictable fashion, following a particular percentile or maintaining a consistent z-score. If not, something is the matter. That *something* can be identified and remedied.

# Typical causes of child weight acceleration

Clinically and from an examination of the research literature, it emerges that factors undermining the child's energy homeostasis cluster into four typical patterns, alone or in combination:

- 1. Misinterpretation of normal growth.
- 2. Restrained feeding and circumstances that mimic restrained feeding.
- 3. Poor feeding practices.
- 4. Stress.

Evidence: "Why do children gain too much weight?"

# Prevention

Preventing weight acceleration mandates supporting normal growth and development *and* avoiding disruptive influences by:

- 1. Optimizing feeding from birth based on Satter's Division of Responsibility in Feeding (sDOR).
- 2. Maintaining (sDOR) throughout the growing-up years.
- 3. Maintaining <u>Satter's Division of</u> <u>Responsibility in Activity (sDORA)</u> throughout the growing-up years.
- 4. Supporting parents in accepting the child's consistent weight. This intervention is particularly urgent for the child whose

longitudinal pattern of weight, weight-forheight or BMI is at or above levels defined by policy-makers as "overweight" or "obese."

5. Supporting parents in developing eating competence as defined by the Satter Eating Competence Model (ecSatter) and accepting their own stable weight. This intervention is particularly urgent for chronically dieting parents and/or those defined as being "overweight" or "obese."

#### Evidence:

Satter, Ellyn, Your Child's Weight: Helping Without Harming

Chapter 2: "Feed and parent in the best way" Chapter 10: "Understand your child's growth" Appendix C: "Children and food regulation, the research" Satter, Ellyn, *Child of Mine; Feeding with Love and Good Sense* 

Chapter 2: "Children know how to eat and grow"

Satter, Ellyn, *Secrets of Feeding a Healthy Family* Part 1: "How to eat"

#### Treatment

Treatment of child overweight from the fdSatter perspective involves:

- 1. Careful assessment *of the individual child* to identify disruptive influences and causes of weight acceleration.
- 2. Constructing a plan to correct disruptions and causes using sDOR and sDORA.
- 3. Allowing the child's weight to establish its own level in response to optimizing eating and activity.
- 4. Support parents in transitioning to sDOR, with particular attention to establishing structure and discontinuing restrained feeding.
- 5. After sDOR is established, give the child time for behaviors to become more extreme before they moderate, to stop testing the rules, and to trust that parents will let him or her determine what and how much to eat.
- 6. Permit the child's own homeostatic mechanisms to neutralize weight acceleration to follow or parallel the current

growth percentile or level off to a lower percentile.

7. For the child whose weight is above the 97th percentile, assess growth stability by converting weight or BMI to z-scores. A consistently growing child will have a consistent z-score.

#### Evidence that the feeding dynamics model "works" in addressing child overweight

Generally people asking for "evidence" that the feeding dynamics model "works" are thinking in conventional terms. They want figures illustrating that applying fdSatter produces weight loss or maintenance of weight below a certain percentile on BMI charts.

Defined weight outcome is absolutely inconsistent with fdSatter. Instead, the feeding dynamics model "works" if it produces consistent growth of the *individual* child. From the standpoint of prevention, evidence that fdSatter works is that a child's weight trajectory follows or parallels a particular growth percentile. From the standpoint of treatment of weight acceleration, evidence that fdSatter works is restoring weight to a consistent percentile or z-score.

Evidence that feeding dynamics used in both prevention and treatment stabilizes growth has been accumulated clinically. Research evidence exists in the negative: Children with early feeding problems and those who fail to achieve developmental tasks with eating tend to have distorted growth.

#### **Didactic testing**

The step that remains is didactic testing of fdSatter in child overweight intervention, both epidemiological and in controlled clinical interventions. The Satter Feeding Dynamics Inventory (fdSI) has been developed to test parents' adherence to sDOR and is currently being validated.