Disordered Eating

CHILDHOOD'S HIDDEN EPIDEMIC?

Mary-Ann B. Shafer, M.D., Professor of Pediatrics, Associate Director, Division of Adolescent Medicine
University of California, San Francisco

During 2001, Dr. Shafer presented Disordered Eating in Young Children: The Hidden Epidemic at the University of Washington Continuing Nursing Education Conference and the North Pacific Pediatric Society Conference in Seattle, WA; the Idaho Academy of Family Physician's annual meeting in Boise, ID; and the Emanual Children's Hospital Pediatric Update in Portland, OR. Her speaking tour was made possible by an educational grant from the Dairy Council of California, Idaho Dairy Council, Nutrition Education Services/Oregon Dairy Council and the Washington State Dairy Council.

Julia, an 8-year-old, straight-A student, whose parents are professionals, has been followed in the same pediatric practice since birth. At her sports physical her weight was 25.3 kg/55 pounds (50 percent for age) and her height was 123 cm/49 inches (25 percent for age). She appeared to be growing well. Her mother mentioned that Julia was already talking about vegetarianism and dieting, and that she wants a "flatter" stomach. The clinician reassured the mother that this was normal and not to worry — that all children go through this "stage". Nine months later her weight is 23 kg/50 pounds (10 percent weight and BMI change) and her height remained the same.

Julia is a good example of an emerging trend — disordered eating problems in children ages 8-11 and even younger.

The Issue: Disordered Eating

Subtle, but serious

Disordered eating in young children has received relatively little attention. When children ages 8 to 11 visit a health care provider for a routine exam, *early* symptoms of the problem will likely not be obvious.

Yet there are signals. Consider children at the tender age of 8 or 9 suddenly deciding on their own to diet, to become a vegetarian, or to work out so they can have a "six-pack" of abdominal muscles like Dad. These children may well be at risk for full-blown eating disorders by the time they reach adolescence, not to mention more immediate health ramifications.

Subtleties of family dynamics, unusual eating patterns, unrealistic attitudes or behaviors surrounding food can easily be ignored or overlooked during routine office visits. A few probing questions are in order and should be part of any routine exam. A strong collaboration with parents will be needed, as they may unwittingly be fueling these patterns and are very definitely part of any solutions.

What is disordered eating?

Children have always demonstrated a wide range of eating behaviors, but there is a big difference between picky eaters and disordered eating. Disordered eating is a multifaceted problem that is characterized by distorted or disturbed attitudes or behaviors surrounding food. Emerging research shows this as an issue to which health care providers must be alerted. Some of the risk factors for disordered eating that practitioners should watch for are shown on page 2.

Disordered Eating Could Include:

- *Family history of eating problems*
- *Family dysfunction*
- *Lack of specific meal times*
- *Low self-esteem*
- *Preoccupation with weight/thinness*
- *Excessive or sporadic bursts of exercise*
- *Overemphasis on athleticism or extreme exercise within the family*

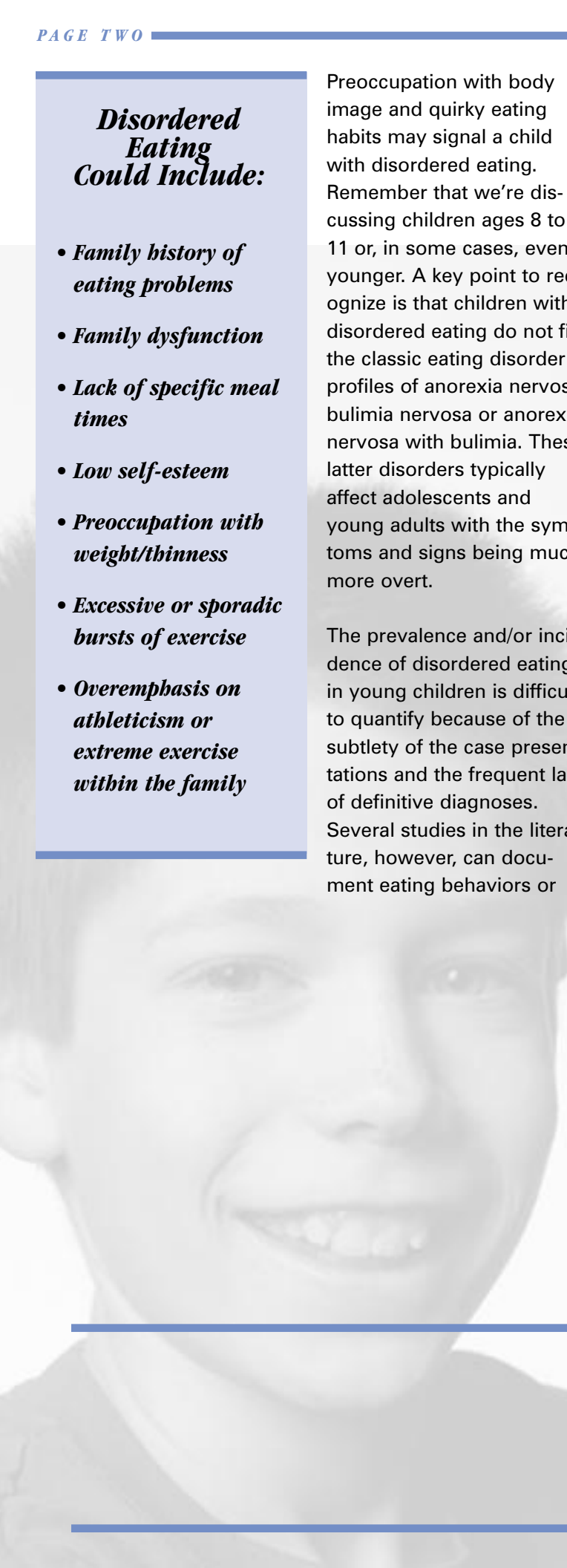
Preoccupation with body image and quirky eating habits may signal a child with disordered eating. Remember that we're discussing children ages 8 to 11 or, in some cases, even younger. A key point to recognize is that children with disordered eating do not fit the classic eating disorder profiles of anorexia nervosa, bulimia nervosa or anorexia nervosa with bulimia. These latter disorders typically affect adolescents and young adults with the symptoms and signs being much more overt.

The prevalence and/or incidence of disordered eating in young children is difficult to quantify because of the subtlety of the case presentations and the frequent lack of definitive diagnoses. Several studies in the literature, however, can document eating behaviors or attitudes consistent with the disordered eating profile. Weight and body image are on the minds of our very youngest children. Several research studies would support this alarming trend:

- 42 percent of 1st to 3rd grade girls surveyed in 1991 reported wanting to be thinner. Many children soon start acting on that desire [1].
- 40-50 percent of girls grades 1-5 are sometimes/often on diets or otherwise trying to lose weight [2, 3, 4].
- 20 percent of elementary aged girls sometimes or frequently "starve themselves" to lose weight whereas 24 percent skip meals to lose weight [3].

Why is disordered eating a concern?

There are short and long term consequences of disordered eating. Disordered eating and the accompanying dieting for weight loss may interrupt normal growth and maturation processes [3]. If severe enough, it poses risk of compromised height as well as decreased bone density. Pubertal development may be impacted and onset of menarche may be delayed. Children who diet may show the same hyperemotionality, irritability, fatigue, and impaired concentration that adult dieters do [5]. Finally, it may be an early sign of serious psychological or emotional disturbances, including the onset of a full-blown eating disorder. The bottom line is that any eating disturbance has a bigger impact on the growing child and adolescent than on a fully mature adult.



"Let us all commit to a greater awareness of more children than any of us might imagine. work to help resolve the issues, attitudes and

Guidelines for Clinic Visits

Child/parent interviews

In a typical practice setting, where dozens of patients are seen in a given day and time to interview the child and/or parent is limited, it can be a challenge to probe for the subtle signs and symptoms that characterize a child with disordered eating. Realistically, practitioners will have to pick just a few from the points below in any given session, and questions will have to be directed to both the child and parent. The following represent the most appropriate areas to probe. In most cases, signs or signals specific to eating patterns or mental health will present before any abnormalities in clinical profiles or growth patterns are evident.

Eating and exercise patterns

- Is the child dieting or concerned about "feeling fat", "being fat", or "dieting"? Further,
  - Is there a purported loss of appetite?
  - Does the child make a conscious effort to restrict calories by skipping meals/snacks or drastically reducing portion sizes?
- Does the child engage in ritualized eating behaviors? For example, chewing every food a certain number of times before swallowing; eating foods in a specific sequence.
- Are there abnormal or inconsistent family eating patterns? Is there a lack of meals eaten together as a family or are different foods prepared for a given meal for each family member? While on the surface, family interactions can appear normal, a little probing can reveal family members pursuing individual interests at the expense of family connectivity.
- Does the child no longer want to eat with the family or friends?
- Is the child and/or family obsessed with fat intake? Is there an incorrect assumption about how food nourishes the body, such as "Fat makes me fat, so I won't eat any!"
- Does the child eliminate major nutrients or entire food groups from their food choices without replacing the nutrients?
- Is there a preoccupation with food, labeling foods as "good" or "bad"…or eating the same foods for every meal?

Four Questions You Must Ask

1. ***Does your family eat together at least 4-5 times each week?***
2. ***Is anyone in your family dieting?***
3. ***Are you dieting and/or concerned about feeling fat?***
4. ***Is anyone in your family exercising vigorously more than an hour a day on more than 5 days a week?***

- Are complaints of diarrhea, constipation, nausea or vomiting used as a reason that the child doesn't want to eat?
- Does the child report abdominal pain or feeling full before or soon after eating?
- Do parents use food as a reward, punishment or as a way to keep the child interested or busy?
- Does the child engage in compulsive exercise routines?
- Does the child enjoy being active either in organized sports or active play at school or home? Does the child participate only out of pressure from parents or peers?
- Are activities appropriate for the child's age and development?

Clinical observations

Symptoms revealed by the following physical exam are not likely to manifest until the disordered eating has progressed to a more advanced stage. Lab work should be ordered as necessary. These clinical signs require immediate treatment.

- Is there a low body temperature (<36°C)?
- Is there a low heart rate for age (<50)?
- Is there poor circulation in the hands and feet (bluish color)?
- Is dry skin or hair loss noted?
- Does the child complain of being weak, tired or dizzy.
- If menarche has begun, has the child missed three periods in a row?

disordered eating and increased sensitivity to the dynamics that contribute to this disorder. It is imperative for health care professionals, parents, educators, school counselors and behaviors that contribute to disordered eating."

Guidelines for Clinic Visits, continued

Mental health

- Is the child unhappy with weight or body shape?
- Are there signs of mood changes or depression in the child?
- Has there been any change in activity or sleep patterns?
- Does the family hold unusually high expectations for child's achievements? Is perfection demanded?
- Has there been a drop in school performance, growing lack of interest in school, recent behavioral problems?
- Is the child becoming socially isolated, avoiding activities, including eating with friends or family?
- Have significant life events occurred recently? These might include major losses like a recent move, transfer to a new school, divorce of parents, illness or death in family.

Growth patterns

Actual changes in weight may be one of the last signs to develop in a disordered eating case. Discrepancies or deviations from normal growth rates may be small or difficult to determine without regular height and weight measurements. Patterns of growth that fall off over several visits should raise a red flag.

- What is the child's BMI or height/weight ratio? These should be checked and compared at each office visit.
- Has growth slowed or stopped? Height and weight that is on the low side of normal may not be cause for concern unless the child's age, pubertal development and other factors are considered.

What to do:

Multidisciplinary Treatment Teams are Effective

A child who is just beginning to talk about or dabble in dieting, skipping meals, or vegetarianism may be an "experimenter". These children are likely worried about being too fat or are displeased with their body shape or size. Their thoughts and reflections should not be taken lightly while counseling the child and parent about the importance of family meals and balanced nutrition. Such children should be re-examined within two to three months. If no improvements are seen, additional lab work should be ordered to determine clinical status. Ultimately the child may need to be referred to a treatment team, ideally composed of individuals with expertise in eating disorders. Such a team might include a physician, family therapist, psychiatrist, registered dietitian, social worker and nurse. Always treat the child *and* the family.

Common Dietary Issues of the Disordered Eating Patient

Calcium and bone health

Dietary calcium is important at all ages. Too little calcium in child hood, can adversely affect growth and strength of bones and jeopardize the attainment of optimal peak bone mass in adolescence. In turn, this can lead to an increased risk for osteoporosis and bone fractures at any age.

Consider, too, that lifetime dietary habits are being formed and reinforced during childhood. While most younger children consume adequate calcium, that shifts dramatically after age 11, when more than 86 percent of girls and 65 percent of boys fail to consume adequate calcium [6]. Perceptions surrounding the need for dairy in the diet as children get older, as well as misconceptions concerning the calorie and fat content of milk and dairy products often lead children to gradually exclude these foods from their dietary choices. This unfortunately occurs at a time when their need for calcium actually increases. Over half of total lifetime skeletal calcium is acquired between the ages of about 11 and

We can presume that this problem affects others who care for and about children to

— Mary-Ann B. Shafer, M.D.
University of California, San Francisco

Common Dietary Issues, continued

20. At age 9, the calcium recommendation increases from 800 mg/day (comparable to about 3 glasses of milk) to 1300 mg/day (comparable to about 4 glasses of milk). In fact, a body of emerging research supports a relationship between adequate calcium intake from milk and other dairy products and a lowered risk of obesity [7,8].

For the these reasons, the American Academy of Pediatrics, in a statement issued in November, 1999, encouraged pediatricians to actively support the goal of achieving calcium intakes in children and adolescents comparable to recent guidelines [9]. In that statement, it is further noted that the largest source of dietary calcium for most persons is milk and other dairy products. These products contain calcium in concentrated amounts, in readily bioavailable forms. Some vegetables contain calcium, though in lower density, and the bioavailability of calcium in those foods is generally not as high as in milk and dairy products. Calcium-fortified foods and supplements have recently gained popularity and may include substantial amounts of calcium per serving, but don't appear to replicate the natural "package of nutrients" (calcium, protein, vitamin D, phosphorous) found in dairy products that best support bone health [10,11].

Vegetarianism

Many families choose to follow vegetarian diets for health, religious or social reasons, and do so in an informed and responsible manner. But children who impulsively become self-proclaimed vegetarians, apart from an existing family pattern, may be of concern especially if they continue to follow this pattern. Teenage vegetarians are at a much greater risk for eating disorders, stemming from greater dissatisfaction with their bodies and more signs of depression [12]. Children may make this "lifestyle choice" as a result of peer influences, media influences, or as an attempt to further control/restrict the foods they eat. Unless they and their family consult with a physician or registered dietitian, it is easy to select a poor balance of food choices. Care needs to be taken to insure that the child is eating a variety of foods and enough of them to get the protein, calories and other important nutrients needed for adequate growth and development. Those include calcium, iron and vitamin B-12.

Children who are allowed to eliminate entire food groups may be at significant nutritional risk.

Generally, lacto-ovo vegetarian diets that include adequate amounts of milk products and eggs can satisfy the needs of growing children. Strict vegan diets that include only plant foods require in-depth education and careful planning [13]. Because they eliminate milk products and meat, vegan diets may consist solely of low-calorie, high-fiber foods such as grains, fruits and vegetables. These foods, while nutritious, can fill a child's stomach before they have eaten enough food to get needed nutrients and calories.

Elimination of whole food groups

The USDA Food Guide Pyramid, a widely recognized system for planning healthful eating, is based on the premise that each food group provides a unique set of nutrients needed for proper growth, development and health maintenance. Children with disordered eating may attempt to eliminate one or more entire food groups from their daily choices — groups with animal products are a common target. The child's rationale might appear to be "taste preferences" when in actuality it is simply one more way to control calories. Children who are allowed to proceed with such wholesale exclusions may be at significant nutritional risk for key nutrients like protein, iron and calcium.

What to Say to Patients and Families

Nourishment for physical health — activity

Children need to be physically active. Age-appropriate physical activity helps strengthen muscles, bone, motor skills and hand-eye coordination. It can also build self-esteem in a non-competitive environment. It is critical to maintain a balanced perspective with the role of physical activity and athleticism as it can be taken to excesses, which are counterproductive and potentially harmful.

• **Advocate an active lifestyle** for the entire family. Most children should be active for 30-60 minutes a day, which may be accumulated throughout the day.

• **Have parents encourage activities that are fun,** non-competitive and age-appropriate for the child's interests and abilities. Children are not little adults and should not engage in athletic endeavors beyond their abilities or physical development.

• **Encourage parents to discourage overemphasis on extreme physical fitness,** athleticism, participation in competitive sports or excessive amounts of exercise (several hours each day).

Nourishment for emotional well-being

Parents should never underestimate the influence of their attitudes and behaviors surrounding eating, activity and acceptance of body shapes and sizes on their children. Parents should be educated on the normal changes where there is a redistribution and increase in fat stores, particularly in girls.

• **Caution parents and siblings who talk about being too fat,** weighing too much, needing to diet, or criticizing themselves about their big hips, fat thighs or bulging stomachs. They could unwittingly be contributing to the child's negative body image.

• **Encourage parents to discuss the media's distortion of an "ideal" figure or body shape with their child.** Pencil-thin models and actresses are not the norm. Parents must help dispel the notion that being thin means being popular and happy.

• **Parents can reinforce that there is no "ideal" body.** Rather, each child is unique and develops at his or her own pace. Gaining weight is normal and necessary to prepare children's bodies for puberty. After puberty, weight and body shape are redistributed.

Nourishment for physical health — nutrition

Reviewing the following concepts with parents and their children will help them understand the life-supporting connection between the foods they eat and how those foods support overall health and well-being. A well-nourished child feels good, thinks clearly, and has plenty of energy.

• **All foods fit in a healthy diet.** Avoid labeling foods as "good" or "bad". Try not to make children feel guilty about eating certain foods.

• **Encourage parents to help dispel misguided thinking,** such as "eating fat will make me fat." On the contrary, fat is necessary for brain function and as a carrier for important vitamins.

• **Eating the appropriate number of servings and serving sizes from all the food groups** helps assure adequate nutrition for appropriate growth and development. Children's nutritional needs are unique, and diets appropriate for adults may not be so for children.

• **Eat together as a family** as often as possible, preferably at home. Children who eat the most meals with their families have been shown to eat more healthfully and do better in school More shared meals also give parents an opportunity to notice any troublesome eating behaviors in their child.

• **Let children help prepare meals and snacks.** It's likely to foster more positive attitudes about food and eating.

References

1. Collins, 1991. *International Journal of Eating Disorders,* 10, 100-08.
2. Gustafson-Larson & Terry, 1992. *Journal of American Dietetic Association,* 7, 818-22.
3. Shisslak, et al., 1996. *Journal of Psychosomatic Research,* 44, 301-313.
4. Smolak & Levine, 1994. *Eating Disorders Journal: Treatment and Prevention,* 2, 293-307.
5. Polivy & Thomasen, 1988. "Dieting and other eating disorders" in *Handbook of Behavioral Medicine for Women,* Blechman and Brownell, eds., 345-55.
6. Combined results from USDA's 1994 and 1995 continuing Survey of Food Intakes by Individuals and 1994 and 1995 Diet and Health Knowledge Survey. Food Survey's Research Group, Beltsville Human Nutrition Research Center, USDA, 1997.
7. Chan, 2001. "The effects of dairy products on children's body fat", presented at American College of Nutrition Annual Meeting.
8. Carruth and Skinner, 2001. *International Journal of Obesity,* 25, 559-66.
9. Committee on Nutrition, American Academy of Pediatrics, 1999. *Pediatrics,* 104, 1152-57.
10. Ghatge, et al., 2001. "Bone Mineral Gain Following Calcium Supplementation in Teenage Girls is Reversed Two Years After Withdrawal of the Supplement", presented at American Society of Bone Mineral Research Annual Meeting.
11. Cadogen, et al., 1997. *British Medical Journal,* 315, 1255-60.
12. Perry, et al. 2001. *Journal of Adolescent Health,* 29, 406-411.
13. Messina & Mangels, 2001. *Journal of the American Dietetic Association,* 6, 661-669.