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GROWING GREAT

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Thirty percent of the thousands of children and adolescents that develop Crohn's disease each year have been thought to have growth impairment. Many actually first, present to their doctor's office with a decrease in their rate of growth. Others will have the usual complaints of diarrhea or bloody stools prompting their visit, but as their pediatric gastroenterolgist reviews their past height and weight, a deceleration in growth may be recognized, beginning months or even years before their intestinal symptoms developed.

Adults who develop Crohn's at a later age are quite different. Having achieved their full height, they may lose weight, even a considerable amount, off and on during the course of their illness. But their concerns and fears about their body image are hopefully less fragile, and nowhere near as devastating—with parents often as distressed as their children.

Children are supposed to grow and develop—that's their "job."

When they don't, when their active bodies become less active and slow down in adding on the pounds and inches, or when the normal stages of sexual maturation are delayed, that's often a sign that something is wrong in the same way that weight loss is a "marker" in adults.

Surprisingly, we are not entirely sure what that something is. Growth Hormone levels are normal in Crohn's disease; and in the past, administration of growth hormone has been ineffective in promoting growth. Many patients have a decreased appetite and intake, and certainly many have mal-absorption and protein loss from their inflamed intestines. But some of these patients fail to grow well and do not "catch up, " even during periods of apparent remission. Numerous researchers have investigated factors such as growth hormone blocking agents and various vitamin and mineral deficiencies to determine if they could be interfering, but no consistent results have accumulated.

Based on metabolic studies, we suspect that the major cause is prolonged caloric insufficiency, which can occur because of a lack of appetite; avoidance of food because

of the symptoms eating causes; restrictive diets that eliminate favorite and high calorie foods: increased losses: and increased energy and protein needs to repair tissues. Thus,

what may be sufficient calories for a normally growing child may not be enough for a child with Crohn's. He or she may need to compensate, but cannot.

Correcting this problem starts by accurately assessing a child's or adolescent's height and weight, comparing that to his or her peers, taking into account the parents' mature height, weight, and their pattern of development. An even more sensitive measure evaluates growth acceleration by comparing the velocity of an individual's growth against that of other normal children. This can be particularly important at the time of puberty, when the timing and rate of growth can be critical and more difficult to recognize. In addition, an X-ray of the hand and wrist can be useful in then determining the current stage of bone development and the growth potential that remains.

Nutritional intervention then becomes important in maximizing that potential. Efforts are first made to record a patient's actual intake of all nutrients, to correct imbalances and increase the calories that patient will consume. Certain dietary changes may be helpful. These consist of limiting low-density beverages and food, adding in nutritious snacks several times a day, and using additives to increase the concentration of foods. However, few children or adolescents will tolerate these measures for long.

Alternatives include using supplemental high density, high protein drinks or puddings, nightly administration of similar formulas by a gastric tube placed just before bedtime, and the use of intravenous alimentation fluids through an indwelling catheter. All require the patient's cooperation and parental support, since they are complicated, and intrusive. These approaches can be quite successful delivering the extra calories and nutrients the patient needs, but because of their risk, and expense they should only be considered after other means have failed, and when reasonable growth seems otherwise unachievable.

Even with optimum nutrition, little growth will occur if the underlying disease remains uncontrolled. Unfortunately, the sickest children are often those with growth failure. And medications, particularly steroids, may interfere with growth when needed daily or at high doses, causing difficulty in separating the ill effects of the medication from that of the disease.

These issues are problematic, at best. They require discussions between the patient, his or her parents and their pediatric gastroenterolgist, to assure that all aspects of their concerns are addresses and to decide among the therapeutic strategies that are possible. Others may be consulted as well. A dietitian may be helpful in optimizing nutrition; and occasionally, further psychological counseling may assist a child and his or her family in coping with the many aspects of this disease, including the growth failure it can cause.