



Fighting Fat

CAN ONLY PREVENTION CURE CHILDHOOD OBESITY?

Leaning over his desk, puncturing the air with his finger, Lutherville, Md., pediatrician **Alan Lake** can't seem to sit still when it comes to this issue. There is an animated energy, a passion, a fighting anger about what he calls an epidemic in this country—the dramatic rise in childhood obesity. The potential costs are high, he soberly stresses, pointing to obesity-related disorders like hypertension, heart disease and type 2 diabetes. And the odds of winning the battle are bleak. How bleak?

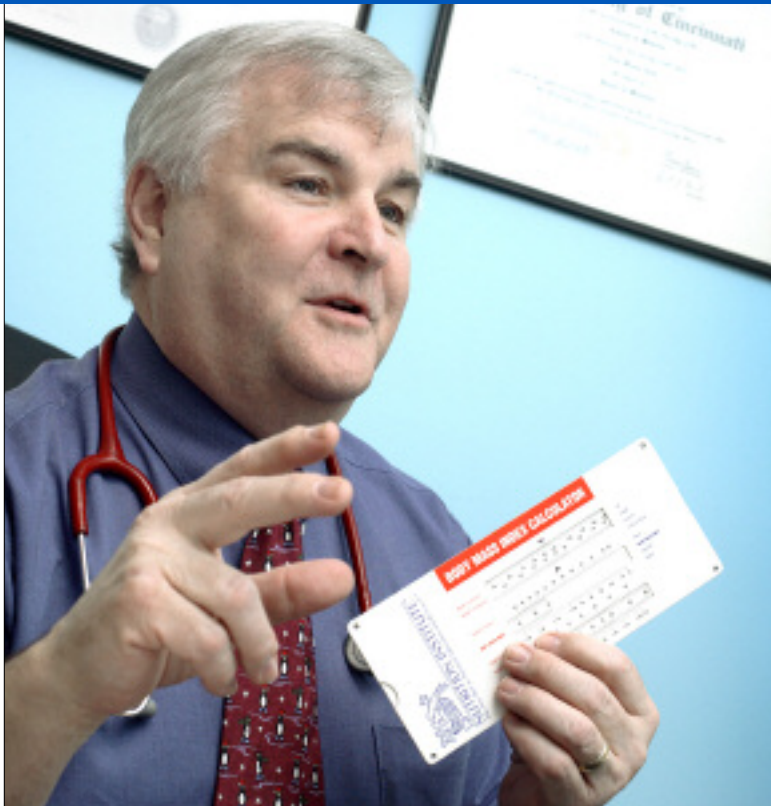
“This could be the first generation in the history of mankind,” warns Lake, “that lives a shorter lifespan than their parents.”

To help turn that scenario around, Lake has been spearheading the Maryland American Academy of Pediatrics' obesity initiative, “Bridges in the Healthcare Community.” Over the past year he's presented 16 grand rounds on obesity at hospitals throughout Maryland, worked with county school boards to increase gym times in the schools—with community leaders to create wellness programs—and handed out some 1,800 BMI (body mass index) calculators to pediatricians around the state. When he says, “I've still got hundreds to hand out,” you expect him to pull one out of his pocket. Where's all the energy coming from?

It's not solely that the number of preschoolers and teens exceeding the 95th percentile for weight has doubled—and tripled for children 6 to 11—between 1980 and 2000, it's what the increases are leading to. Up until a few years ago, Lake had not seen a type 2 diabetes case in his practice more than once in the past 15 years. Then he started seeing five or more cases each year. Two things stuck in his mind: Type 2 diabetes translates into a 15-year loss of life, and the disease is unequivocally related to obesity. That, along with the loss of friends to heart disease at middle age, stirred him to move. “All this,” says Lake, “caused me to sit back and say, OK, how can I make a difference?”

Initially, the answer appeared to be better identification of kids at risk, fewer high-fat foods, more phys ed, less TV. The efforts have had some payoffs, says Lake, like schools' recognition that increased gym time does not mean decreased academic performance. But on the front lines, clinicians and their patients are losing the battle.

“A 9-year-old child with a BMI over the 99th percentile has a 100 percent risk of adult obesity and all of



BMI calculator in hand, Alan Lake is leading American Academy of Pediatrics' efforts in Maryland to reduce childhood obesity.

its related complications,” Lake explains. “Of 16-year-olds at the 95th percentile, only 20 percent will lose weight. And there's evidence to suggest that even that 20 percent will not reduce their cardiac risk factors.”

Through the Maryland AAP initiative, Lake has helped raise pediatricians' awareness of this “stark reality” and the need for more aggressive identification. But a 2005 joint survey by the AAP and the American Academy of Family Practice revealed problems with physicians recognizing risks and complications of obesity early on. One obstacle is the traditional approach of dieting and targeting an ideal weight. Another is the tendency to overfeed low-birth-weight babies the first year of life, in effect establishing metabolic patterns that send them down a path to obesity.

“The model we need,” Lake stresses, “is a wellness and prevention model, one that never lets children get to that point in the first place. We're talking, literally, from intrauterine on.”

For more information about the Maryland AAP's obesity initiative, go to www.mdaap.org.

LITERATURE CHECK: Recognition of Childhood Overweight During Health Supervision Visits: Does BMI Help Pediatricians? *Obesity*, Vol. 15, 2007.

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George Dover, M.D.
 Director,
 Johns Hopkins
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A Growing Problem

As revealed in our cover story this issue, childhood obesity is growing to epidemic proportions in this country. The take-home message from pediatrician **Alan Lake**, who is leading the Maryland American Academy of Pediatrics' obesity initiative, is earlier identification of kids at risk and more aggressive interventions. While some community pediatricians have come up with comprehensive treatment approaches, like **Dan Levy** in Owings Mills, Md., (see "In Practice," page 6), at this stage the only cure may be early prevention. Because of childhood obesity's related risks of heart disease and type 2 diabetes, perhaps no other issue these days is more important for us to address collaboratively, as academic and community pediatricians. Please do send us your ideas and insights in fighting this battle.

Ted Leffler was a colleague and friend of many of us here at the Children's Center and in the community. But it was not just his collegiality and friendship we embraced, but his unwavering approach to pediatric practice. As shown in our reflection piece on Ted (page 5), he was always about the patient and family first, despite obstacles presented by economic changes in health care over the last three decades. We will miss Ted but keep his deep commitment to personalized children's health care close to our hearts. He was, indeed, the quintessential pediatrician—a model for all of us.

Antibiotic Antidote



Pediatric Infectious Diseases Director Kwang Sik Kim

A streamlined antimicrobial management program for restricted antimicrobials has not only eliminated missed doses of antibiotics in the Children's Center, but revealed that about a third of all antibiotic orders in the past year were denied or substituted. The pilot Web-based program is a model "any institution can use to improve patient care and safety and, in general, practice medicine more efficiently and lower costs without adversely affecting quality of care," says **Kwang Sik Kim**, director of pediatric infectious diseases (ID).

Since the 1980s, orders for upwards of 50 of the newest or most potent antibiotics used in the Children's Center have required the ap-

proval of an ID fellow. Until the 2005 launch of the Web-based program, a time-consuming, phone-based network connected the prescribing physician, the ID fellow and the pharmacist, often delaying delivery of antibiotics in the process. Developed at Hopkins, the new system connects everyone by automatic paging and instant Web communications, and records each request and its outcome. Of the more than 4,000 orders reviewed under the new program during its first year, ID deter-

mined that nearly a third were inappropriate, prescribed for too long a course, inferior to another antibiotic or had potential side effects.

"While there had been stories for years that the number was routinely high, this computer system quantified it," says Kim, who considers the monitoring program not only a safeguard for patients but excellent medical training for attendings, residents and fellows.

"It goes to show that even in top-notch medical institutions like Johns Hopkins, we can still find people who don't know how to use these antibiotics judiciously," Kim says. "Our goal in all of this is to see that children get the best care possible." ∴

Letters

Managing Metabolic Disorders

I read with interest the article in *Pediatrician* on "Detecting Metabolic Disorders" (Fall 2006). While Diana Fertsch is an outstanding community pediatrician, I'm concerned about the last paragraph: "For more information about managing metabolic disorders, e-mail Dr. Fertsch." Community pediatricians can provide primary care for these patients, but the management of their metabolic disorders should be done by a board-certified biochemical geneticist, of whom we have five on faculty in the Children's Center. Thank you.

Ada Hamosh, M.D.

Clinical Director
 Institute of Genetic Medicine
 Johns Hopkins University School of Medicine

The Pre-College Checkup

COME SPRING AND SUMMER, COLLEGE-BOUND ADOLESCENTS STREAM INTO THEIR PEDIATRICIANS' OFFICES FOR THE CHECKUPS AND VACCINATIONS REQUIRED BY THEIR SCHOOL. THEY SHOULD LEAVE WITH SOMETHING MORE, SAYS THE DIRECTOR OF THE STUDENT HEALTH AND WELLNESS CENTER AT JOHNS HOPKINS UNIVERSITY, PEDIATRICIAN ALAIN JOFFE.

What makes this checkup unique?

We're not sending our patients back into the care of their families, who know them and their health needs very well. We're sending them off to live on their own where they must make their own health decisions. To do this, they must learn how to interpret their symptoms and sense of well-being, as well as where and when to go for help.

Will they listen?

In my experience, most kids going off to college still feel a very strong allegiance to their pediatrician. This puts pediatricians in a strong position, because they have the kids' trust, to help fortify them medically and emotionally.

So, what do you recommend for community pediatricians?

See that your college-bound

patient has a clear sense of his or her own medical history and background; knows how to manage any chronic illness; and understands the importance of taking any prescribed medications. Many more kids these days are going off to college with chronic illnesses like diabetes and asthma that require adherence to medical regimens. Those with significant illnesses should make an appointment with a college health-care provider early in the semester, before there's a crisis. When kids get into trouble in college, I often don't have a baseline for them. I'm left to try to sort out quickly their *status quo* before they got sick, but their pediatricians know what they look like when they're well and what medications they respond to when they're not. Let us know, too. Mail us a brief summary of your current management of your pa-



tient's illness and medications. Also, encourage all your college-bound patients to pay attention to their nutrition, maintain regular exercise, avoid stress where they can—begin those college papers early—and set aside enough time for sleep.

Anything else?

It's not unusual for kids to doubt themselves, to feel lonely, homesick, depressed

or overwhelmed in a new environment. Help them understand it's not unusual or abnormal to have a lot of mixed emotions. If those feelings persist and begin to interfere with their academic performance or social interactions, they should seek help and not just try to tough it out. Colleges have health centers because they recognize that the college experience can be stressful. ∴

Research Briefs

Manhood Myths and Sexual Health

Teenage boys who hold some traditional beliefs about what it means to be a "real man" can undermine their sexual health and good preventive care in general, according to a study led by Children's Center researchers (*Pediatrics*, April 2007). A second finding of the study, which surveyed

1,600 boys ages 15 to 19, is that boys who can speak openly to their parents about sexual health are more likely to see a doctor for preventive care. "Many illnesses in young men, such as sexually transmitted infections, can be prevented through timely intervention by a doctor or a

nurse," says Johns Hopkins pediatrician **Arik Marcell**, lead author of the study. "However, stereotypes about masculinity suggest that for boys, seeking care is a sign of weakness, and our analysis shows that such beliefs can be considered a health risk factor in and of itself." ∴

Detecting Mozart's Disease

The 13-year-old first complained of cough, fatigue, headaches, rapid breathing and a runny nose—a cold or the flu, his pediatrician figured. But when the symptoms persisted over two weeks, he ordered a chest X-ray, which led to a diagnosis of pneumonia. Despite antibiotics, the symptoms worsened, and chest pain, fever and vomiting were added to the picture. Another chest X-ray revealed a slightly enlarged heart, and an abnormal EKG pointed to an AV (atrioventricular) block disrupting the patient's heartbeat. At the heart of the case, it appeared, was a heart problem, and the young patient was referred to the Johns Hopkins pediatric intensive care unit.

Possible diagnoses, said **Jennifer Johnston**—the medical student who co-presented the case at the Children's Center—included an array of conditions that inflame the sac-like membrane enveloping the heart (pericarditis), the heart muscle itself (myocarditis), and its lining (endocarditis), and Lyme disease. All of these diseases could result in the patient's chest pain, flulike symptoms and irregular, slow heartbeat. Acute rheumatic fever, which can result from an untreated streptococcus infection and also lead to damage of the heart and its valves, was placed near the bottom of the list. That raised the eyebrows of the more seasoned Children's Center faculty in the room who had treated scores of rheumatic heart disease patients decades ago. Why wasn't rheumatic fever higher on the differential list?

Residents responded that in the United States rheumatic fever is rare these days—1 in 100,000—thanks to the development of strep treatments. Their experience with rheumatic fever is limited to what they have read in medical texts and history books. [It's widely held that it was rheumatic fever that Wolfgang Amadeus Mozart succumbed to at age 35.] One resident conceded, "Our view can be skewed by the prevalence of disorders we tend to see."



"Our view can be skewed by the prevalence of disorders we tend to see."

That, along with the key tipoffs for rheumatic fever—a new murmur, unexplained acute tachypnea, an X-ray with no clear focal pneumonia, and no improvement of respiratory symptoms with treatment—were the take-home messages, says pediatric cardiologist **Diana Alexander**. Other cautions: Some kids with strep suffer very mild symptoms, and studies have shown that one-third of patients diagnosed with rheumatic fever give a history of only mild sore throat, which may not have prompted a sick visit to the doctor's office. When symptoms worsen and they do get to the pediatrician, the focus often tends to be on the lungs, especially in the winter when respiratory viruses thrive. If untreated strep and rheumatic fever are the underlying culprits, as in this case, carditis and valve inflammation have already begun. Symptoms of rheumatic fever, Alexander notes, generally appear within a few weeks after a strep infection: "By that time, the horse is already out of the gate and the inflammatory process in the heart has kicked in."

The good news, Alexander says, is that only about 3 percent of untreated strep patients develop rheumatic fever. "But the reality," she adds, "is rheumatic fever is something we always have to think about. Because it's not seen that often in this country, it can be missed." ∴

At CME

Continuing Education Schedule

2007

June 8

Long Term Consequences of Childhood Maltreatment: Successful Prevention Strategies and Treatment Interventions
Johns Hopkins Turner Auditorium

June 15

Pediatric Endocrinology for the Primary Care Clinician
Johns Hopkins Turner Auditorium

September 7-8

Frontiers in Research and Clinical Management of Asthma and Allergy
Johns Hopkins Asthma & Allergy Center.

For more information, or to register for courses, call 410-955-2959, or go to www.hopkinscme.net/

Pediatricians are invited to attend weekly Grand Rounds at 8:30 a.m. on Wednesdays and Case Conference on Fridays at 12:15 p.m., both in the Children's Center. For conference schedule, go to the Children's Center Web site at <http://www.hopkinschildrens.org/>, click "For Health Care Providers" on the left navigation bar, and then "Conference Schedule." For more information, call 410-955-2727.

Ted Leffler, the Quintessential Pediatrician

At first it appeared to be a typical Friday afternoon at Ellicott City Pediatrics. Moms with toddlers in tow checked in as staff streamed in and out of exam rooms. But the office seemed uncharacteristically quiet for a busy practice. There was little talk, no laughter. One mom looked somber as she removed her child's coat.

A notice on the front desk and sympathy cards tacked onto a bulletin board explained the pall over the office. Allan “Ted” Leffler, 66, the founder of the practice and a Howard County, Md., community pediatrician for over three decades, had been killed two weeks earlier in a car crash while on his way to see a newborn at Howard County General Hospital. Staff and families were grieving the loss of someone they would describe as a tireless patient advocate, a thorough clinician who thought way outside the box, a caring colleague and friend. He was, they said, the quintessential pediatrician.

“He was one of those docs who could make you feel like you got everything you needed,” says pediatrician Edward Cahill, who joined the practice in 1976. “No one ever felt they were getting the short end of the stick because he was so engaging.”

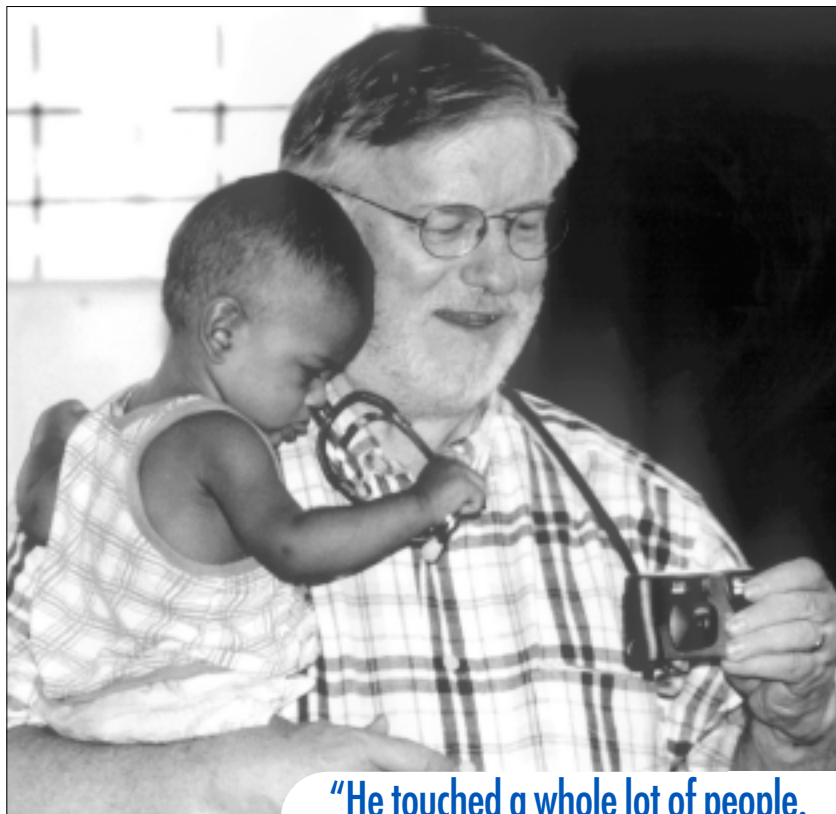
Adds office nurse Connie Chamberlin, “If he felt he wasn’t giving the patient and parent his full attention, he’d apologize and talk some more. ‘You’re my patient,’ he’d tell them. ‘I’m not going anywhere.’”

That, stresses Cahill, was Leffler since day one when he opened a solo practice in the basement of his home in 1970. A former chief resident in pediatrics at the University of Maryland Medical Center and an NIH fellow, he always wanted to keep up with academic medicine, but one-on-one with patients and parents was where he wanted to be. Communication, he believed, was fundamental to care.

“He listened to the mothers,” says assistant office manager Barbara Larrick, who has been with the practice for 24 years. “He always told them, ‘You know your child better than anybody.’”

Leffler truly knew his medicine, adds referral coordinator Cheryl Johnson, and he’d break it down so patients and families could understand what was going on: “He’d always start with a story to put them at ease.”

Preserving his way of practicing pediatrics, he resisted managed care and hospitalists taking over the care of his pa-



“He touched a whole lot of people. Thousands and thousands.”

tients. “At Howard County he was one of only two docs who asked for privileges. Everyone else signed their patients out,” says Cahill. After he retained his privileges at local hospital nurseries, Cahill adds, “He drove the neonatologists nuts.”

Being a maverick didn’t bother Leffler. What mattered was the investment of time and medicine in the patient, the depth of thinking underlying diagnosis and treatment. “He had ways of looking at things you never would have thought of,” explains Cahill. “While I could think of one idea for a problem he could think of 10.”

House calls, late-night calls, Leffler did it all. He reached outside

his practice, too. Sitting on the Howard County school health committee, he made sure there was a nurse in every school. With state medical societies he pushed to make vaccines available to all children. Each year he would spend some time in San Salvador, treating children who had little or no access to health care.

Recent years had been Leffler’s happiest, Cahill says, noting that he cut back on his patient load to free himself up for other activities. He liked building things—including two of the practice’s exam tables—and he loved to cook, though invariably he’d leave something out. Staff joke that he experimented with recipes the same way he experimented with office computer software. His greatest love, says Cahill, may have been sailing on the Chesapeake Bay: “God forbid you should try to reach him on a Wednesday afternoon.”

But staff, who one after another call Leffler “a wonderful boss” and “the best boss ever” because he sought and valued their opinion, might say where he wanted to be the most was in the office. There he would be in his trademark Birkenstock sandals, belly-laughing at the news on the Internet, telling stories in his soft-spoken, self-deprecating way.

“He touched a whole lot of people. Thousands and thousands,” says Johnson, citing the calls and letters, the outpouring from generations of patients and families following Leffler’s death. “He had a way of relating to people,” says medical receptionist Luann Maggio. “He made you feel like you were the only patient he had. It was his life, his passion.”

Engaging Families to Fight Obesity

When it comes to treating obesity, medicine's traditional model of determining what's wrong with patients flat-out doesn't work. What's needed is a fresh, competency-based model that builds on the strengths—rather than points out the weaknesses—of the patient and, more importantly, the family. That's the mantra of Owings Mills, Md., pediatrician **Dan Levy**, who's been developing childhood obesity treatment programs for the past 15 years with, he concedes, little success.

"In a certain way we have to demythologize the whole concept," Levy says. "If you keep on focusing on what's wrong with people, you'll turn them off."

This certainly appears to be the case with childhood obesity, which despite pediatricians' best efforts has tripled in numbers for 6- to 11-year olds since 1980 (see "Fighting Fat," p. 1). Their lack of success, Levy notes, can in part be attributed to pushing the patient separately to diet and exercise without engaging the family in the care plan. Why? Typically one or both parents of an obese child are obese themselves, and pediatricians fear offending them. But to change a child's behavior, you must



Physical trainer Amy Nusbaum meets weekly over four months with Dr. Levy's patients to help them develop exercise programs.

change the parents' behavior as well.

"If you can get buy-in and change the lifestyle of the family so they amend the way they eat and exercise, you have a pretty good chance," says Levy, who is also president of the Maryland chapter of the American Academy of Pediatrics.

A disciple of University of Pittsburgh psychologist Leonard Epstein, one of the country's leading experts on childhood obesity, Levy uses behavioral-choice theory—or how people allocate choice and decide to do things—in working with families. If two choices are incompatible, like being active or being sedentary, you can support the

choice you want or limit access to the choice you don't want. In his obesity studies, Epstein has found that reinforcing children's behavior—rather than restricting it—achieves better results.

Similarly, prescribing a high-intensity exercise program for a child will more often than not, according to the literature, fail. But lifestyle exercises that target parents, too—like parking farther from a store or a family hike to encourage walking—have been shown to be more effective than traditional exercise.

"When kids see they've got to get on a treadmill or exercise bike everyday, they quickly lose interest," Levy says. "But if they do things

with parents that are both fun and engaging—and aerobically sound—they're more likely to do it."

Levy's experience has also taught him that a one-stop shop model works best. That's why he employs a nutritionist, psychologist, social worker and sports trainer in his obesity program. Now he's looking to build a gym. But the formula for success, he adds, is really in the family approach.

"You look at the strengths of the family and feed into that, develop and plumb those gifts as a way of engaging people," Levy says. "You can't challenge people until you support them first." ∴