

# Pediatric Update

**A Resource for Physicians**

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## UCLA Program Helps Overweight Children

As more and more American children gobble fast-food lunches, spend limited time exercising in school, consume high-calorie snacks and sit at home for hours staring at a TV, computer or video box instead of playing outside, the problem of weight gain in children increases. And with that additional weight comes, in addition to a host of psychosocial problems,

an alarming rise in some health conditions once thought of as diseases of adulthood. Doctors, for example, increasingly are diagnosing adult-onset, or type 2, diabetes in overweight youngsters, along with high blood pressure and elevated cholesterol.

Testifying before a congressional committee several years ago, then-U.S. Surgeon General Richard Carmona stated that the rates of overweight children and adolescents have increased at a worrisome rate in the past 20 years, and he called the situation "a growing epidemic in our country."

Excessive weight among children is now characterized as the most serious and prevalent nutritional disorder in the United States. An estimated 11 million children and adolescents nationwide are overweight, and some 13 million more are at risk for becoming overweight. According to UCLA Assistant Clinical Professor of Pediatrics Wendy Slusser, M.D., an expert in childhood nutrition, with weight problems youngsters have a 70-percent risk of becoming overweight adults with increased risk factors for such weight-related health problems as heart disease, hypertension, osteoarthritis, gallstones, kidney stones,

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CONTINUED FROM PAGE 1 sleep apnea, colon cancer and stroke, among others.

Increasingly, a public light is being shined on the problem through such programs as the Alliance for a Healthier Generation, a partnership of the American Heart Association and the William J. Clinton Foundation. In December 2007, the journal *Pediatrics* dedicated a 125-page supplement to the issue of overweight children. As part of that growing recognition, UCLA is joining a number of health centers across the country that have established multidisciplinary programs focusing on treatment of overweight children. For information about the UCLA Fit for Healthy Weight Program, go to [www.fitprogram.ucla.edu](http://www.fitprogram.ucla.edu) or call 310-UCLA-FIT (310-825-2348).



Children are classified as overweight if their body mass index, BMI, a calculation based on height and weight, is at or above the 85th percentile but less than the 95th percentile in comparison to national statistics for children their age, and obese if their BMI is at or above the 95th percentile.

"The goal of this program is to work with the doctors in the community to serve a group of children who traditionally have been challenging for general pediatricians to take care of," says Dr. Slusser, who is among the lead physicians for the UCLA Fit for Healthy Weight Program.

In addition to a general pediatrician whose professional focus is nutrition, the UCLA program includes an endocrinologist, gastroenterologist, psychologist, dietitian, exercise physiologist, and a pediatric bariatric surgeon. Daniel DeUgarte, M.D., surgical director of the program, notes, "Only select patients

range of the child's health issues.

"Not only will we address children's medical needs, but we can also work on their weight loss, which is very important to their overall treatment and will ultimately help to reverse their problems," Dr. Slusser says.

"This program is part of an overall strategy to fight the epidemic," says Edward R.B. McCabe, M.D., Ph.D., director of Mattel Children's Hospital UCLA. "It is a problem that needs to be aggressively addressed." Part of that strategy includes increasing children's activity levels. Toward that end, the UCLA program has partnered with a program on campus, the Bruin Kids Club presented by Mattel Children's Hospital UCLA, which has UCLA athletes serving as mentors and role models for youngsters. "It is a great way to try to get the kids to increase their physical activity," Dr. McCabe says. (See back page for more about Bruins Kids Club.)

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who undergo a minimum six-month evaluation will be candidates for minimally invasive weight-loss and metabolic surgery."

"We will work to find out the root of their weight problem that hasn't responded to the less-intensive efforts in the primary-care setting," Dr. Slusser says. "Based on our assessment, we will determine the needs for each individual child."

Dr. Slusser notes that *Pediatrics* laid out a four-tier system for managing overweight children. The first two tiers can be undertaken in a community pediatrician's office and involve identification, assessment of risk factors, nutritional guidance and structured weight management, while the third and fourth tiers require a more specialized, multidisciplinary approach such as that offered by the UCLA program. A general pediatrician might not be comfortable, for example, managing a child with metabolic syndrome; in such a case, the UCLA program offers a multidisciplinary team that addresses the

The cornerstone of therapy to treat weight issues in children—as with adults—remains diet and increased physical activity. Thirty to 40 minutes of sustained exercise at least five days a week is recommended for children. A diet that offers the full Recommended Daily Allowance of vitamins, minerals and proteins and is based on fruits, vegetables, whole grains, non-fat and low-fat dairy products, fish, lean meat and beans, is preferable. Changes in diet seem to be most successful when preparation of familiar foods is modified rather than new foods being substituted. ★

#### **Recommended Reading**

John-Sowah J, et al. Assessment of child and adolescent overweight and obesity. *Pediatrics*. 2007 December; 120(6) (Supplement): S163-S288.

Weiss R, Taksali SE, Tamborlane WV, Burgert TS, Savoye M, Caprio S. Predictors in changes in glucose tolerance status in obese youth. *Diabetes Care*. 2005 April; 8(4): 902-909.



# Less Invasive Surgeries Increasingly Performed in Children

Minimally invasive pediatric surgeries have increased dramatically at major academic centers such as UCLA in recent years—both in the breadth of surgeries in which minimally invasive techniques such as laparoscopy and thoracoscopy are being used, and in the proportion of patients for whom these techniques, in which pediatric surgeons operate through tiny incisions in the abdomen or chest, are employed.

“A high percentage of the operations we do are now using these techniques,” says Stephen Shew, M.D., UCLA pediatric surgeon. He notes that as pediatric surgeons have gained more experience with the minimally invasive approach, clear advantages over traditional open surgery have emerged, most notably in the area of cosmetics.

After minimally invasive techniques

were first used in adults in the late 1980s, demand for the procedures skyrocketed among the adult population in the 1990s, Dr. Shew notes, as benefits such as less pain, shorter length of hospital stay and faster recovery time became apparent. Pediatric surgery has lagged behind the trend for several reasons. Perhaps most significantly, given that children represent a small segment of the overall surgery population, the manufacture of instruments tiny enough to enable pediatric surgeons to operate within the limited confines of a child’s abdomen or chest was slower in developing. Once that occurred, and as the number of pediatric surgeons trained in minimally invasive surgery grew, the trend took hold. Dr. Shew notes that widespread publicity about the procedures has greatly increased demand among parents, accelerating the shift.

Certain benefits may be less pronounced in children. For example, since pediatric patients tend to recover significantly more rapidly than adult patients after open surgery, the reduction in recovery time is likely less among children after minimally invasive procedures than for adults. It is believed that children, like adults, enjoy shorter length of hospital stay and less need for pain medicine following minimally invasive operations, though these observations have yet to be confirmed in randomized prospective trials.

The indisputable benefit of the tiny incisions necessitated by minimally invasive surgery is the smaller scars that result. “Children tend to have a better body image after minimally invasive procedures,” says James Dunn, M.D., UCLA pediatric surgeon. He recently saw two brothers who had both had appendectomies, one laparoscopic and one open. “The differences were pronounced,” Dr. Dunn says.

He notes that smaller scars are particularly important for children given that the scar grows along with the child. “A one-inch scar for an infant may expand to several inches by the time that infant is an adult,” says Dr. Dunn. The faster recovery time—even if it’s not as big a difference as in adults—means that children are able to resume normal activities more rapidly after minimally invasive surgeries than after open procedures, typically within two to three weeks, he adds.

Nissen fundoplication, appendectomy, intestinal pull-through procedures (such as for Hirschsprung’s disease and ulcerative colitis) and lung surgeries have been most affected by the move toward minimally invasive surgery, but virtually every type of operation can be done with the new approaches, says Daniel DeUgarte, M.D., UCLA pediatric surgeon.

Certain patients may not be good candidates, including patients with severe heart or lung deficits, who may not be able to tolerate the inflation of air into the abdomen. “We always tell parents there is a possibility that we won’t be able to proceed in the minimally invasive way and will have to switch to the traditional surgery,” Dr. Shew says. “But those are rare cases. There are few surgeries that can’t be done using minimally invasive techniques.” ✨



# New Vaccines Must Be Given Universally to Benefit Public Health

**T**he recent approval of several new vaccines for children and adolescents promises to bring major public health benefits—but only if they are universally applied, says James Cherry, M.D., UCLA pediatric infectious diseases expert.

Highly effective shots are now available to inoculate against human papillomavirus (HPV); rotavirus; meningitis; tetanus, diphtheria and pertussis; and, now in combination, measles, mumps, rubella and varicella (MMRV). But some fail to appreciate the importance of achieving herd immunity—in effect, eliminating the diseases from the population—by ensuring that the vast majority of patients receive the vaccines.

“The reason we have been successful against diseases such as measles, mumps, rubella and polio is that we’ve

been able not only to immunize individuals but to reach enough of the population that we create herd immunity so that the disease can’t circulate and find those who aren’t immunized,” Dr. Cherry notes.

Reaching a critical mass of the population is particularly challenging when it comes to shots for older patients, such as adolescents and adults, many of whom tend to have weak ties to the healthcare system, Dr. Cherry says. Compounding the problem are misconceptions about the risks associated with available vaccinations. Most prominent among these is the well-publicized concern that MMR and thimerosal are linked with increased autism risk, despite the absence of any credible scientific evidence to support the claim and numerous studies that have refuted it.

“A number of parents are coming in with misinformation, and it’s up to pediatricians to be persistent in explaining that these vaccines are safe and important,” Dr. Cherry says. He suspects that many of those who are not forceful enough in pushing for the vaccines are too young to have seen firsthand the havoc caused by the likes of bacterial meningitis, polio, measles, rubella and mumps.

Among the most promising of the new immunizations is the HPV vaccine, which has been approved by the Food and Drug Administration (FDA) to prevent cervical cancer and genital warts in females ages 9 to 26 years and is recommended to be routinely given to girls at age 11 or 12 years, prior to the onset of sexual activity. The vaccine contains the serotypes that cause up to three-fourths of cervical cancers and roughly the same proportion of genital warts, Dr. Cherry notes, and large studies have shown no significant side effects.

Within the next two years, the recommendation for boys will be the same as that for girls—a critical step toward the goal of herd immunity, Dr. Cherry notes. Although there has been some political resistance to the shots, particularly among people with a moral objection to a vaccine for a sexually transmitted disease, it appears that the greater challenge is reaching adolescents and pre-adolescents who aren’t regularly seen in the healthcare system.

The rotavirus vaccine, which is recommended for infants, protects against an infection that is the most common cause of severe dehydrating diarrhea in babies and young children, and is estimated to be responsible for 500,000 physician visits and tens of thousands of hospitalizations in the United States each year. Because rotavirus-caused diarrhea tends to be less severe in more affluent populations, some physicians fail to push the vaccine, Dr. Cherry says. “The fact is that it works, it will decrease rotavirus





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disease substantially—possibly even achieving herd immunity—and the cost saving from hospital admissions will be tremendous,” he asserts.

Menactra, which protects children from several strains of meningococcal bacteria—including the leading cause of bacterial meningitis in adolescents—is recommended to be given routinely to all 11-year-olds. But thus far, a low percentage of eligible patients has received the shot. “The vaccine prevents a terrible disease, which can cause long-term disabilities or death,” Dr. Cherry says.

The new Tdap vaccine, which combines vaccines against tetanus and diphtheria with the acellular pertussis vaccine, is also recommended for all pre-adolescents and can be given at the same time as Menactra and, for girls,

the HPV vaccine. Adherence to this recommendation is also low, though Dr. Cherry hopes that will soon change. Pertussis is common in teens and adults in the United States; it is also highly contagious, and when transmitted from adults to infants the consequences can be particularly severe. “For herd immunity, we will have to immunize adults at periodic intervals as well as adolescents,” Dr. Cherry notes.

As for the new MMRV vaccine, which combines MMR and a varicella vaccine into one shot, Dr. Cherry says it is not vital that patients receive the four-type shot, but everyone should be given MMR and V, whether together or separately. “The circulation of measles and rubella has

been eliminated in this country thanks to continued vigilance in immunizing the population,” he notes. “We have had mumps outbreaks the last two years, so we need to work harder at getting patients second doses of that vaccine, since the vaccine is not quite as effective. And anywhere varicella vaccine has been used, there has been a marked reduction in the number of cases.”

All things considered, Dr. Cherry believes most pediatricians do an excellent job in ensuring that their patients receive the appropriate immunizations. “It’s not always easy given the misinformation that’s out there,” he says, “but we must continue to work hard at this. The consequences if we don’t are too severe.”



## Recommended Reading

Immunization Action Coalition  
[www.immunize.org](http://www.immunize.org)

Centers for Disease Control and Prevention  
[www.cdc.gov/vaccines](http://www.cdc.gov/vaccines)

Parents' Guide to Childhood Immunizations  
[www.cdc.gov/vaccines/pubs/parentsguide](http://www.cdc.gov/vaccines/pubs/parentsguide)

## Health Tips for Parents

Our easy-to-read “Health Tips for Parents” series tackles important issues for parents to keep their children healthy. UCLA experts address topics such as flu shots, the overscheduled child, sibling rivalry, nutrition, eating disorders and more. You can download copies of “Health Tips for Parents” in English or Spanish at [www.uclahealth.org](http://www.uclahealth.org) and click publications. Or call, **310-794-8949** for more information.

**HEALTH TIPS** for Parents  
Produced by UCLA Healthcare Pediatric Neighborhood Offices  
January 2006

**How important are childhood friendships?**

Using social and emotional development as a tool, parents can help their children develop healthy relationships. Children's friendships are important because they help children learn to share, cooperate, and solve problems. Children's friendships also help them learn to deal with conflict and build self-esteem.

**Make the connection**

In elementary school, children begin to form friendships. Parents can help their children develop healthy relationships by encouraging them to play with friends, share toys, and help each other. Parents can also help their children learn to deal with conflict by teaching them to use words to solve problems.

**Be a good role model**

Children learn by watching their parents. If parents show their children how to be kind, helpful, and respectful, their children will learn to do the same. Parents can also help their children learn to deal with conflict by showing them how to use words to solve problems.

**Encourage your child to be a good friend**

Children who are good friends are more likely to be successful in school and in life. Parents can help their children develop healthy friendships by encouraging them to play with friends, share toys, and help each other. Parents can also help their children learn to deal with conflict by teaching them to use words to solve problems.

**HEALTH TIPS** for Parents  
Produced by UCLA Healthcare Pediatric Neighborhood Offices  
November 2005

**Should my child get a flu shot?**

With the holiday season just beginning, another annual flu season is just around the corner. Although it's not yet time to get your child's flu shot, it's a good idea to think about it now. The flu is a common illness that can be prevented with a flu shot. The flu shot is a vaccine that helps protect your child from the flu. It's a good idea to get your child's flu shot every year.

**Who should get a flu shot?**

The flu shot is recommended for everyone 6 months of age and older. This includes children, adults, and pregnant women. The flu shot is also recommended for people who live in long-term care facilities, work in health care, or have a chronic medical condition.

**When should I get a flu shot?**

The best time to get a flu shot is in the fall, before the flu season begins. The flu season typically lasts from October to May. It's a good idea to get your flu shot before the flu season begins.

**Where can I get a flu shot?**

There are many places where you can get a flu shot. You can get a flu shot at your doctor's office, a community health center, or a pharmacy. You can also get a flu shot at a school or a workplace.

**Is the flu shot safe?**

Yes, the flu shot is safe. It's a vaccine that has been tested and approved by the Food and Drug Administration. The flu shot is also safe for pregnant women and young children.

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# UCLA Expands Drug Clinical Trials Involving Children



Less than one-fourth of the drugs approved by the U.S. Food and Drug Administration (FDA) are labeled for pediatric use, due to historic disincentives for pharmaceutical companies to include children in clinical trials. “For every day that a drug doesn’t reach the market, the company behind it is losing millions of dollars,” says Edward R.B. McCabe, M.D., Ph.D., professor and executive chair of the UCLA Department of Pediatrics and physician-in-chief of Mattel Children’s Hospital UCLA. “Expanding clinical trials to include

children increases the cost and introduces the risk that you will see side effects that you don’t see in adults, further delaying the time to market.”

Thus, in pediatrics most drugs have been used off-label—prescribed without having been tested in a controlled setting. This introduces several concerns, notes Theodore Moore, M.D., pediatric hematologist-oncologist at Mattel Children’s Hospital UCLA. “Children metabolize drugs differently than adults,” he says. “You can’t just say a child is 20 pounds so I’ll give him one-tenth the dose I would give a 200-pound

adult. In addition, children are actively growing—their bones are forming, their neurologic system is developing—so a drug may affect them differently than adults.”

Adds Dr. McCabe: “In effect, pediatricians have been forced to conduct unsupervised clinical trials. In that sense, it takes a lot longer to identify serious side effects, because no one is tracking the data.”

That has begun to change. In 1997 the Food and Drug Administration Modernization Act was signed into law. Reauthorized in 2002 as the Best Pharmaceuticals for Children Act, it gives companies an extra six months of marketing exclusivity on their patent if they perform appropriate studies for children showing an indication for their drug. This provision, endorsed by the American Academy of Pediatrics, has resulted in more than 100 drugs being approved for pediatric use.

Mattel Children’s Hospital UCLA has also been a major supporter, taking steps to increase the number of clinical studies involving children. In 2006, Dr. McCabe established an Office of Clinical Trials within the Department of Pediatrics, aimed at increasing clinical research within the department by providing resources to assist and support faculty. The office, under the leadership of Erica Stanley, J.D., is designed to encourage more clinical research by faculty in collaboration with industry and government sponsors.

Researchers are assisted in all administrative functions, with Stanley serving as a liaison between the faculty and the university’s contracting offices as well as providing support in dealings with the institutional review boards. Those pursuing clinical studies receive support in developing budgets and tracking payments. An educational component is also being developed for research study staff.



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*With the Best Pharmaceuticals for Children Act as an impetus, UCLA clinical researchers have been involved in a variety of efforts to team with drug companies in ways that will bring new pediatric cancer drugs to market.*

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In addition to ensuring that approved agents have undergone appropriate tests for dosing and side effects in children, the push to increase clinical trials within the department is driven by the need for new drugs for diseases in which the current standard of care is inadequate. This is particularly true in cancer. "There are more than 400 anti-cancer drugs in the pipeline of drug companies, almost none of them developed with children in mind," says Dr. Moore. The reason is simple, he notes. Approximately 14,000 pediatric cancers are diagnosed each year; by comparison, breast cancer alone is diagnosed in 50,000 adults each year. "A drug company is not going to make a profit off of just treating children with cancer," Dr. Moore explains.

And yet, the need for new treatments is substantial. "We need more clinical trials to investigate new therapies for children, because we are still unable to cure all patients with pediatric tumors," says Kathleen Sakamoto, M.D., Ph.D., pediatric hematologist-oncologist at Mattel Children's Hospital UCLA. She notes that despite significant strides, approximately 20 percent of pediatric cancer patients relapse or have resistant disease. "We must take the reins and find new therapies for these children," Dr. Sakamoto says. "In addition, although we are giving chemotherapy and 80 percent of children who get cancer today are cured, we are now realizing that many of our children have long-term complications from their treatment. So we also must find ways that we can treat these children without producing long-term complications."

With the Best Pharmaceuticals for Children Act as an impetus, clinical researchers such as Drs. Moore and Sakamoto have been involved in a variety of efforts to team with drug companies in ways that will bring new pediatric cancer drugs to market. In many cases, that has meant getting appropriate existing drugs that have been developed and tested for adult cancers into trials for pediatric tumors. Mattel Children's Hospital UCLA is one of five institutions

across the country that have partnered with the Glaser Pediatric Research Network to bring new clinical therapies for pediatric diseases; as part of this effort, Dr. Moore collaborated with the manufacturer of rituximab to conduct a pediatric study for a drug that had only been tested in adults. Dr. Moore's team is also part of the Children's Oncology Group, a multi-institutional collaborative group leveraging its status as a consortium in an effort to spur development of new drugs and clinical trials for pediatric tumors.

"Most drugs that pediatricians are using have still not had the appropriate studies done in children," concludes Dr. Moore. "The new incentives for drug companies are an important step. As pediatricians, we all need to continue to support efforts to have more clinical trials that include children."



**To contact any of the doctors** referred to in this issue, or to correspond with a Mattel Children's Hospital UCLA specialty pediatrician, click the "contact us" icon on our website, **[www.mattel.ucla.edu](http://www.mattel.ucla.edu)**, or call **1-800-252-4933**



*The Bruin Kids Club* presented by Mattel Children's Hospital UCLA is an exclusive membership club for kids ages 13 years old and younger. Members will have the opportunity to meet new friends, participate in exclusive Kids Club events, and attend sporting events to cheer on their favorite Bruins. This club provides members with a chance to become a part of the excitement of UCLA Athletics!

Join online now at [www.uclabruins.com](http://www.uclabruins.com)

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