Doctors have known for years that adults with thick necks and weight problems are likely to struggle with obstructive sleep apnea syndrome (OSAS), an occasionally life-threatening condition in which the upper airway becomes constricted, interrupting an otherwise peaceful night of sleep.

Unfortunately, doctors are now learning something else: Like so many other health-related issues, what’s true of adults is also becoming true of children. “Excess weight makes an individual’s airway smaller, and that can have a disruptive effect on a child’s nighttime breathing,” says Dr. Christopher Green, a UW Health pediatric pulmonologist who studies and treats the condition. “It’s becoming a big issue.”

OSAS more commonly affects children with Down Syndrome—in fact, they’re 17 percent more likely to have it than non-Down’s children. But Green believes the number of non-Down Syndrome children who have the condition is significant and growing, in part because it doesn’t account for the spectrum of pediatric sleep disorders that affect children, from simple snoring and obstructive hypopnea (slow shallow breathing) to upper airway resistance syndrome.

“Too frequently, parents and physicians either fail to recognize the problem, or believe that snoring or sleep apnea is something a child will grow out of,” says Dr. Green. “But emerging research is showing substantial behavioral effects in children who experience nighttime obstruction, even in those who simply snore.”

Those effects can include a long list of behaviors that can negatively affect school performance and socialization: hyperactivity, aggressive and/or antisocial behavior, as well as difficulty with concentration, learning and memory.

“As adults, we know that if we don’t get an appropriate amount of sleep, we may not drive our car as well the next day, or perform well at work,” he notes. “The same is true for children whose sleep patterns are disrupted.”

To help parents and physicians recognize and address this growing problem, Dr. Green, along with Dr. Mark Kiehn, a UW Health craniofacial surgeon, has formed a Pediatric Sleep Apnea clinic. Currently, the two treat patients at the Waisman Center in Madison two afternoons a month; in the fall, the clinic will expand its hours as it moves to a new location in UW Research Park to become part of the new Wisconsin Sleep center.

Children who are battling obesity or have enlarged tonsils and adenoids are most at risk to develop OSAS. A sleep study can help to diagnose the condition, and, once recognized, multiple treatments can help to alleviate it. The first-line defense is surgical removal of the tonsils and adenoid glands. “You have to take out both, or you won’t fix the problem,” says Green.

To learn more about OSAS and UW Health’s Pediatric Sleep Apnea Clinic, visit uwhealth.org or contact (608) 263-9425.
Among baby boomers and active younger patients, interest in hip resurfacing surgery, a bone-sparing procedure available for the last year at UW Hospital and Clinics, continues to soar.

It’s easy to understand why. Patients with resurfaced hips are enjoying increased range of motion and decreased dislocation, making it possible for them to return to a fully active lifestyle. Unlike traditional total hip replacement, a procedure in which surgeons cut the neck of the femur and remove the femoral head, resurfacing a hip involves removing the cartilage at the end of the femur, placing a metal cap over the top, and repositioning it in a metal socket. For patients in their 30s and 40s, resurfacing provides the important benefit of preserving bone in the event a future hip revision surgery is needed.

At UW Health, three fellowship-trained surgeons—Dr. John Heiner, Dr. Richard Illgen and Dr. Matthew Squire—perform the procedure.

The surgeons caution that hip resurfacing isn’t for everybody. Younger patients with good bone quality are the best candidates for the procedure; patients with poor bone quality or kidney problems are not. Women are also less likely to be candidates for hip resurfacing if they’re planning to have children or suffer from dysplasia.

In countries like Australia, where hip resurfacing has been the standard of care for several years, approximately 15 percent of patients needing a hip surgery to manage severe arthritis qualified as good candidates for hip resurfacing. Even though interest in hip resurfacing is high, the surgeons expect those numbers to be similar for U.S. patients.

“To get good outcomes, it’s important to have experienced surgeons and physical therapists to help patients navigate the recovery process and return to an active lifestyle,” says Dr. Illgen. “That is one of our strengths.”

Four different state-of-the-art rehabilitation facilities in the Madison area make a huge difference in recovery for patients, as does an aggressive, sensible post-rehabilitation protocol that focuses on a team-based approach involving both doctors and physical therapists.

“The way we’re approaching this is radically different than when we were doing total hip replacements a few years ago,” notes Dr. Illgen. “Then we weren’t talking about patients asking, ‘Can I go back to playing tennis and biking?’ Now we are, and we couldn’t be happier about it.”

As the word about hip resurfacing continues to spread, orthopedic surgeons at UW Health are already looking at the next evolution of the surgery: computer-assisted hip resurfacing. “We already have the technology on hand here in the hospital,“ says Dr. Squire. “It makes sense for us to explore that.”

For more information about hip resurfacing at UW Hospital and Clinics, contact (608) 263-4069 or visit uwhealth.org.

GOVERNOR DOYLE AND HIP RESURFACING

Governor James Doyle had his hip resurfaced in March at UW Hospital and Clinics by Dr. Richard Illgen, a UW Health orthopedic surgeon. He was back on his feet and back at work at the Capitol within a few weeks. Now that he’s had time to recover, we caught up with him to ask about his experience.

How has hip resurfacing changed your life and your ability to stay active?

“Although the weeks immediately after my surgery were a challenge, I’ve gotten to the point where I pretty much have full mobility,” says Doyle. “My doctors and surgeons did such a great job. I’m looking forward to some long walks and maybe even hitting a few balls around the golf course this summer.”

What would you tell your friends who might be considering hip resurfacing?

“I would tell them that it’s something they should really look into. If it’s a person who is planning on maintaining an active lifestyle after surgery, hip resurfacing might be the way to go. For me, it was the best option. The operation has allowed me to continue living much as if I had never had surgery at all.”

Anything else?

“While it might not be right for everyone, hip resurfacing has so far worked out well for me. The operation has probably allowed me a quicker and fuller recovery. I’m thankful that everything has worked out well and glad I made the decision that I did.”
Teresa Strine assumed that the birth of her third child would go as smoothly as her first two. She couldn’t have known that her son, TJ, would be born with a condition called Pierre Robin sequence—his lower jaw was both unusually small and set back, creating a dangerous blockage in his airway.

“My doctor told me he’d be having surgery at two days old,” recalls Theresa, a CAD technician for an engineering firm in Spring Green, Wis. “To me, there was no way. I couldn’t grasp it.”

As it turned out, a heart defect meant that TJ would wait several weeks longer to have his surgery—a new procedure called mandibular distraction.

Using a device that allows no movement or shift, Dr. Delora Mount, a UW Health pediatric plastic surgeon, surgically inserted a pair of small pins into TJ’s jaw. Over the course of the next week, Dr. Mount repeatedly turned the pins a microscopic amount, gradually moving TJ’s jaws apart and allowing the bone to grow and fill in the gap.

“In most cases, we want to bring the jaw out far enough that we overcome their airway obstruction,” explains Dr. Mount. TJ’s surgery occurred in 2005. Two years later, his appearance and breathing are completely normal—an outcome that thrills the entire Strine family.

“Up until this happened to my son, I considered plastic surgery as an optional thing,” says Theresa. “For TJ, it was a matter of life and death.”

TJ is just one of hundreds of children each year whose lives—and appearances—have been improved by UW Health’s multidisciplinary pediatric plastic surgery program. The program includes Dr. Michael Bentz, Dr. Mark Kiehn, Dr. Mount and Dr. John Siebert. Together, they treat a wide variety of congenital and acquired deformities in children, from cleft lip and palate to fused fingers and micrognathia.

And while most of the procedures UW Health surgeons treat might be defined as cosmetic, to the patients, they’re also functional, and, in many cases, essential for normal growth and development.

“A lot of people think it’s called plastic surgery because we put plastic in the kids,” says Dr. Mount. “But the fact is, nothing could be further from the truth. What we’re doing is taking tissue from one area in the body and molding it to function in a different area.”

Some procedures, like cleft lip repair, can be done early, when a child is between 6 weeks and 12 months old. Others, like cleft palate repair, generally occur later, when the child is old enough to handle a major surgery. Patients are monitored post-surgically for any speech or hearing problems, as well as any future orthodontic or jaw surgery needs. The surgeries, while complicated, generally only require a single night’s stay in the hospital.

“The patient success rate on these types of surgeries is very high, both from a speech standpoint and a healing standpoint,” says Dr. Mount.

Once Drs. Mount, Kiehn and Bentz have done their work, Dr. Siebert steps in, using tissue from other parts of the body to recontour the child’s face, sculpting what’s missing to correct any remaining irregularities.

“It’s a little like building a house,” says Dr. Siebert. “To do it well, you need a team approach. We’re trying to give the child’s face a natural flow, to make it look pleasing and harmonious.”

Not surprisingly this type of procedure can be draining, both on the patients and their families. To ease the process, UW Health surgeons use pre-surgery counseling sessions (including before and after pictures) and testimony from parents whose children have successfully completed surgery to help new patient families navigate the process.

“When we show them the pictures, each family is amazed at what a difference it makes, both aesthetically and functionally, to their child.”

With the opening of the new American Family Children’s Hospital in August 2007, UW Health’s pediatric plastic surgery program will expand to a larger space and a greater role. For more information about the program or to refer a patient, contact (608) 263-2376 or visit uwhealth.org.
Steve Myrah has traveled to Costa Rica and Belize to admire exotic birds. He’s journeyed to South Africa on an animal-watching excursion. And this summer, the 68-year-old retired university administrator and his wife are planning to sail the Aegean Sea.

He’s traveled the world, but Steve Myrah can’t walk a block down his own street without having chest pains.

Having suffered from severe coronary artery disease since his mid-40s, Myrah is participating in a trailblazing clinical trial investigating whether a person’s own stem cells can stimulate the growth of new blood vessels in the heart.

Myrah is the first patient to be treated in the UW School of Medicine and Public Health portion of a national study investigating the use of adult stem cells to treat patients with a severe type of coronary artery blockage called chronic myocardial ischemia (CMI). Myocardial ischemia is a serious heart condition that results in limited blood flow to the heart, affecting hundreds of thousands of new individuals each year.

Promising treatment offers new hope

Like Myrah, patients eligible for the study have exhausted other conventional “revascularization” treatments to restore blood flow in the heart, such as surgical coronary artery bypass or angioplasty.

“In patients without other options who have failed medical therapy, this treatment strategy offers the potential of new hope for improved quality of life,” says Dr. Amish N. Raval, head of cardiovascular regenerative medicine at the UW School of Medicine and Public Health. Raval is the principal investigator for UW’s portion of the study.

Myrah, who first began experiencing chest pains in the 1970s, has undergone three angioplasties—a procedure to restore blood flow through several narrowed arteries in his heart—and a five-vessel coronary artery bypass surgery. None of these procedures offered permanent relief for his pain.

Myrah says he’s optimistic about the innovative new treatment, though he recognizes that he might have received a placebo rather than his stem cells.

“I’d settle for half as much chest pain as I have now,” says Myrah, who daily wears time-released nitroglycerin patches to help ease his discomfort. The patches must be removed for eight hours a day, so he also uses four to seven under-the-tongue nitroglycerin pills a day.

Using stem cells to stimulate vessel growth

In February, Myrah was injected with a protein that helps to release adult stem cells called CD34+ from his bone marrow into his bloodstream. Next, Myrah was connected to a special cell separation system to collect the CD34+ stem cells from his bloodstream.

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Parents end up selecting their children’s sports in ways as diverse as the sports themselves. Some pick a particular sport because they want their kids to stay fit or have fun. Others are looking to live vicariously through their children, to relive the good experiences they had playing the sport when they were kids themselves. Still others opt for the heavy-pressure route, convincing themselves that their kids can become the next Tom Brady and Kobe Bryant.

If you ask the experts, however, they’ll tell you that the most sensible way to select a sport for your child starts with—surprise!—the child.

“The best approach is to have the kids pick the sport that they think is fun—and then try to expose them to many sports,” says Dr. David Bernhardt, a pediatrician and sports medicine physician with UW Health.

“A variety of different sports can give your child significant benefits from a coordination and fitness standpoint.”

Like an increasing number of physicians, Dr. Bernhardt worries about a national trend toward children specializing in a single sport at a young age. While year-round specialization may breed an increase in skills, it also carries increased risk—of overuse injuries, boredom and burnout. Add to that the all-too-common parental pressure to succeed, and you have a potential recipe for disaffection and disaster.

“Unfortunately, I have plenty of examples of teens who have told me, ‘I want to quit but I’m afraid to tell my parents,’” says Dr. Bernhardt.

Paying attention to how your kids are feeling about the sports they’re playing is a key way to head off problems. Matching their personalities and skills to the sports to which you expose them in the first place is another. For example, a high-energy child who has trouble sitting still might find baseball—a sport that requires significant amounts of standing around both during and between innings—frustrating. A sport like ice hockey, by contrast, offers fast action and a quickly changing environment—great for the spirited child, but perhaps not as rewarding for a deliberate one.

Other sports, like football or soccer, may be more suitable for multiple types of kids’ personalities and body types.

“From a physical standpoint, there’s a position for anyone who wants to play football, no matter what their build,” notes Bernhardt. While slower, larger kids can play line, speedier kids who lack strength might gravitate to a position like wide receiver and defensive back.

“The other thing that’s nice about football is that there’s a lot of thinking involved, so as the kids learn plays, they learn techniques in terms of blocking and tackling. For kids who don’t have endurance, there are breaks every 30 seconds between plays and there’s something everybody has to be doing on every play.”

Basketball offers a similar set of mental benefits, but may be a more demanding sport physically. Kids who can handle the constant up-and-down-the-court action will get a serious cardiovascular workout; those who struggle to keep up or have trouble dribbling the ball may not.

“Building now For the future

UW Health Sports Medicine Center offers a developmental performance program for 9- to 12-year-old athletes looking to prepare for the rigors of athletic performance or to develop an active and healthy lifestyle. These programs introduce essential muscular and movement patterns through workouts designed to be fun and promote self-esteem and self-confidence.

The program runs from 3:30–4:30 p.m. on Mondays and Wednesdays throughout the summer, from June 11-August 29.

For more info, visit uwhealth.org/power2.
If you’re a sports fan—and frankly, even if you aren’t—you can’t help but have heard the gigantic crash as human growth hormone (hGH) bumped the discussion of anabolic steroid use in professional sports to the sidelines.

But as national pundits debate whether the achievements, careers and comeback bids of professional athletes are tainted by performance-enhancing supplements, physicians and geriatricians in Madison and across the country find themselves dealing with questions from an entirely different group of individuals: Older patients wondering if a shot of hGH might help them recapture the look and energy of lost youth.

“There’s a big group out there arguing that the ravages of age can now be explained by a deficiency in hormone X or Y, and it just so happens that some believe passionately that it’s hGH,” says Dr. Steven Barczi, a UW Health geriatrician.

Doctors know that a person’s normal levels of growth hormone, an anabolic hormone produced by the brain’s pituitary gland, begin to decline around age 20. By the time a person hits 50—coincidentally, about the same time many men’s muscle mass begins to give way to fatigue and middle-aged spread, growth hormone levels are much lower. Since the small number of patients diagnosed with an actual growth hormone deficiency also experience fatigue and muscle loss, the notion of simply replacing hGH to restore muscle and stamina seems an easy leap—right?

Not so fast, says Barczi.

“If you look at a person with chronic health problems, and say, well, this is all explained by a growth hormone deficiency, I’d say this is pretty shaky ground,” says Barczi. “There are many other conditions and lifestyle choices that can cause fatigue and muscle loss.”

To most physicians, hGH—a substance the U.S. Food and Drug Administration outlaws except in rare medical instances—is used exclusively to treat children and adults with documented growth hormone deficiencies, as well as children with certain congenital disorders that affect growth. In short-term, tightly regulated doses, growth hormone can trigger the body to burn fat, increase muscle mass and stamina.

But there’s also a downside. When it’s used in an unregulated manner, over prolonged periods of time, doctors say growth hormone can have devastating effects on the body.

Dr. Diane Elson, a UW Health endocrinologist, ticks off the possible drawbacks of using hGH long-term: elevated blood pressure, enlargement of the heart, liver and bones, sleep apnea, carpal tunnel syndrome, soft-tissue swelling and even risk of colon polyps. hGH also plays havoc with the body’s ability to control glucose levels, potentially triggering diabetes. Some of these effects take time to develop, and some, like hypertension and diabetes, don’t go away when the patient stops taking the hormone.

“The concern about the average person using growth hormone and using it because he thinks it’s going to make him stronger, faster and have better endurance is that it may have the opposite effect,” says Elson.

Doctors don’t yet know what happens to individuals who take growth hormone over a period of decades—the hormone has only been available for 20 years. They do know what happens to patients with acromegaly, a rare disease in which a tumor causes excessive growth hormone production.

“The excess hormone actually shortens their lifespan, sometimes by as much as ten years,” says Elson, who notes that the major cause of death from excessive growth hormone is actually cardiovascular disease.

“Patients don’t feel well. They have joint pain. They’re less mobile. Unmonitored, excessive growth hormone is far from a fountain of youth.”

Barczi says he only sees a handful of patients each year who ask about using growth hormone to combat aging. Both he and Elson acknowledge that there’s a growing national interest and demand for hGH, fueled in part by its rumored use among professional athletes. On the Internet and in less-than-reputable clinics in cities across the country, patients are paying thousands of out-of-pocket dollars to obtain hGH in vials.

Don’t believe the hype, says Elson.

“Don’t waste your money, your health or your time. I certainly understand the sense of getting older, wanting to push back the clock and feel younger. But I think there are safer ways to stay younger and healthier—better diet, regular exercise and adequate sleep—that don’t cause potentially life-threatening side effects.”

Opening the Gift: Introducing American Family Children’s Hospital

American Family Children’s Hospital Grand Opening - Community Open House, Sunday, July 29, 1-5 p.m.

Please join us to celebrate the grand opening of the American Family Children’s Hospital—a children’s hospital like you’ve never seen before, a community resource unlike any other. Join us on July 29 from 1-5 p.m., and go behind the scenes to explore this new state-of-the-art facility, meet our care providers, and see how we provide world-class care for kids and their families.

Bring your whole family! We promise a fun-filled summer afternoon with music, entertainment, a scavenger hunt, snacks, refreshments and more! For information, please visit uwhealth.org/kids or email afch@uwhealth.org.

New Building. New Name. Same Great Care.
Chad Stockinger knew he wouldn’t be the first person to receive a kidney transplant. In fact, he had already received a kidney in 1996, donated by his father. When that kidney failed, Chad had to resume dialysis treatments three times a week. He needed another kidney transplant. What Chad didn’t know was that over time his system had developed antibodies that would make his body reject a new kidney.

“I wasn’t yet sick enough to move to the top of the waiting list,” says Stockinger. “Plus I had organ-rejecting antibodies and rare Type B blood. I knew I would have a long wait on the deceased-donor waiting list.”

Enter the UW Health Desensitization Program and Chad’s wife, Kristin Calhoun-Stockinger.

“When I learned we had different blood types, we thought that I couldn’t donate to Chad,” says Kristin. “But then we heard about this new process the UW was testing, and we immediately called to learn more.”

Desensitization is a process that removes the rejection-causing antibodies from the blood. In a process called plasmapheresis, Chad’s plasma was exchanged for donor plasma, which removed the harmful antibodies and allowed him to accept an organ of a different blood type. He also took medications to prevent the antibodies from returning.

“Weeks of treatments greatly reduced Chad’s antibody levels,” notes Dr. Milagros Samaniego-Picota, the UW Health transplant physician who managed Chad’s desensitization process. “That made him a good candidate.”

Chad was the first patient in the UW Health Transplant Program to overcome the combination of rejection-causing antibodies and blood-type incompatibility. Nineteen other patients have completed desensitization, but no other patients had both blood type and antibody issues to overcome. The UW Health program is one of only few in the nation performing this procedure.

More than six months have passed since the Stockingers’ surgeries, and both are doing well.

Newspaper and TV stations from around the world covered the Stockingers’ transplant success story, and although they’ve become local celebrities, they’ve chosen to use the limelight to share the message of organ donation.

“There are more than 95,000 people on the waiting list for organ transplants,” says Kristin. “Sign your driver’s license and tell your family you want to be an organ donor. I gave Chad one of my kidneys, and when I die someone else will get the other one.”

For more information about the UW Health Transplant program, visit uwhealth.org/transplant or call (608) 263-1424.

Stem cell from page 4

Targeting the area of Myrah’s heart with poor blood flow, Dr. Raval then injected the stem cells (or a placebo) directly into Myrah’s heart muscle using a special cardiac catheter.

This innovative new area of research is called regenerative medicine — treating disease by using growth factors, genes or stem cells to promote blood vessel or tissue growth.

In a phase I trial investigating the CD34+ stem cell injections into the hearts of CMI patients, 15 of the 18 total subjects who received the cells reported feeling better with reductions in chest pain and/or improved exercise capacity.

Subjects in the current phase II study are randomly selected to receive either one of two dosing levels of CD34+ stem cells, or placebo. Researchers will conduct follow-up examinations in the ensuing 12 months.

Steve Myrah, meanwhile, is hoping to regain the energy to join his wife, Dagry, on the nature trails at the Pheasant Branch nature conservancy near his Middleton home.

“She misses me,” Myrah says. “That’s something I’d really like to be able to do with her someday.”

To be included in the study, patients must:

- be at least 21 years old;
- experience chronic chest discomfort at rest and with minimal exertion;
- have found inadequate relief from medications; and
- be unsuitable candidates for conventional revascularization techniques, such as surgical bypass, angioplasty or stents.

Approximately 10 volunteers are being recruited for the UW arm of the study. For more information, contact study coordinator Soni Vander Ark, RN, at (608) 265-0612.
Imagine having your name (or that of someone you choose to honor) permanently included in the new American Family Children’s Hospital that opens in Madison this summer. Similar to brick or tile campaigns that support construction of new hospitals, convention centers, theaters or other community facilities, Shape the Way offers you or your organization the opportunity to be visibly recognized while helping the American Family Children's Hospital's fundraising campaign reach its goal.

All tiles—be they from individuals, businesses or associations—will be displayed together in a beautiful montage as shown in the illustration below. Priced at $100 (small), $500 (medium) or $1,000 (large), Shape the Way tiles will be installed in phases, based on the sequence in which orders arrive. Already, more than 1,000 Shape the Way tiles have been purchased by UW Health employees, UW Children's Hospital donor families and others. Tile space is limited, so please act now to ensure we have room for your tile.

For Jodi and Matt Roberts of Pardeeville, the decision to purchase a Shape the Way tile was an easy one. When he was only 3 weeks old, their son Cooper was successfully treated at UW Children's Hospital (UWCH) for sepsis, a condition in which the entire body is fighting severe infection. On February 22, 2007, Cooper celebrated his third birthday and is doing just fine.

"Without UWCH, I doubt that our son would have made it," says Jodi. “When we heard about Shape the Way, there was no question about us buying a tile. This hospital is a part of our lives forever, and now we will forever be a part of the hospital.”

All of the information you need to purchase a Shape the Way tile can be found online at nofinergift.org/shapetheway. Printed brochures are also available at several UW Health clinic locations, or you can contact Shape the Way campaign manager Jim Gilmore at jgilmore@uwhealth.org or (608) 262-7665.

Get the family together, bring your bikes, have some fun and support a great cause—UW Children’s Hospital (which will become the American Family Children’s Hospital when the new facility opens in July). Presented by Pacific Cycle, Gear Up for Kids is the perfect cycling outing that appeals to everyone from families with children to the more serious cyclist.

What: Gear Up For Kids bike ride, Choose from 4 routes (1, 10, 25 and 50 miles).
When: Saturday morning, June 9, 2007
Where: McKee Farms Park Shelter in Fitchburg (just west of Fish Hatchery Road on Highway PD). For those from outside the area, Fitchburg is Madison’s neighbor to the south.
Helmets: BICYCLE HELMETS ARE REQUIRED!
Cost: $25 for adults, $10 for children (ages 7 to 15); Free for kids 6 and under with paid adult.

All the information you need, including online registration, is available at gearupforkids.org. If you would like a printed brochure or have questions, please call (608) 265-0738.