Pediatric Cardiology at Mayo Clinic

Kids with heart problems get expert care at Mayo Clinic through a skilled staff, state-of-the-art equipment and techniques, and an emphasis on personal care.
Providing high quality care for kids

Dealing with a child’s illness is never easy. For many families, the experience can be stressful and emotionally draining. At Mayo Clinic, helping sick kids regain their health, and making the experience a little easier on families, is an important part of what we do.

This issue of Inside Mayo Clinic features two specific areas at Mayo where children’s health is the focus. Pediatric cardiology has been part of the clinic since the 1950s and offers a wide range of services for children with heart problems. One of our newer areas for kids is in the Mayo Sleep Disorders Center, which recently began a unique program that assists children suffering from sleep disorders.

In addition to these types of specific areas for pediatric care within our medical specialties, Mayo Clinic has one facility dedicated solely to kids.

The Mayo Eugenio Litta Children’s Hospital is a place where infants, children and adolescents, with the support of their families, can receive care in a setting that is comfortable, caring and accessible. Located within Saint Marys Hospital, the children’s hospital has access to all the medical expertise Mayo has to offer. It also provides room for parents and other family members to stay with the children; play rooms and activity areas; and bright, cheerful artwork and architecture to make the surroundings more inviting.

By focusing on kids through special pediatric medical programs and services, as well as through the facilities in the children’s hospital, Mayo is well-equipped to provide high quality, compassionate care to even our smallest patients.

Hugh C. Smith, M.D.
Chair, Mayo Clinic
Board of Governors

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Editorial office:
Communications, Mayo Clinic
200 First St. SW, Rochester, MN, 55905
Telephone: 507-284-9258
E-mail: inside mayo@mayo.edu

Editor: Tracy Reed Will
Art director: Julie Quinn
Editorial assistant: Pam Mickelson
Writers: Rosemary Cashman, Katherine Caspersen, Beth Heim de Bera, Mary Lawson, Rachel Nicholas, Judith Samson

Cover photo by Rob Meyer
Illustrations by Taia Morley

Advisory Board:
Chair – Deborah Lightner, M.D., Urology; B. Lynn Frederick, Patient Access and Business Services; Sharonne Hayes, M.D., Cardiovascular Diseases; Marianne Hockema, Communications; Lori Janssen, Appointment Office; Lyn Larson, Desk Operations; Kent Seltman, Marketing; Robert Sheeler, M.D., Family Medicine; Mark Warner, M.D.
Anesthesiology
When Ethan Geiwitz entered the world on October 11, 1992, “healthy” seemed like a good word to describe him. At 10 pounds, 2 1/2 ounces, and 23 1/2 inches long, he certainly didn’t look frail. And, at that size, the bluish tint to his skin didn’t appear to pose any problem.

When Ethan’s parents, Amy and Rick Geiwitz, of Houston, Minn., took him in for his three-week appointment with Dr. John Peterson at the Rushford Clinic in Rushford, Minn., they expected a routine newborn checkup. It turned out to be anything but routine.

“Dr. Pete was a little worried about what he was hearing at the checkup,” says Ethan’s mother, Amy. Their doctor arranged for a visit to Mayo Clinic in Rochester. What was initially planned as a short trip to Mayo’s Pediatric Cardiology Clinic for a few tests quickly turned into a 10-day struggle to save a failing heart.

Dr. Co-burn Porter, a pediatric cardiologist at Mayo and Dr. Francisco Puga, one of the clinic’s cardiovascular surgeons, diagnosed three heart problems in Ethan: transposition of the great arteries, ventricular septal defect and severe pulmonary stenosis.

These defects reduced the blood flow through his lungs and flooded his heart with too much blood.

“If they hadn’t found these defects when they did, he would have died of heart failure within a week,” says Amy.

Years of surgery
At 27 days old, Ethan had surgery that placed a shunt to improve blood flow to his lungs, but it would help only for a limited time. Ten days before his first birthday, he underwent the first of two open-heart surgeries that would return the flow of blood in his heart to its normal pattern.

Dr. Puga performed the surgery by first closing a hole between Ethan’s two ventricles. In doing this, he blocked the pathway of the right ventricle to the aorta, which enabled the oxygen-rich blood from the left ventricle to flow out the aorta. He then placed a human tissue (homo-graft) conduit from the right ventricle to the pulmonary artery. This gave the blue venous blood a pathway to the lungs to receive oxygen.

During the years following his surgery, Ethan’s first conduit became too small, due to his growth. To relieve this, Ethan underwent two interventional cardiac catheterizations using a balloon catheter to stretch open the constricting conduit. These measures helped sustain him until he could have a second open-heart surgery, which took place in April 1998, to replace the conduit.

“Because Ethan is not fully grown, he will need to have another conduit replacement sometime in his teenage years,” says Dr. Porter. “In the meantime, Ethan is doing very well. Currently there is mild obstruction of the conduit. But his heart function is excellent, and he is a very active boy.”

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Expert pediatric care

Ethan Geiwitz’s experience is just one example of the expert care Mayo Clinic’s Pediatric Cardiology Division offers. The division began in the early 1950s when Dr. Jim DuShane became Mayo’s first pediatric cardiologist. Currently at Mayo, there are eight pediatric cardiologists. Each participates in hospital and outpatient clinics, and each focuses on specific specialties within the division, such as pediatric electrophysiology, echocardiography, exercise and cardiac catheterization.

In addition to the patient care the Pediatric Cardiology Division undertakes, its staff is also involved in continuous research to advance clinical medicine and molecular cardiology, and it has an active training program.

The pediatric cardiologists regularly consult with five of Mayo’s cardiovascular surgeons. These surgeons operate on both children and adults with congenital heart defects. This expertise provides the division with a broad range of patient populations and perspectives of what can happen as patients get older.

“One of the things that’s really important about the pediatric cardiologists is their working relationship with the surgeons,” says Dr. Porter. “Because of the surgeons’ unique surgical schedule, they are available for consultations on a one-on-one basis on the days they are not operating.”

The Geiwitz family was impressed with the individual care provided by their Mayo physicians. “Both Dr. Porter and Dr. Puga were very approachable,” says Amy. “They were willing to answer any questions we had.”

Pediatric cardiology nurses and other allied health staff, such as dietitians, chaplains, medical social workers and therapists, are also vital participants in the lives of patients.

Fostering strong relationships between staff members and their patients and families is important to the mission of Mayo Clinic. Dr. Porter, the Geiwitzs and their nurses have nurtured a close relationship over the past eight years, keeping in touch through letters, phone calls and Christmas cards with pictures.

“We provide quality care with excellent results, but it is the personal relationships that develop between the staff and patients that really pull people towards Mayo Clinic,” says Dr. Alison Cabalka, another Mayo pediatric cardiologist.

Eight years later

Nearing his eighth birthday, Ethan Geiwitz has grown to be an active and energetic kid. When he is not riding his bike or playing with neighborhood kids, Ethan can be found on the baseball field with his Pee Wee team or watching his favorite television shows.

“We won’t go anywhere else. We are very happy with the way Mayo cared for Ethan.”

– Amy Geiwitz
Ethan is currently not taking any heart medication, but he has been advised to stay away from contact sports. Although football and basketball may be out of the question, Ethan continues his love of sports by learning golf under his grandfather’s supervision.

“Many people don’t believe Ethan has a heart problem,” says Amy. “He looks like a perfectly healthy boy.” Ethan is currently a second grader at Rushford Public School. “I think he’s going to be a doctor when he grows up,” laughs Amy.

Ethan just shakes his head and smiles.

— Rachel Nicholas

Following are specialized programs available at Mayo Clinic for children with heart problems.

Interventional cardiac catheterization
Mayo Clinic’s catheterization labs are used to supplement or replace cardiac surgery through various non-surgical techniques, including:

• Balloon angioplasty – In this procedure, a balloon is attached to a catheter and inserted into a narrowed valve or vessel. The balloon expands and stretches the walls of the valve or vessel open to relieve narrowing.

• Stents – Wire mesh tubes can be implanted to hold open arteries or veins.

• Various devices also are available to permanently close holes within the heart or vessels when necessary.

Cardiac Transplant Program
Mayo Clinic’s Cardiac Transplant Program provides services for patients undergoing evaluation for heart transplant, care during the waiting period and post-transplant care. Patients diagnosed with end-stage congenital heart disease or cardiac muscle dysfunction may require a cardiac transplant, but transplants are dependent on donor availability.

Long QT Syndrome Clinic
This clinic conducts research to learn more about long QT syndrome, its effects on the body, and genetic diagnosis of the syndrome. The QT interval is measured on an electrocardiogram and reflects the time it takes the heart to recharge between beats. In long QT syndrome, the recharging time is long and various life-threatening arrhythmias can occur.

Cardiomyopathy Clinic
There are two forms of cardiomyopathy studied at this clinic:

• Hypertrophic – A very thick muscle of the lower heart chambers puts the patient at risk for arrhythmias or blockage to outflow.

• Dilated – A very thin heart muscle causes the left ventricle to expand, resulting in poor contraction of the heart.

Velo-cardio-facial (VCF) Clinic
Studies on the effects of specific types of congenital heart defects in children are conducted at this clinic. In addition, the clinic has resources available to help children with VCF deal with the other problems that often are associated with this condition, including cleft palate, speech and language problems, kidney problems and learning difficulties.

For Information
If you would like more information about pediatric cardiology at Mayo Clinic, call the Inside Mayo Clinic information line at 1-877-372-1610.
Despite Minnesota’s wintry reputation, a trip to Mayo Clinic in Rochester during cold months doesn’t have to be a chilling experience. Here are a few tips to help warm up your next winter visit.

**Stay indoors**
You can avoid the wind chill if your place of lodging is connected to Mayo Clinic’s buildings by pedestrian subways or skyways – and many in the downtown area do offer this convenience. Other hotels and motels not connected directly to Mayo offer free shuttle service to and from the clinic, so you won’t have to scrape those frosty car windows in the morning.

Although Mayo Clinic does not own, operate or endorse any hotel, motel or guest house, you can find information about local lodging options on the Mayo website at www.mayo.edu/mcr/LodgingRoch.html. You may also contact the Rochester Convention and Visitors’ Bureau for information at 800-634-8277.

Once you arrive at Mayo Clinic, you’ll have the option of remaining inside. Pedestrian subways connect all of the clinic’s downtown buildings. These indoor walkways also provide access to restaurants, shopping areas and movie theaters, as well as the Rochester Public Library, Mayo Civic Center and the Government Center.

Watch for signs throughout the subways and skyways to direct you where you would like to go. You can also ask for directions at the information desks located throughout the clinic and hospitals.

**Park under cover**
Mayo Clinic offers patients and visitors two locations for parking in a covered ramp on the downtown campus:

- **Damon Parking Ramp:** Third Avenue SW (one-way going north) and First Street SW
- **Baldwin Parking Ramp:** Fourth Avenue SW (one-way going south), one block south of Second Street SW

Covered, underground parking is also available at Saint Marys Hospital (approximately one mile west of the downtown campus). Cost to park in the Mayo ramps is one dollar per hour, with a maximum charge of six dollars per day. If you’re parked in a Mayo ramp and your car won’t start, ask the parking attendant to call for assistance. There is a charge for car starting.

**Check your coat**
If you arrive at Mayo Clinic bundled up to ward off the cold, you don’t have to lug those layers around all day. You may check your coat, boots and hat, as well as your briefcase, at the information desks located on the first floor and subway level of the Mayo Building. While you’re there, check out the wide variety of informational materials available in the literature racks regarding Mayo services and programs.

**Pass the time in comfort**
If you have time between appointments, there are a number of activities on the clinic’s campus that don’t require you to pull on your boots and coat.
• Take a tour: General tours of Mayo Clinic are offered Monday through Friday at 10 a.m. An art and architecture tour is offered Tuesday and Thursday at 1:30 p.m. Both begin at Judd Auditorium in the Mayo Building, subway level. You may also take a self-guided tour of Rochester Methodist Hospital or Saint Mary's Hospital at your convenience between 8 a.m. and 8:30 p.m. Tour brochures are available at the Admissions Desks at each hospital.

• Learn more about your health: The Mayo Patient Education Center has books, periodicals, pamphlets, videos and classes available to help you educate yourself about healthcare topics. The center is open from 8:30 a.m. to 5:30 p.m., Monday through Friday, and is located in the subway level of the Siebens Building across from the Mayo Clinic Store.

• Relax with music: During the holiday season, area choirs and instrumental ensembles perform throughout the Mayo Clinic campus. In addition, Tuesdays, Wednesdays and Thursdays, during lunch time, a pianist plays for patients and visitors at Hage Atrium in the Siebens Building, subway level. And, if you're at Mayo Clinic on a Monday, you can enjoy a “Harmony for Mayo” concert during the noon hour. This concert series features artists performing classical, jazz, blues, rock, folk and popular music. For more details, stop by one of the Mayo information desks.

• Watch a movie: Entertaining and educational films are shown Monday through Friday in Judd Auditorium in the Mayo Building, subway level. Check the list of times and titles posted at the auditorium entrance. If you are interested in seeing a current feature, visit the theater in the Galleria Mall, connected to the Mayo Clinic buildings via skyway.

For information on other things to do while you are at Mayo Clinic, refer to the booklet Patient’s Guide to Mayo Clinic, (reference number MC1075) or pick up a copy of Inside Mayo Clinic today, which contains a monthly activity calendar. Both publications are available in the literature racks located throughout the clinic and hospitals.

– Tracy Reed Will

Prepare for your appointment

No matter what time of year you come to Mayo Clinic, you’ll get the most from your visit if you prepare ahead of time. Here are a few things to keep in mind as you get ready for your appointment.

• Before you talk with your physician, write down a brief list of your main concerns. This will help you remember details and focus your conversation.

• Bring along any current medications you are taking. It’s most helpful if you bring the medications in their original bottles.

• During your appointment, answer questions as accurately and completely as you can.

• Listen carefully to what your physician tells you and ask for more explanation if you don’t understand something.

• If you have questions or are uncertain about your diagnosis or treatment, be sure to tell your physician.

• Before you leave your appointment, you should have a clear understanding of what your physician has told you. If you don’t, you may schedule a follow-up visit or make arrangements for a phone call with your physician.
The paintings of artist Peter Fletcher have taken on a new look in the last year. The change in his art is Fletcher’s way of dealing with the cancer that invaded his body and required him to undergo a bone marrow transplant to reclaim his life.

Fletcher is a quiet, reflective person whose speech gives away that he’s English by birth. For the past 13 years, he’s been an art instructor at Viterbo College in La Crosse, Wis., where he has passed on his love of art to students and received recognition for his teaching and paintings.

Earlier this year, he achieved another distinction he never anticipated: he became the 1001st patient to undergo a blood and bone marrow transplant at Mayo Clinic in Rochester. “It’s a milestone because it gave me a chance to live,” he says of the transplant.

Initially diagnosed with pancreatic cancer, Fletcher came to Mayo Clinic for a second opinion. Tests ordered by Dr. David Inwards, a Mayo Clinic hematologist, showed that Fletcher did not have pancreatic cancer. Instead, he had B-cell diffuse large cell non-Hodgkin’s lymphoma, a cancer affecting his lymph system.

Fletcher underwent chemotherapy treatments, only to have the lymphoma return eight months after completion of the treatments. Because of the aggressive return of the cancer, Dr. Inwards recommended a stem cell transplant as the best means of retaliation. Fletcher agreed.

A second course of chemotherapy brought the cancer into remission. Then Fletcher’s own cells were harvested from his bone marrow for him to receive as an autologous peripheral blood stem cell transplant. On Feb. 1, his stem cells were infused back into his bloodstream.

While receiving chemotherapy and recovering from the transplant, Fletcher continued to pursue his profession and passion – art – to help him through restless days and sleepless nights. On small pieces of paper, he sketched roads, flowers, trees and the countryside near his home in La Crosse. One of his most surreal sketches, titled “Chemo Self Portrait,” showed him amid a variety of plants and herbs considered in Oriental traditions to promote healing.

“Art became my refuge, my haven, my way of going inside myself to get through my treatments and express my feelings,” Fletcher said at a reunion of patients and staff. The reunion, held in July, celebrated the gift of life the Blood and Marrow Transplant Program had given to patients since 1982 when it began at Mayo Clinic.

Along with his art, Fletcher credited the compassionate support of physicians and staff for getting him through his transplant and ordeal with cancer. “I expected expert treatment because this is Mayo Clinic,” Fletcher said at the reunion celebration. “What impressed me as much, and will stay
with me forever, was the humanness of my doctors, nurses and everyone involved in my care. They cared about me.”

The Blood and Marrow Transplant Program became part of Mayo Clinic’s new Transplant Center, which opened in July in the Charlton Building of Rochester Methodist Hospital. The Blood and Marrow Transplant Program is located on the ninth floor, where the Heart-Lung Transplant Program also is housed. Inpatient services for patients requiring bone marrow transplants are also provided at Rochester Methodist Hospital.

When the Mayo Clinic’s new Gonda Building opens next year, treatment services for patients requiring cancer and hematology care will be contained on floors adjacent to the new Transplant Center. The ultimate goal of the center is to group related services to provide more effective service to patients.

“Both the Transplant Center and the Mayo Clinic Cancer Center represent a developing trend in medicine to create multi-disciplinary disease groups and have treatment built around the patient” says Dr. Christopher McGregor, acting director of the Transplant Center. “We’re seeing that patients don’t necessarily need the care of just one type of physician. Thus, creating centers is a trend in the development of care.”

According to Dr. Mark Litzow, director of the Blood and Marrow Transplant Program, “By coming together, it will strengthen all the programs in terms of shared resources in treatment, research and education.”

Fletcher understands the importance of the endeavor. “I’m here essentially because of what they did for me,“ he says. In July, Fletcher took his 11-year-old son to England to see the country of his ancestors. This fall, he went back to teaching art at Viterbo College.

– Mary Lawson

Bone marrow is the soft, spongy tissue inside bones. Bone marrow contains young cells called stem cells that produce three types of blood cells that are essential to life: red blood cells that carry oxygen throughout the body; white blood cells that fight infection; and platelets that prevent bleeding. Some stem cells also circulate in the blood and more can be “mobilized” from the bone marrow into the blood and collected for use in transplant. The patient’s medical situation and physician determine whether to use bone marrow or blood stem cells for transplant.

Some diseases cause bone marrow to either stop working normally or to be replaced by non-functioning, cancer cells. Diseases that adversely affect bone marrow include acute leukemia, chronic leukemia, lymphoma, aplastic anemia, multiple myeloma, myelodysplastic syndrome and solid tumors. In many cases, bone marrow or stem cell transplants are performed to allow higher doses of anti-tumor therapy to be given than could be tolerated without the administration of stem cells.

The types of blood or marrow transplants include:

• Autologous transplantation: Blood or marrow is harvested from the patient for transplant back into that patient at a later date. Autologous transplant may benefit patients with acute leukemia, Hodgkin’s disease, non-Hodgkin’s lymphomas, multiple myeloma and a variety of solid tumors.

• Allogeneic transplantation: The healthy blood or bone marrow stem cells come from a donor, usually a sibling or a parent. Unrelated donors also may be used. A baby’s cord blood is a newer rich source of stem cells that can also be used for transplants in selected circumstances For allogeneic transplants to work, the donor must be compatible with the patient’s immune system.

• Syngeneic transplantation: Blood or marrow is taken from an identical twin because identical twins have the same genes and antigens.

For Information

If you would like to receive information on how to become an organ donor, fill out the enclosed, postage-paid, reply card and drop it in the mail. For more information about Mayo’s Blood and Marrow Transplant Program, call the Inside Mayo Clinic information line at 1-877-372-1610.
Every spring Mayo Clinic holds a unique ceremony to honor a special group of men and women. The “Convocation of Thanks,” coordinated by Mayo’s first-year physical therapy and medical students, pays tribute to individuals who have contributed an invaluable gift to Mayo Clinic by donating their bodies to science, and in so doing, help to make the students’ education possible.

The Mayo Clinic Donor Program allows individuals to indicate their desire to donate their body to education and research at Mayo Clinic. The program is an option that many individuals and couples consider when making end-of-life decisions.

“My husband and I decided to sign up for the donor program more than 40 years ago,” says Renee, a Mayo Clinic patient and former employee. “I heard about the program while working at the hospital. I saw how it benefited the students, and I knew it was a good program and a good deed.”

Each donation plays a very important role in making anatomical studies and certain areas of research possible at Mayo Clinic. “The donor program is essential to what we do in education,” says Dr. Stephen Carmichael, a professor in Mayo’s Department of Anatomy. “The knowledge that the students gain in Anatomy serves as a baseline for their future careers as doctors and physical therapists.”

At the beginning of their anatomy class, students are informed of the donor program and their role in planning the “Convocation of Thanks.” “The entire time the students are in class they have this to consider,” says Dr. Carmichael. “From day one, they are aware of the tremendous gift that they have been given.”

The students select representatives to coordinate the convocation. These individuals are then responsible for organizing the music, poetry, flowers and all other aspects of the program. Each year, the central part of the convocation is the reading of the donors’ first names. Six names are read at a time, followed by a moment of silence and the lighting of a candle. It is a confidential, yet very emotional and meaningful portion of the program.

“I did not know about the convocation until after my husband died,” says Renee. “The ceremony was beautiful. It made me feel very good about my husband’s donation and reaffirmed my own decision to donate.”
The convocation is special not only for the families, but for the students as well. “I learned so much from my anatomy class. Thanking the families was the best way for me to express my gratitude to the donors,” says Joe Ocel, a medical student representative for the 2000 convocation. “I gained not only medical knowledge, but also a great deal of respect for the donors. They have given so much to the field of medicine.”

The donor program benefits many areas of research, as well. Types of research that are made possible in part by the donor program include testing improved artificial joints, techniques and instruments, and developing new surgical approaches.

“These contributions to education and research ultimately improve patient care,” says Dr. Carmichael. “So, the donor program helps to fulfill Mayo Clinic’s mission on all three levels.”

When an individual decides to enroll in the donor program, he or she fills out a short form that is kept on file in the Department of Anatomy office. When a donor dies, the department arranges all transportation, preparation and care of the body. Mayo Clinic covers expenses for individuals within a 200-mile radius from Rochester, Minn. Because medical schools across America, and around the world, are in need of donated bodies, Mayo encourages individuals interested in this type of program to contact a medical school near their home.

After the anatomical studies or research activities are finished, the bodies are prepared for interment according to the families’ wishes: almost all are cremated. About half of the families then choose to have the cremated remains returned for placement within a family vault. The other half are interred in a Mayo Clinic vault at Oakwood Cemetery in Rochester. The inscription on the vault reads, “Dedicated to the individuals who have donated their bodies to Mayo Foundation for anatomical study so that others might live.” Ground-breaking began in June for a second memorial vault.

The vaults and the “Convocation of Thanks” are ways that Mayo Clinic students and Mayo Foundation attempt to convey their sincere thanks for such a generous gift.

“My experience with the donor program in my first year of medical school set the stage for my whole career,” says Ocel. “Healthcare is about giving of yourself to help others and that is exactly what these people do.”

– Katherine Caspersen

for Information

If you would like more information about Mayo Clinic’s donor program, call the Inside Mayo Clinic information line at 1-877-372-1610.

If I can stop one heart from breaking,
I shall not live in vain;
If I can ease one life the aching,
or cool one pain,
Or help one fainting robin
unto his nest again,
I shall not live in vain again.
– Emily Dickinson
Babies wake up multiple times during the night. School-age kids won’t go to sleep at bedtime. Teenagers sleep all day. Normal behavior, right? Probably. But, for some kids, these habits could indicate a problem.

Although most people don’t think of children when they think of sleep disorders, approximately 20 to 30 percent of all children do have recurrent sleeping problems, according to Dr. Suresh Kotagal. Dr. Kotagal is the director of a new program in the Mayo Sleep Disorders Center that addresses pediatric sleep disorders. During the one week every month that Dr. Kotagal spends at the Sleep Disorders Clinic, he sees about 15 patients, the majority of them teenagers.

While sleep disorders may occur in children of all ages – from infants to teens – Dr. Kotagal finds sleep disorders in teens to be his biggest challenge. The fault, he suggests, is partly Thomas Edison’s for inventing the light bulb. Before that, people probably went to bed when it got dark. But, with televisions in 25 percent of teen bedrooms, and the growing popularity of chatting on the Internet late at night, teens rarely wind down when the sun sets.

However, teenagers don’t stay up late just to be contrary. Around 12 to 13 years of age, their internal clocks shift, and teens really do find it difficult to fall asleep before 10:30 p.m. This means that with high school start times around 7:30 a.m., many teens feel sleep deprived.

Sleep deprivation isn’t the only type of sleep disorder that Dr. Kotagal sees in teens. In one unique case from earlier this year, he saw a teen from Chicago who went through disabling periods when she wanted to sleep all the time. Her appetite also increased. Nicole Santi’s sleep disorder began after Christmas in 1998, when she was 17 years old.

When she suddenly found herself sleepy all the time, Nicole thought she had mononucleosis. She went to see her physician, but the tests were negative. After about a week and a half of sleeping 20 hours per day and missing a week of school, Nicole bounced back. Her mother, Terry Santi, thought perhaps she had just overdone things during the holiday season. The family was happy to see Nicole back to her usual energetic self and put the episode behind them.

However, six months later, immediately after Nicole’s graduation from high school, the same feelings of extreme sleepiness and lethargy struck again. From May 1999 to January 2000, Nicole underwent a barrage of tests, receiving a variety of diagnoses that ranged from narcolepsy to bipolar disorder. Despite the medications prescribed, every six months Nicole continued to be disabled for about a week and a half by her extreme sleepiness.

Turning to Mayo Clinic
In January, Nicole and her parents decided to come to Mayo Clinic for help. Nicole was first seen in the Department of Internal Medicine and was subsequently sent to Dr. Kotagal in the Sleep Disorders Clinic.

“I told him what had been happening and almost immediately he seemed sure it was Kleine-Levin syndrome,” says Nicole. This syndrome is a rare disorder characterized by intermittent episodes, generally lasting 10 to 14 days, during which there is excessive sleepiness and a marked increase in appetite. The disorder is four times more common in males than females, and generally begins in adolescence.
Dr. Kotagal told Nicole he wanted a second opinion. He walked down the hall and described her situation to one of his colleagues who agreed with the diagnosis, even though the syndrome is more common in adolescent boys.

Nicole is likely to grow out of Kleine-Levin syndrome, probably during her 20s. Until then, Dr. Kotagal prescribed medication for Nicole to take during her sleepy episodes. She took it for the first time during a bout of the sleep disorder in May. “I was actually able to work,” says Nicole. Although she didn’t feel completely normal, she was relieved at being able to continue with life. She looks forward to returning to college soon, confident that she will be able to function even if she has further episodes.

While an abnormality in brain arousal mechanisms and neurotransmitter functions is likely in Kleine-Levin syndrome, the exact cause has not yet been determined. Other sleep disorders may result from bad sleep habits or a variety of other factors. Dr. Kotagal says his constant challenge in the pediatric sleep disorders program is sorting out the cause of the child’s problem.

– Beth Heim de Bera

Tips to promote healthy sleep habits in children

Dr. Kotagal has the following suggestions for parents to help their child sleep tight.

**Infants**
- Keep your infant’s schedule as consistent as possible.
- Teach an infant to sleep on his/her own. (Rocking a baby to sleep or taking him or her for a drive at bedtime may not be a good idea.)
- Leave the room before your child falls asleep.
- Avoid excessive feeding or stimulation at bedtime.
- After eight or nine months of age, limit naps to no more than two hours.

**School-age children**
- Keep bedtimes and wake-up times consistent.
- Avoid vigorous exercise or action-filled videos for two hours before bed.
- Avoid caffeine in the evening, especially if it seems to keep your child awake.
- Use the period right before bedtime as a time to unwind with quiet conversation or story reading.

**Teens**
- Avoid caffeine.
- Do not put a TV in a teen’s bedroom.
- Keep bedtimes and wake-up times as consistent as possible, seven days a week.

**For Information**

If you would like to receive a brochure that provides more information about the Mayo Sleep Disorders Center, fill out the enclosed, postage-paid, reply card and drop it in the mail. For further information about the pediatric sleep disorders center, call the Inside Mayo Clinic information line at 1-877-372-1610.
Making an appointment at Mayo Clinic

There are several ways to make an appointment at Mayo Clinic:

• Phone the Appointment Information Desk at 507-284-2111 between 8 a.m. and 5 p.m. Central Standard Time (CST), Monday – Friday.
• Write to: Mayo Clinic, Appointment Information, 200 First Street SW, Rochester, MN, 55905.
• Make direct arrangements with your Mayo physician’s office if you are already a Mayo Clinic patient.
• Ask your local physician to refer you to Mayo Clinic and arrange your appointment.
• International patients may call the International Appointment Office at 507-284-8884 from 7 a.m. to 6 p.m., CST, Monday – Friday and 7 a.m. to 2 p.m. on Saturday, or fax appointment requests to the International Appointment Office at 507-284-3891.

Patients with urgent medical or surgical problems are given priority in Mayo Clinic’s appointment system. Appointments for individuals whose medical problems are not urgent are scheduled as availability allows.

In some areas of the clinic, individuals who request an appointment may be placed on a waiting list if an appointment is not available in the near future. In areas of the clinic where waiting lists are not used, these individuals will be encouraged to call back at a later date to check appointment availability in that department.

If you have questions about making an appointment at Mayo Clinic, call the Appointment Information Desk at 507-284-2111.

Mayo celebrates the 50th anniversary of the Nobel Prize for cortisone

This year, Mayo Clinic marks the 50th anniversary of the Nobel Prize awarded to Drs. Edward Kendall and Phillip Hench for their discovery of cortisone and its use in treatment of rheumatoid arthritis.

Dr. Kendall, a biochemist, and Dr. Hench, Mayo’s first rheumatologist, began working together in 1929, searching for a substance that would prompt the secretion of a natural anti-rheumatic. In 1948, they saw their years of work rewarded. On Sept. 21 of that year, a woman suffering from rheumatoid arthritis at Saint Marys Hospital received an injection of the substance “compound E,” which the two doctors had developed in conjunction with a pharmaceutical company.

The first day she received the medication, the patient was bedridden. By the third day, she could roll over easily. On day four, she was exercising, lifting her hands over her head. Over the next seven months, clinical trials using compound E were completed on 14 patients with rheumatoid arthritis. All showed marked improvement.

The results of these clinical trials led to wide-spread discussion about compound E, which the doctors subsequently renamed “cortisone.” On May 31, 1949, Dr. Hench made a presentation to the International Congress on Rheumatic Diseases. He showed a film that had been shot during the initial trials. The audience could see a patient first stiffly navigating several steps, then walking up and down the steps with ease, and finally running.

In 1950, Drs. Kendall and Hench learned they were co-winners of the Nobel Prize in Physiology and Medicine. The prize came with a cash award, which they shared with their colleagues. “In our opinion,” said Dr. Hench, “the awards we received belong to all the men and women of Mayo Clinic because it was the spirit of cooperative endeavor, the fundamental credo of this institution, which made possible the work which resulted in our trip to Stockholm.”
A new health resource on the Web from Mayo Clinic

Beginning later this month, Mayo’s Internet health information will be available at MayoClinic.com. Featuring free tools you can use everyday, the new site offers resources that can help you make a difference in your health.

Some of the new features available on MayoClinic.com include the following:

• “The Face of Mayo” offers video and audio clips that let you see and hear a doctor or specialist providing information. Real patients tell their stories on video.
• Planners and tailored e-mail messages help you lose weight, manage stress, stop smoking or start exercising.
• Condition centers bring you articles, live online seminars and forums with Mayo doctors to help you live more comfortably with chronic conditions.
• The section “Answers from Mayo Specialists” gives you an opportunity to ask questions of Mayo specialists who will consult with their Mayo colleagues to get you an answer.
• Personalization lets you see what’s new in your areas of interest every time you come back to MayoClinic.com.
• A personal health scorecard reveals your personal health risks.
• Health decision guides for a variety of conditions provide extensive multimedia resources and stories from real patients to help you make the best choice about treatment options.
• The “News Desk” section, updated every weekday, provides Mayo Clinic perspectives on health issues in the headlines.
• Feature articles give you in-depth discussions of important health topics.
• The reference section includes drug information, first aid and self-care guides, and an A-to-Z disease and condition index.

MayoClinic.com draws from the knowledge and experience of Mayo Clinic doctors and furthers a key Mayo goal: providing people with trustworthy health information to help them improve their lives.

Gonda Building Phase II going up

Construction crews began installing steel beams for Phase II of Mayo Clinic’s Gonda Building in late July. This work will continue through the end of the year, at which time the beams will outline the seven additional floors. These floors will be shelled-in space that will not be completed until needed in the future. Meanwhile, exterior finishing work continues on the 10 floors of Phase I with installation of the glass and stone curtain wall. When finished, the Gonda Building will house a full spectrum of outpatient and inpatient activities. Space for examinations, procedures, outpatient surgery, education and research will centralize many services in one location.

In July, workers began construction on Phase II of Mayo’s Gonda Building, located at the center of the clinic’s downtown campus in Rochester.
Myth: If I go to Mayo Clinic and my doctor decides I need hospitalization, I will be sent to a hospital that isn’t part of Mayo.

Fact: Mayo Clinic is affiliated with two hospitals in Rochester, Minnesota: Saint Marys and Rochester Methodist. These institutions share the Mayo heritage and a common governance structure through Mayo Foundation. In fact, your surgeon or internist at Mayo Clinic practices exclusively at one or both of these hospitals.

Saint Marys Hospital opened on September 30, 1889. This 1,157-bed tertiary care hospital is sponsored by the Sisters of Saint Francis. Saint Marys admits more than 37,000 patients each year. Rochester Methodist Hospital was built in 1966 as a tertiary care facility and today has more than 750 beds available for service. Rochester Methodist

Hospital annually admits more than 15,000 patients.

As Mayo Foundation hospitals, Saint Marys and Rochester Methodist are organized as private, not-for-profit corporations whose medical staff is that of Mayo Clinic. Together, Mayo Clinic, Saint Marys Hospital and Rochester Methodist Hospital form an integrated medical center in Rochester, offering patients virtually every medical expertise, treatment and diagnostic tool. Patient care programs are supported by extensive programs in medical education and research.