Therapy for hand disease gives patients non-surgical option

Robert Newman likes to make his bed every day. It might seem a simple task, but it was one that was problematic for him for years.

“My little finger was always in the way,” says the 84-year-old. “I couldn’t use my flat hand. There are many times you need to use your flat hand to do something, and you probably don’t even realize it.”

Newman’s little finger had curled into the palm of his left hand due to Dupuytren’s disease, an abnormal thickening of the connective tissue beneath the skin of the palm.

Until recently, the only way to treat the condition effectively had been surgery. But a new, less invasive treatment used by James Long, M.D., associate professor of plastic and reconstructive surgery at UAB and chief of plastic, reconstructive and hand surgery at The Veteran Affairs Hospital, offers patients a non-surgical option.

An injection of a collagenase enzyme into the affected area has proven to have the same quality and quantity of correction as surgery and does not require extended therapy.

“The treatment consists of an initial injection followed in 48 hours by a manual release,” Long says. “That just means we apply traction to the cord 48 hours after the procedure. During that two-day span, the collagenase has an opportunity to break up the cord to the degree that enables us to rupture it. We were able to do that with Mr. Newman, and he has gone on to have some occupational therapy and has achieved a quite good result.”

Newman found out about the procedure from his daughter Barbara Steele, a nurse in Michigan. When she heard about the injection treatment, she immediately told her dad. Newman was excited, largely because he had surgery for Dupuytren’s in his right hand in 1984. The surgery was a success, but it wasn’t something he was excited about repeating in his advanced age.

After he had his first hand operated on, Newman says he can remember his heart pounding if he dropped the hand below his chest. So, he says he walked around for five days with his hand above his heart.

“They were calling me the Pope,” he says with a laugh. “I was walking around blessing everybody.”

The collagenase injection he had in May was much quicker, less painful and provided a speedier recovery.

“I much prefer the injection procedure,” Newman adds. “I had my hand wrapped just one day. They told me I should put the splint on every night, otherwise I could use my hand. And I’ve been able to do just that.”

History of Dupuytren’s

Dupuytren’s is an inherited disease; Newman’s father also suffered from it.
One percent of the population in the United States has schizophrenia. Doesn’t sound like much, says UAB psychiatrist Robert McCullumsmith, M.D., until you put it in perspective. In a high school class of 300 for example, three may have schizophrenia. The disease that is not well understood, not well treated and can be devastating.

UAB has received two grants totaling $3.9 million from the National Institutes of Mental Health, one of the National Institutes of Health, in an effort to better understand schizophrenia and identify new therapies. McCullumsmith is the lead investigator on one grant. James Meadow-Woodruff, M.D., chair of the Psychiatry and Behavioral Neurobiology, leads the other.

Both target glutamate, a major neurotransmitter in the brain. The tools are cutting-edge methodologies, including laser-capture micro-dissection — a device that can isolate specific cells for detailed analysis — and advanced proteomics techniques that study the function and structure of proteins. The goal is to better understand why there are profound deficits in glutamate-signaling and processing in the brains of those with schizophrenia.

“We know that there is something wrong with the handling of glutamate in the brains of people with schizophrenia,” says McCullumsmith. “What we don’t know is just what is wrong. Is there too much glutamate? Too little? Is it in the wrong place at the wrong time? These studies will look for those answers.”

Schizophrenia is an especially troubling condition because it usually begins in young adults ages 18-25.

People who previously had demonstrated relatively normal development and are going to college, starting a family or beginning a career suddenly have deterioration in function, including social and occupational skill sets,” says Meadow-Woodruff. “They typically are unable to work and have a hard time maintaining interpersonal relationships.”

More financial and community resources go toward the care and treatment of schizophrenia than any other medical illness, says McCullumsmith, and it’s an equal-opportunity condition, affecting all socioeconomic segments and populations.

There are medications available to treat the “positive” symptoms of schizophrenia — manifestations that a patient has that they should not have, such as hearing voices and suffering from delusions and hallucinations. Those medications, some developed more than 50 years ago, have serious side-effects. The older ones can cause movement disorders; the newer versions can spur obesity, heart disease and diabetes.

There are no medications that deal with what are called “negative” symptoms — manifestations a patient should have but does not. These include grasping the concept of non-verbal communication, motivation and even understanding the need for good grooming and hygiene.

Meador-Woodruff says there are also cognitive symptoms such as decline in memory, decision making and problem solving. Again, there are no medications to treat these symptoms.

“We need new treatments for schizophrenia,” says McCullumsmith. “People with schizophrenia are often homeless, unemployed and unemployable.”

In both trials, the researchers will compare brain tissue collected from patients with schizophrenia who donated their brains to brain banks, including the Alabama Brain Collection, a tissue repository managed by Rosalinda Roberts, Ph.D., a professor of psychiatry at UAB. Comparisons made between schizophrenic brains and normal controls may reveal changes in glutamate signaling, uptake or dispersal. Meadow-Woodruff’s main focus will be on glutamate receptors on cells, while McCullumsmith’s project will look at the mechanism by which excess glutamate is removed from the brain.

“Schizophrenia is a disease that likely has many causes,” says Meador-Woodruff. “There is strong evidence that glutamate plays an important role in the development of the disease. Hopefully, these studies will help define that role and lead us to a better understanding of how to treat schizophrenia.”

New, expanded classes in arts, culture offered at ArtPlay

Learn how to create an app, sew a quilt, “upcycle” fashion, dance flamenco and act out this fall when the Alys Stephens Center’s ArtPlay at UAB presents a new, expanded session of arts-education classes.

Classes offered include ballet fitness, Indian dance, hip hop dance, history of jazz, acting for adults, musical theater, drawing, painting and poetry, plus many more. ArtPlay offers something for everyone, from pre-kindergarten to adults. This session also will offer a “First Steps in Music” class for parents and newborns or toddlers. Scholarships and financial aid are available. A full listing of all ArtPlay classes and offerings is online at www.ArtPlayASC.org or call ArtPlay at 975-4769.

ArtPlay is the new arts education and outreach center from UAB’s Alys Stephens Center. Its mission is to educate, inspire and nurture creative growth and self-expression for everyone by providing innovative programming in a collaborative and holistic environment, says Kimberly Kirklin, director of education and outreach for ArtPlay.

ArtPlay has an impressive roster of area teaching artists and collaborations with the UAB Department of Music, Red Mountain Theatre Company, Alabama Symphony Orchestra and others. Since opening in January.

“We’ve grown our class offerings to include some really exciting new ways to inspire creativity,” Kirklin says.

One new opportunity for all students is the Collaborative Arts Ensemble, a chance for students to participate in a cross-genre collaboration with other students. Each week students interested in a variety of art forms will work together to create a unique arts project. The class will culminate with a number of public and private performances presented by ArtPlay and the ASC.

ArtPlay offers something for everyone, from the pre-kindergarten set to adults.
Math, science teaching model draws European interest

A German delegation of science education, business and government officials visited Alabama July 13 to meet with Gov. Robert Bentley and State Superintendent of Schools Joe Morton and to review UAB’s Alabama Math, Science and Technology Initiative (AMSTI) program.

We probably have six or seven internationals and several U.S. educators visit each year and consider the success of our model and contemplate if they should duplicate any of it back home,” says Michael Wyss, Ph.D., director of the Center for Community Outreach and Development (CORD). “The idea that a model in part germinated at UAB could be used throughout Europe is impressive. If they would pick up on this, it would be the largest group yet to have adopted the AMSTI model.

Earlier this year, Professor Petra Skiebe-Corrette of Freie Universität Berlin heard Alabama State Department of Education Director Steve Ricks give a presentation on the AMSTI program to European education, business and governmental leaders who are part of the Fibonacci Project. The Fibonacci Project includes members from 21 countries focused on working to expand inquiry-based math and science education in primary and secondary schools in Europe.

“Participants were astounded at the size and quality of AMSTI and the services it provides to your teachers and students,” Skiebe-Corrette wrote in a letter to Morton in March. “While many of our countries are working to expand effective math and science education, it appears that Alabama has found an effective model for accomplishing this through AMSTI.”

A Blue Ribbon Committee comprising lead teachers, administrators, higher education representatives and business leaders designed AMSTI, and it was formed in December 2000. The initiative, which was based on research of best practices for math and science, strongly supports national and state standards. AMSTI research has shown that students attending AMSTI schools in the state are scoring higher in math and science than students who do not.

AMSTI is rooted in providing three basic services to help K-12 students learn by doing math and science:

- Comprehensive professional development for teachers
- All equipment and materials needed to deliver high-quality, activity-based instruction
- On-site, regular support providing mentoring and follow-up assistance to individual teachers in inquiry instruction by math and science specialists

Skiebe-Corrette says implementing math and science reform in their areas has been a difficult and arduous task. He was impressed that AMSTI has been able to accomplish this through its program.

“Alabama has created an excellent program that greatly benefits students and has been uniquely successful in scaling the AMSTI initiative,” he says.

AMSTI infuses excitement into area K-12 math, science and technology teachers and students. AMSTI has 11 sites at colleges and universities throughout the state, and AMSTI-UAB serves all of Jefferson County and is operated through CORD.

Area schools are considered official AMSTI-UAB schools when 80 percent of teachers and administrators agree to participate and send their math and science teachers and administrators to the AMSTI-UAB Summer Science Institute for two summers.

“We encourage area teachers to be more of the guide on the side, instead of the sage on the stage,” says Karen Wood, director of AMSTI-UAB. “We try to change the teacher’s behavior in the classroom and make science more of a verb, with more active, hands-on participation by students.

In this way, we provide children with experiences in which they are encouraged to ask questions, design experiments and arrive at scientific conclusions based on their own data collection.”

During the school year teachers are provided with modules containing chemicals, global-positioning devices, plants and more to conduct hands-on activities that support the state’s science and math curriculum. Each module is customized for specific activities. After students complete the activities, the module is returned to AMSTI-UAB, then restocked and sent to another school.

Wyss says the hands-on, inquiry-based nature of the program makes it a popular draw to teachers and students. “It totally revitalizes teachers and students,” he says. “Also, federal and state assessments indicate that all K-12 students perform 20 to 30 percent better on standardized tests at AMSTI-schools compared with schools that are not participating.”

AMSTI also relieves a burden on many teachers. Textbooks and instruments often are scarce resources in poor school districts, and science and math teachers often had to buy supplies with their own money to adequately provide for students.

“AMSTI provides teachers with resources to teach the entire curriculum in math, science, engineering and technology,” Wyss says. “AMSTI gives the teacher everything they need to help students learn, achieve and truly own the new knowledge they gain.”

SCHOOL SUPPLIES

CONTINUED from page 1

the national norm — 81 percent to 76 percent — on the question “UAB has a good reputation in the community.” Jones says, “Our faculty and staff always have displayed a commitment to helping others. This school-supply drive will help many of the schools hardest hit by the recent tornadoes.”

The needs list was developed by Baisden and Samantha Drew, chief of schools and operations for Birmingham City Schools. It includes traditional items such as binders, crayons, erasers, colored pencils, glue sticks, college-rule loose leaf paper and wide-ruled spiral notebooks. Other items of need are rubber bands, hand soap, Kleenex tissue, hand sanitizer, reusable bags, disinfectant spray and school uniforms.

The school uniforms are the most expensive things on the list, but Baisden says they’re not really as expensive as the first thought. The pants sell for approximately $10 and the shirts for $12. All sizes are needed — from kindergarten through high school.

“If someone is going to donate a uniform, it wouldn’t be a huge expense,” Baisden says. “But if you think about some of the families affected by the tornadoes that have multiple children, buying uniforms could be a huge expense for them. It would be a great blessing and a relief for these families to have a little help.”

The sales-tax holiday weekend of Aug. 5-7 will occur during the collection period. Jefferson County will not be participating in the tax holiday, but cities in Jefferson County will, including Hoover, Mountain Brook and Vestavia Hills. Almost all of the school supplies to be collected for the project are tax-exemptible in participating cities.

“The best thing is that most of these supplies are not expensive, so even if your budget is tight, you can still participate,” Baisden says. “When you’re buying pencils, crayons or paper for your child, maybe you can buy an extra pack to donate for this project. Any little thing will help because they need it all.”

Drop boxes will be located throughout campus, including Faculty Office Towers, UAB Child Development Center, School of Dentistry, Heritage Hall, Hoehn Engineering Building, Administration Building, Materials Science & Engineering Building Room 254, Medical Towers, Sparks Center, Henry Peters Building, Nursing Building, UAB Police Department, Volker Hall Lobby, Campbell Hall Room 452, Community Health Services Building, Cahowrth Hall, Facilities Administration Building, Kaul Building, North Pavilion second floor lobby, Employee Health 123 Spain Wallace, Highlands, VIVA, Kirklin Clinic/HSF and Callahan Eye Hospital.

Building representatives at each donation site will oversee the box at their locations. Business Services will donate a truck and two movers to pick up the supplies to deliver to the Birmingham Board of Education on Aug. 8. The board will distribute the items to schools in need.

“UAB employees are always so generous and gracious when it comes to helping others,” Baisden says. “Our people really care. When disaster strikes so close, we realize it could have been any one of us in need of assistance. Please join us in making this project a massive show of love and support.”
McLain provides comfort and a steady hand in UAB’s ED

The patience to listen, the attitude to deliver care with humility, facing fear and anxiety with kind words and a gentle touch — all are important attributes for a nurse. Sometimes — often times — the care they provide goes unnoticed.

Faye Fitzpatrick Hester brought her elderly mother through UAB’s Emergency Department several times this past year after falls, and she wanted to ensure the care provided to her family by Charge Nurse Matt McLain didn’t go unnoticed. Frances “Teetah” Fitzpatrick made three trips to the emergency department in 2010. McLain was her nurse on her first and third visits. Hester and her daughter, human relations representative Kelly Mayer, say McLain provided comfort, steadiness and a reassuring hand and went above and beyond the call of his position. As a result, McLain has been named July’s Employee of the Month.

Teetah, as she was called by family and friends, was frightened and severely injured when she had her first fall early in 2010. McLain comforted Teetah and got to know her. Hester and Mayer very well. That was especially important in December 2010 when Teetah was rushed to the hospital in an ambulance with life-threatening complications brought on by her previous falls.

McLain was passing through the ambulance bay when he saw Teetah sitting on an ambulance stretcher. McLain remembered her instantly. “Kelly’s grandmother was kind of feisty,” he says. “She was someone you remembered.” McLain immediately went to Teetah, got her placed in a room, completed her initial workflow and started her IV. Then he went to the waiting room to find Hester and bring her back to get a detailed description of what happened. Hester was more than impressed. “I find it amazing that Matt recognized Teetah, remembered her name and then made it a point to find and check on me,” says Hester. “It is comforting to know that there are caring individuals such as Matt in this world who care so much about their patients.”

McLain, a 2005 UAB graduate, is on track to complete his nurse practitioner degree in 2013, and he’s also July’s Employee of the Month. To nominate someone for the honor, send at least three letters of nomination to Leticia Waldon at lwaldo@uab.edu.

Emergency Department Charge Nurse Matt McLain is on track to complete his nurse practitioner degree in 2013, and he’s also July’s Employee of the Month. To nominate someone for the honor, send at least three letters of nomination to Leticia Waldon at lwaldo@uab.edu.

family was around. She wasn’t just another name or number to Matt.”

Co-workers say that’s just McLain’s personality. Alford has known McLain for a number of years — all the way back to his days as a student nurse. She says he has shown many times what it means to be a caring and compassionate nurse. “He always goes above and beyond in taking care of families and the patient,” Alford says.

Alford says McLain also diligently shows empathy and caring to staff, too. “Recently when a staff member’s house burned, Matt was one of the first to give monetary donations and ensure that the staff member had what she and her children needed,” Alford says.

Terri Poe, administrative director of emergency services, says Matt is consistently a dynamic and professional leader of the emergency department team. He is always energetic and positive and passes that energy on to the clinical and clerical staff he works with each shift. “Matt’s strengths are communication, attention to detail, teamwork and leadership,” Poe says. “He provides ongoing communication to all patients, family members, staff and physicians and proves to be an excellent listener.”

As the charge nurse, McLain often has the daunting task of accompanying the emergency department physician to speak with a patient’s family to let them know their loved one has passed away. Routinely, McLain will give the family his number so that they can call back with any questions or concerns in order to alleviate any fear or anxiety. “It’s very difficult to have to go and give them upsetting news, many families don’t want to believe it when you tell them, McLain says. “But I try to think if it were my family member that had passed, what would I need at that moment. If I keep that in mind, usually I’m able to be of some help to them. But sometimes anything you say really does no good because they’re in such shock. That’s a very difficult part of the job.”

The most difficult time was when someone he knew came to the ED after a car accident. She was 16 and the niece of a high-school friend. She passed away in the Trauma Burn Intensive Care Unit a few weeks after the accident.

“I think it’s everybody’s worse nightmare to work in the ER and have someone you know come in,” McLain says. “Going to talk to her family and tell them about the serious nature of her condition after the accident was one of the hardest things I’ve had to do. It was really hard when I actually had a personal connection with the family outside of work.”

McLain says his co-workers all help one another get through the difficult times. The Childersburg native works three days a week, including every Saturday and Sunday, and he says his weekend Baylor crew is a very supportive bunch. “I have a great group of co-workers,” McLain says. “We all have to help each other to get everything done. I think that has kept me in that position for seven years this January — the camaraderie and the teamwork in the ER. It keeps many of us there. We pull together.”

McLain, a 2005 UAB graduate, is on track to complete his nurse practitioner degree in 2013.

HAND DISEASE

CONTINUED from page 1

The Vikings brought it from northern Scandinavia, especially among Northern European descent, and is usually found predominantly in Caucasians, especially men of Western and Northern European descent, and is known to change in a certain population that extends beyond the call of his position. As a result, McLain has been named July’s Employee of the Month.

Teetah, as she was called by family and friends, was frightened and severely injured when she had her first fall early in 2010. McLain comforted Teetah and got to know her. Hester and Mayer very well. That was especially important in December 2010 when Teetah was rushed to the hospital in an ambulance with life-threatening complications brought on by her previous falls.

McLain was passing through the ambulance bay when he saw Teetah sitting on an ambulance stretcher. McLain remembered her instantly. “Kelly’s grandmother was kind of feisty,” he says. “She was someone you remembered.” McLain immediately went to Teetah, got her placed in a room, completed her initial workflow and started her IV. Then he went to the waiting room to find Hester and bring her back to get a detailed description of what happened. Hester was more than impressed. “I find it amazing that Matt recognized Teetah, remembered her name and then made it a point to find and check on me,” says Hester. “It is comforting to know that there are caring individuals such as Matt in this world who care so much about their patients.”

McLain, a 2005 UAB graduate, is on track to complete his nurse practitioner degree in 2013, and he’s also July’s Employee of the Month. To nominate someone for the honor, send at least three letters of nomination to Leticia Waldon at lwaldo@uab.edu.

Emergency Department Charge Nurse Matt McLain is on track to complete his nurse practitioner degree in 2013, and he’s also July’s Employee of the Month. To nominate someone for the honor, send at least three letters of nomination to Leticia Waldon at lwaldo@uab.edu.

The first treatment for Dupuytren’s was performed in 1831 by Baron Guillaume Dupuytren, who was Napoleon’s general and a famous French physician.

Dupuytren’s is not painful in itself, but laborers or others who use their hands for their occupations or hobbies can experience pain. “If someone tries to hold a hammer, wrench or any number of tools they might use for their job, that force transmission through the tool can sometimes cause nerve compression pain,” Long says. Surgery — a full hand fasciotomy and the less-intrusive needle aponeurotomy in affected tendons — has been the most widely available treatment. But with the introduction of the collagenase injection, Long says a new patient population that couldn’t be treated before now has an option.

“Most off those with Dupuytren’s are older gentlemen who often have associated medical conditions,” Long says. “They may be on blood-thinning medications, a lifelong or current smoker or have a heart condition or other medical conditions that make them a poor candidate for surgery. Before this injection therapy, patients who weren’t candidates for surgery had to live with it. Now they have an alternative.”

The injection has worked wonders for Newman. He can carry a pail of water to his backyard, put his hands in his pockets, button his shirts and, most important, make his bed to near perfection. “I love when I make my sheets in the morning; I can straighten them out,” he says. “It makes me feel good.”

McLain was passing through the ambulance bay when he saw Teetah sitting on an ambulance stretcher. McLain remembered her instantly. “Kelly’s grandmother was kind of feisty,” he says. “She was someone you remembered.” McLain immediately went to Teetah, got her placed in a room, completed her initial workflow and started her IV. Then he went to the waiting room to find Hester and bring her back to get a detailed description of what happened. Hester was more than impressed. “I find it amazing that Matt recognized Teetah, remembered her name and then made it a point to find and check on me,” says Hester. “It is comforting to know that there are caring individuals such as Matt in this world who care so much about their patients.”

McLain, a 2005 UAB graduate, is on track to complete his nurse practitioner degree in 2013, and he’s also July’s Employee of the Month. To nominate someone for the honor, send at least three letters of nomination to Leticia Waldon at lwaldo@uab.edu.

Emergency Department Charge Nurse Matt McLain is on track to complete his nurse practitioner degree in 2013, and he’s also July’s Employee of the Month. To nominate someone for the honor, send at least three letters of nomination to Leticia Waldon at lwaldo@uab.edu.