THE HEART BEAT

THE DIRECTOR’S CUT CHRISTINE DONNELLY, MD

Heart History: William Withering and the Discovery of Digitalis - “Flower Power” for the Broken Heart

Plants, herbs and spices have been used for medicinal purposes since antiquity. In the early Renaissance, nutmeg was so highly valued as a “cure” for the plague that the Dutch wanted a monopoly on the lucrative trade of this spice. They went to war with Britain to gain control of a tiny island called Run in Indonesia that was virtually overrun with nutmeg trees. So precious was this island’s produce that in the treaty which ended this war, the Dutch agreed to give up claim to one of their islands in exchange for Britain giving the island of Run to the Dutch. And the island the Dutch gave up? It was New Amsterdam, otherwise known as Manhattan, and the history of the world was changed forever.

The history of medicine was changed forever as well by the discovery of the medicinal power of another plant, the purple flowering foxglove (digitalis), for treatment of patients afflicted with “dropsy” or fluid buildup in the body resulting from congestive heart failure. William Withering, an English physician and botanist, describes his initial encounter with the power of foxglove thus:

“In the year 1775, my opinion was asked concerning a family receipt (recipe) for the cure of dropsy. I was told it had long been kept a secret by a woman in Shropshire who had sometimes made cures after the more regular practitioners had failed...This medicine was composed of twenty or more different herbs, but...the active herb could be no other than the foxglove.”

Although foxglove or digitalis purpurea was used as a medicinal plant prior to Withering’s era, it was Withering who went on to use varying amounts of foxglove to determine the appropriate dose to cause the desired effect with minimal side effects. After a nine year period of “clinical trials”, he published his findings in a 1785 classic of medical literature: “An Account of the Foxglove and Some of Its Medicinal Uses”. In this book, he carefully details his work in administering digitalis, which he had identified as the crucial ingredient of the herbal preparation, to 163 patients. His work was the epitome of meticulous clinical “research” in that he established a dose-response effect and documented the toxicity of the drug. It can be argued that with the publication of this work, Withering ushered

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SCHEDULING CHANGES THIS SUMMER

The department of pediatrics will be transitioning to electronic medical records (EMR) during the summer of 2014. In order to accomplish this federal requirement, pediatric cardiology will have to temporarily decrease the number of available appointments in the months of July, August and September 2014.

We regret the inconvenience, but we’re sure that your needs will be met if you act early. To avoid delays and disappointment, please don’t wait for the end of the summer or the beginning of the school year to get the necessary clearance for your child to participate in fall sports.

Save the Date: Valentine’s Party on February 9, 2014
Physical Activity Safety Awareness
Megan Dickinson, RN

Always check with your cardiologist about which physical activities are OK.

♥ Wear appropriate protective gear. For pacemakers, the PaceGuard shirt is an option.

♥ If you feel your heart racing or skipping, check your heart rate. Place 2 fingers on the inside of your wrist. Count beats for 60 seconds. A resting heart rate is 60 – 100 beats/minute.

♥ Keep drinking fluids to stay well hydrated. Typically, a minimum of 64 oz./day is recommended. More may be needed in hot weather or very strenuous situations.

♥ Stretch and warm up prior to physical activity. This gradual increase in blood makes muscles more pliable and reduces stress on your heart.

♥ Cool down after sustained physical activity. This gradually reduces your heart rate and breathing. It may prevent dizziness or fainting from blood pooling in leg muscles.

Staff Highlight
Donna Timchak, MD

I’ve been with Atlantic Health since 2005 and have 22 years of experience as a board-certified pediatric cardiologist. Following my medical degree from the State University of NY, Health Science Center at Brooklyn, I completed my pediatrics residency and pediatric cardiology fellowship at Columbia. My undergraduate degree in chemistry from NYU was a tremendous help because I worked during my college years at the laboratory for Ultrastructural Biochemistry at the Hospital for Special Surgery. I was a laboratory assistant and wrote my first papers there.

My path to medicine solidified when a neighbor with childhood leukemia was undergoing treatment at Memorial Sloan Kettering. I saw female doctors there. Also, in my local public library, I found the biography of Elizabeth Blackwell, the first female physician in the U.S. I was hooked on medicine ever since. By age 16, I was volunteering in the outpatient hematology lab, doing finger stick CBC’s and running blood tests.

Do you have special areas of interest in pediatric cardiology?

I love the challenges of arrhythmias, the complexities of staged heart repair/re-intervention, and, of course, modern imaging analysis and decision-making.

You regularly devote time to teaching pediatric residents. What other teaching/education activities have you been involved with?

Over the years, critical care nursing lectures and pediatric cardiology fellow education have been part of my repertoire. I teach at Columbia 3-4 days a month with AHS support. It’s a great mechanism to keep me on my toes! Recently, I gave a lecture on Orthostatic Intolerance to pediatricians at Somerset, Overlook and Morristown Medical Centers. Also, since I had the benefit of training under a prime researcher in pulmonary hypertension, I lectured on that topic at a conference sponsored by our neonatology division for all professionals in the NJ area who care for newborns.

What is one thing you wish everyone knew about taking care of their heart?

Knowing oneself and being authentic is probably the best thing one can do for their heart. The stress of pretending to be something you are not, or not taking the time to make your own decisions in life can really manifest with somatic effects and stress on your physical health. It’s important to find happiness. I recently came across a quote from Marcus Aurelius: “For every man has but one life...those who do not observe the impulses of their own minds must of necessity be unhappy.”

What do you do to relax?

I enjoy life with my husband who is a contemporary artist in NYC. His work is frequently in galleries on the Lower East Side or in Bushwick. Our friends in the art world are a great distraction and I also love going to museums and galleries in our area. Some of my other favorite pastimes are travelling, wilderness camping and bicycling.
Healthy Heart

KidFit is a special program for children and teens at risk for obesity and obesity-related difficulties at Goreyb Children's Hospital. It's headed by David Scott, an exercise physiologist, who sees children from age 6 to 21 after referral from a pediatrician. The team will develop an individualized plan incorporating exercise, nutrition and counseling. Financial assistance may be available. For more details, please contact kidfit@atlantichealth.org or call (973) 971-8824.

Think Summer! Heart Camp for Children and Teens

Would you like your child to have the experience of overnight camp with the reassurance that qualified medical staff can address your child’s cardiac needs? These specialized camps are available to all families, regardless of ability to pay. It’s an opportunity to make friends who have gone through similar experiences and to develop more independence. Please feel free to contact the camps to see if it’s right for your child or teenager.

Family Connection

Hope with Heart camp was the highlight of my entire summer. I wasn't nervous, but I honestly had no idea what to expect. It was my first sleep-away camp ever, and I didn't know anybody. However, the minute my dad drove up the small hill to the Hope with Heart campsite, my worries became nonexistent. I was instantly greeted by several camp counselors who smiled at me and waved. One of my counselors, Blair, welcomed me as I got out of the car. Little did I know, she would become an amazing friend to me along with so many others.

My dad came in to check my name off the camper list and go over my medical records. He left after that, and I walked with Blair to my cabin. I saw 6 girls all around my age, sitting in a circle in the middle of the bunk beds. Blair introduced me, and everybody welcomed me. This wasn't a forced welcome or anything; they were opening a spot in the circle for me with genuine smiles. Everybody took turns saying their names, and to be honest, I forgot some names as soon as they were said. But that night, we all talked so much that I could name everybody without hesitation. While I became close friends with our entire cabin, Tiffany and I immediately became best friends. By bedtime that night we pretty much knew each other's life story.

There were 10 people in our cabin, 7 campers and 3 counselors. There were about 6 cabins, each separated by gender and age. Our daily activities included games in the pavilion, arts and crafts, bob time (relaxing/sleeping time), our meals, and pool time. In the evening, we always had a different type of activity, such as a drive-in movie, bowling, karaoke night, or spa night. By the first night in our cabin, we started a ritual of always playing card games together and telling stories from our beds once the lights were turned off.

On the last night, I had no idea what to expect. We sang songs and held hands in a circle - united. The counselors handed out awards for everyone and, of course, everybody cried. I got the "Most Easily Adjusted Camper" award, since I fit into the camp almost instantly. Hope with Heart did something for me that it also did for everybody else. We weren't just a group of people with heart problems. We weren't just a group of people who attended a camp. We are a family and grew a bond so strong that we are inseparable. I went into Hope with Heart camp hoping to make a few friends, but I didn't. I came out belonging to a family.

Emily, age 14

Did you know??:

- The heart of a blue whale weighs over half a ton.
- Frogs and reptiles have only 3 heart chambers while birds and mammals have 4 chambers.
- A python’s heart gets bigger when it gorges on a meal.
- An octopus has three hearts.
- A giraffe’s heart is specially adapted to pump blood up its long neck against the force of gravity.
- An earthworm has five aortic arches instead of a heart.
- Adult male gorillas in captivity are prone to a type of cardiomyopathy.
- A hedgehog’s heart beats about 190 times a minute.
- Smaller animals have faster heart rates than larger animals.
- What animal has the largest heart in relation to the size of its body?
SOCIAL WORK CORNER  MARGARET MICCHELLI, LCSW

STRESSED OUT? INTEGRATIVE MEDICINE’S PEDIATRIC SERVICES

Atlantic Health has a vision to transform healthcare in the 21st century by combining modern medicine with the natural healing powers of the mind, body and spirit. In the Integrative Medicine program, physicians, nurses and other practitioners take a holistic approach and look beyond the medical problem to see how a person is faring overall. They offer complementary treatments, in addition to your regular physician’s care, such as yoga, massage, acupuncture, energy healing, meditation and stress management techniques.

The pediatric services are specially geared towards the particular needs of children and teenagers. School work, busy activity schedules, social pressures, family problems, as well as dealing with health problems are all potential sources of stress even for elementary school children.

A board-certified holistic nurse assesses and makes recommendations for integrative modalities for your child’s individual needs. She provides education about their benefits in relieving stress, anxiety, pain or specific symptoms related to illness. There is an emphasis on self-help strategies that can be used at home, school, while playing sports or engaging in other activities. A copy of the recommendations and notes will be sent to your referring physician for coordination of care.

In addition, there is a board-certified pediatrician, Dr. Annette Cartaxo, who combines traditional pediatric care with holistic practices, including nutritional medicine. Again, the results of this consultation and treatment plan will be sent to your child’s pediatrician. For more information about Integrative Medicine at Morristown Medical Center, please call (973) 971-6301 and at Overlook Medical Center, please call (908) 598-7997.

DR. SUZANNE MONE RETURNS TO GHANA

For the second year in a row, Dr. Mone joined the Hearts and Minds of Ghana team sponsored through Boston Children’s Hospital. The group makes an annual medical mission trip to the Komfo Anoye Teaching Hospital in Kumasi. Here they offer the only pediatric open heart surgery available in West Africa. From 11/5 to 11/16/13, Dr. Mone was involved in the evaluation and surgical planning of all patients, sharing in the hope and joy experienced by the many grateful families. She already knows where she’ll be again next Fall – in the heat of Kumasi, helping one child at a time.

The Heart Throbs: Pediatric Cardiology Team

It was an amazing sight to see over 1,000 people joined in a common purpose: supporting families affected by congenital heart defects. The 6th annual fundraising walk sponsored by the CHD Coalition, a local parent organization, was the scene of all the action on 9/29/13. The pediatric cardiology staff team, The Heart Throbs, proudly wore their team t-shirts for the walk at the Ridgewood Duck Pond. Many of our pediatric cardiology families signed up and showed their team spirit, bringing family and friends together to support each other and raise awareness about CHD. There was live music, arts and crafts, food and camaraderie. Please join us next year for this annual event!