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August 2010



**Pioneer in
Respiratory Therapy**

**Dr. Fred Helmholz
lead the way in
medical specialty**

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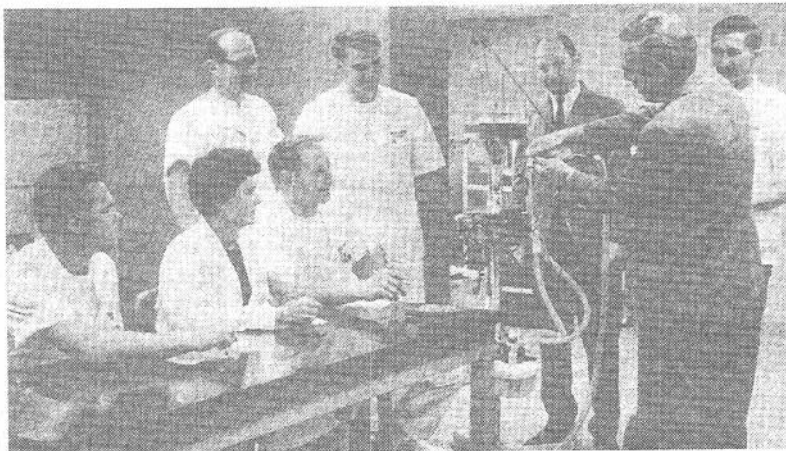
Leading the Way

Meghann Hanson

Dr. Fred Helmholz was at the forefront of respiratory care education

The year was 1911. Chevrolet officially entered the automobile market, competing against the Ford Model T. The New York Public Library opened and the Mona Lisa was stolen. Also that year, nearly ten decades ago, Doctor Fred Helmholz was born.

Fred, son of Dr. and Mrs. Henry F. Helmholz, moved to Rochester with his family in 1921, "when my father began the pediatric department at St. Marys Hospital." Fred attended Shattuck (now Shattuck-St. Mary's) prep school in Faribault. He continued an extraordinary academic career post high school. "I attended Dartmouth College for my undergraduate studies and Johns Hopkins Medical School in Maryland. My father never pushed me to be a doctor. He spoke very



Helmholz (back to camera) instructs inhalation therapists at the Mayo Clinic. Seated (from left) are Lawrence Swenson, Renee Caspersen and Orvis Dahl. Behind them are James Chihak and Lyle Sundry. Standing on either side of Dr. Helmholtz are Bernard Gilles and Glen Ranfranz. Dr. Fred describes the scene as "the beginning of what was the happiest and most worthwhile part of my life." June, 1969, photo.

little about it, actually."

Although no one forced Fred into the medical field, a good education was extremely important to the Helmholtzes. "My older brother, Lindsay, became a physical

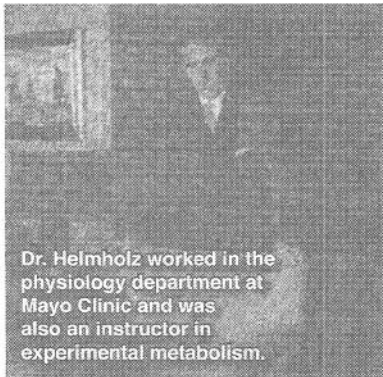
chemist; Carl, my younger brother, became a physicist. Both worked on the atom bomb."

Fred recalls a particular time when college involved more than focusing on his studies. "My last year of

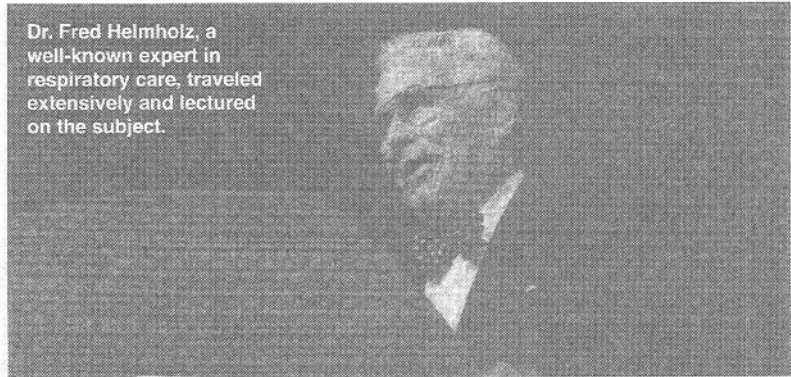
college, I met a very attractive girl. The school told me I wasn't going to graduate; they also told my father." In a calm, collected manner, Henry wrote to his son saying, "Dear Fred, I heard you got yourself in a bit of trouble. I will be interested to hear how you get out of it. Love, Dad." Fred laughed, reminiscing over that letter and the predicament he got himself into. He did, however, resolve the problem and went on to a very successful career.

While in medical school, Fred decided to study an area of medicine other than surgery; he chose physiology. After interning at Massachusetts General, Fred took a fellowship at the Mayo Clinic in Rochester.

Moving back to Minnesota also brought good things to Fred's personal life. "I married Mary Balfour in 1941. My wife knew what she was getting herself into with a busy doctor's schedule, but



Dr. Helmholtz worked in the physiology department at Mayo Clinic and was also an instructor in experimental metabolism.



Dr. Fred Helmholtz, a well-known expert in respiratory care, traveled extensively and lectured on the subject.

my work hours were fairly regular—only a few overnights—not enough to bother us.” Mary’s father was a prominent doctor in Rochester. Fred considered himself lucky to marry a girl from a medical family.

When World War II began, Fred was asked by the surgeon general of the Army Air Force to work in San Diego, California, taking charge of a high-altitude laboratory. “I was in the same station where they made

B-42s.” Fred recalled. While in San Diego, Fred received a phone call from Dr. Walter Boothby, head physician in charge of the aeromedical laboratory at the Mayo Clinic. Dr. Boothby (co-inventor of the BLB mask, considered a forerunner of the partial re-breathing mask) was in charge of oxygen therapy at Mayo. He had taken ill and asked Fred to return to Rochester to participate in the research and

development of oxygen masks, both for clinical and military use. Fred accepted the offer and commuted between San Diego and Rochester until the war’s end.

With the war over, Fred returned to work in the physiology department at Mayo. He was also an instructor in experimental metabolism, researching lungs and the circulatory system. Along with all of Fred’s responsibilities



Upon Fred's retirement in 1978, he and Mary moved to Cuttyhunk Island in Massachusetts. The couple moved back to Rochester when Mary became ill. She passed away in 1983.

at Mayo, he continued to add to his long list of accomplishments. Involved in developing the first pulmonary function tests, Fred worked closely with doctors in the field of inhalation therapy.

"My work in pulmonary function got me involved in sessions on oxygen therapy at the AMA meetings. During those conferences, I got to know people such as Dr.

Albert Andrews." Dr. Andrews, an early supporter of respiratory care, asked Fred to become a member of the newly-formed Board of Schools. This group is known by many scholars as a turning point in the respiratory care profession. "Dr. Helmholtz is really the grandfather of formal respiratory care education. He worked out the accrediting process," explained Gary Smith, executive director of the NBRC.

Proving his dedication once again, Fred took on the Board of Schools as his personal project. At one time, this panel was failing miserably, but with Fred's dedication and use of his own money and time, he turned the board into a success. "The leadership Dr. Helmholtz displayed helped legitimize this profession. He assured us the support of medical groups that might otherwise never have happened," commented Gerald Dolan, RRT.

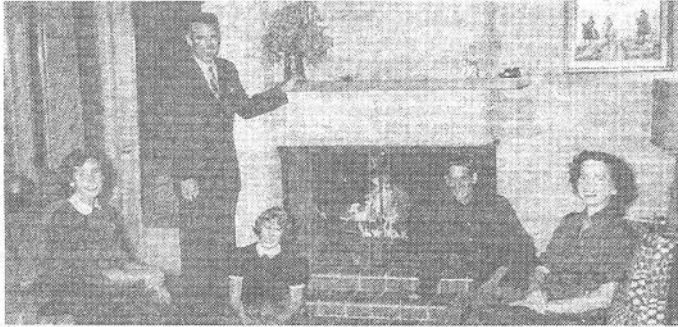
As the years passed, Fred's career

thrived while he and Mary raised the couple's three children—Donald, Anne and Martha.

In 1978, Fred retired and spent more time with his family. "We moved out east for awhile. A friend of ours had land in Massachusetts. We fell in love with the area. Mary and I bought land on Cuttyhunk Island." Being the multitasking scholar he is, Fred designed the Helmholtzes' new home. "However, I'm not an architect. The builder came to me one day and said, 'Doc, if you put the windows in like you have them drawn, you won't be able to open them.'" The dream home was successfully built, with a few modifications.

Fred and Mary stayed on Cuttyhunk Island until Mary became ill. She was diagnosed with a malignancy of the neck. The Helmholtzes chose to move back to Rochester and the Mayo

The Helmholz family relaxes around the fireplace in their Rochester home, circa 1960. From left: Anne, Fred, Martha, Donald and Mary.



After accepting a fellowship at Mayo Clinic in Rochester, Fred Helmholz married Mary Balfour in 1941. Mary's father was a prominent Rochester physician.

Clinic. With Fred's background and extensive medical training, he knew exactly what was occurring to his wife and her prognosis. "That became very bothersome for me, and even for Mary, too, because she knew what was happening."

Mary underwent several procedures that were unsuccessful. She passed away in 1983.

Fred does not feel that the advances that have taken place in cancer treatment would have helped Mary. "We need to figure out symptoms of illness much sooner. I do not think Mary would have found a cure today, either."

Since Mary's death, Fred has kept busy the best way he knows—through learning. "I take courses. I send away to teaching companies and they send me the information I need." One of Fred's favorite topics of study is astronomy.

Throughout much of his retirement Fred frequently visited the clinic to check in on the respiratory care unit. Mayo provided him with an office through his mid-eighties. He continued to be briefed on new findings and questioned on old ones.

Fred continues to drive to Mayo each week. "There is a poet's corner, made up of retired doctors, that meets for lunch at the Kahler." In addition to all his other activities, the ninety-eight-year-old Fred has signed up for a medical study.

Being a doctor, Fred knows the ins and outs of how to stay healthy. Nonetheless, he attributes his long life to nothing more than genetics. "I had the right parents. My mother also lived into her nineties."

With only a few months until his ninety-ninth birthday, Fred keeps to his daily routines, hobbies and favorite pastimes. "I still find life very interesting."

The following poem was written by Fred on his ninetieth birthday.

Growing

*It's not that I grow old,
But that once I was young;
It's not that breath of life grows cold,
But tones aren't true to songs we've sung.
It's not I hear less somehow
But now there's sound of passing time.
Why can't the joy of things remembered
Sate the wish that trove should grow.
Can't content with content gained
Obscure how much there's still to know?*

*It's not that needs of just this day
Are not sufficient good.
But thoughts intrude of days long gone
When what I would I could.
Yet even as I now grow old
The past has left in place,
A treasure deep secure and gold,
A smile on memory's face.*

*Today's portends to swell full well
The best of memory's treasure;
It's very hard to tearless tell
How really great my pleasure!*

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