

HISTORY OF WOMEN IN SURGERY

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A Study of a Woman's Hands
By: Leonardo da Vinci

**“The ideal surgeon should have the
eye of an eagle,
the heart of a lion and
the hands of a woman.”**

15th century English proverb

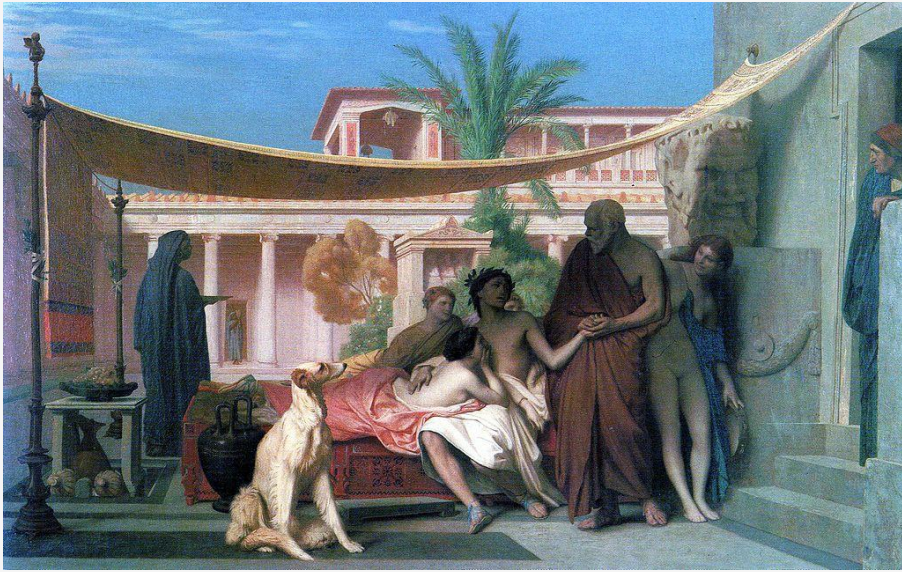
- These hands, dated around 1474, in Silverpoint on prepared paper are heightened with white
- Possibly for a portrait that has since been lost, called the Lady of Lichtenstein
- These elegant, loosely held hands probably represent the most exquisite drawing of hands in the history of art
- This is an exercise in how to draw human hands to the peak of human skill.

History of Women In Surgery



Portrait of Henry VIII after Hans Holbein the Younger, c. 1537–1547

- Dates to 3500 B.C.E. (Before Common Era)
- Ancient history reveals an active role historically in Egypt, Italy, and Greece
- The Middle Ages were a very disappointing period for women in general and specifically for women in medicine and surgery
- Middle Ages, man had to intervene by establishing regulations forbidding women from practicing surgery “unless they assumed their husbands’ practice upon his death or unless they were deemed competent by jury”
- Henry VIII proclaimed “No carpenter, smith, weaver or women shall practice surgery”
- 1540 he granted the charter for the Company of Barber Surgeons, women were barred
- Women did continue to practice during this time without formal training or recognition in England and North America



Jean-Léon Gérôme (1824–1904):
Socrates seeking Alcibiades in the
house of Aspasia, 1861.



Painting by Hector Leroux (1682–1740), which portrays
Pericles and Aspasia admiring the gigantic statue of Athena
in Phidias' studio

- 3500 B.C.E. Women In Surgery at the banks of the Tigris and Euphrates Rivers in Mesopotamia
- Flint and bronze instruments were discovered in the grave of Queen Shubad of Ur
- 1500 B.C.E. there were female medical students in Heliopolis, Egypt
- 500 C.E. (Common Era) In ancient Greece, Leto the wife of Zeus and mother of Apollo cured the wounds of Arneas the founder of Rome
- Aesculapius, son of Apollo had four daughters, all of whom were physicians
- 150 B.C.E. the fall of Corinth, Greek female prisoners were taken to Italy, those with medical knowledge commanded the highest price
- 150 B.C.E. Aëtius wrote the “Tetrabiblion” which described the surgical techniques of Aspasia, a Greco-Roman female surgeon. This served as the main surgical text into the 11th century



London, Wellcome Library, early 14th century (France), a copy of the intermediate Trotula ensemble, pen and wash drawing meant to depict "Trotula", clothed in red and green with a white headdress, holding an orb.

- The rise and predominating force of a male-dominated church, women were actively discouraged from the practice of surgery
- Education of women in medicine did continue in Salerno, Italy where Trotula (12th century) wrote a volume on the practice of gynecology and midwifery and was revealed as a reference for centuries
- Trotula is a name referring to a group of three texts on women's medicine that were composed in the southern Italian port town of Salerno in the 12th century.
- The name derives from a historic female figure, Trota of Salerno, a physician and medical writer who was associated with one of the three texts. However, "Trotula" came to be understood as a real person in the Middle Ages and because the so-called Trotula texts circulated widely throughout medieval Europe, from Spain to Poland, and Sicily to Ireland, "Trotula" has historic importance in "her" own right.

The Three Texts:

- Liber de sinthomatibus mulierum ("Book on the Conditions of Women")
- De curis mulierum ("On Treatments for Women")
- De ornatu mulierum ("On Women's Cosmetics")

- An image of 'Trotula' from a 14th-century French encyclopedia; the caption translates: 'How the woman teaches the clerk the secrets of nature'.

Image credit: Bibliothèque virtuelle des manuscrits médiévaux. © 2013 Institut de recherche et d'histoire des textes.

- Learning for women was a challenge outside the university, it commonly emanated within monasteries



- Monks and Nuns followed an enclosed way of life
- Their lives were established around strict routine and regulation serving to maintain and enhance physical and spiritual well-being
- This is the point of sharing knowledge with parishioners

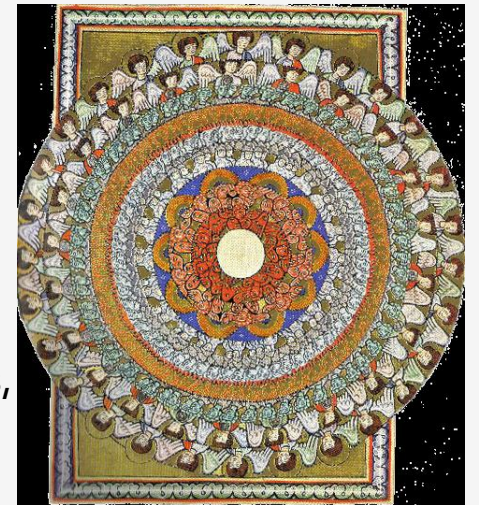
*The earth
sustains
humanity. It
must not be
injured; it must
not be destroyed.*
Hildegard of Bingen



This image of Hildegard's is known as
The Cosmic Tree, or The Wheel of Life.

The Following Medieval Queries Arise:

- **Could a woman be a healer?** Most very likely were, it was they who treated wounds and illnesses of family and neighbors.
- **Could a woman be an author?** It was one thing to practice medicine, another entirely to claim authoritative knowledge. Prior to the 15th century, no works by a woman have yet to be credited in medical writings in medieval Europe aside from the German nun Hildegard of Bingen (1098-1179), *The Nun Who Loved the Earth*"



An illuminated image of one of Hildegard's visions,
known as All Beings Celebrate Creation.

*O most honored Greening
Force,
You who roots in the Sun;
You who lights up, in shining
serenity, within a wheel
that earthly excellence fails to
comprehend.
You are enfolded
in the weaving of divine
mysteries.
You redden like the dawn
and you burn: flame of the
Sun.*

*Hildegard von Bingen,
Causae et Curae*



- **Could a woman be an authority?** It is not known who assembled the “Trotula” ensemble, it is known how they did it. They took a text called “The Book of Women’s Conditions,” largely derived from a work called “Women’s Cosmetics” and fused this with Trota’s teachings called “On Treatments for Women.”
- **Could a woman be a reader?** It is likely that gender differentials in men’s and women’s reading abilities and habits affected the Fate of the Trotula texts.
- **All known medieval readers of the Latin “Trotula” were men:** male physicians, clerics, and laymen. Hebrew, French, German, and Italian translations all show no evidence suggesting the Trotula was meant for (1) women to read and (2) the translations were meant for women.

Hildegard von Bingen: Viriditas, the Healing Green Force

Hildegard lived in relationships with the plants, herbs, and trees available to her for medicine and that evolved into a European medicinal tradition, later influencing modern medicine all over the world.

Modern Era of Surgery



Dr. Miranda Stewart
Alias: Dr. James Barry

- Commences with women impersonating men to practice medicine and surgery
- The “beardless lad,” Dr. James Barry (1795-1865), educated at Edinburgh Medical School, graduated in 1812 at age 17
- Joined the Army as a surgeon during the Napoleonic Wars
- 1820 Conducted one of the first cesarean sections at the request of a wealthy patron whose wife was stalled in labor, both mother and infant survived
- At the time of his death, Dr. Barry was discovered to be a woman with abdominal findings indicating previous pregnancy



Dr. Miranda Stewart

- There had been rumors during his life that he was involved in at least one long-term homosexual relationship
- Turns out, Dr. Barry was actually Dr. Miranda Stewart
- Upon her death, a friend commented that “**she chose to be a military doctor, not to fight for the right of a woman to become one, but simply to be one.**”

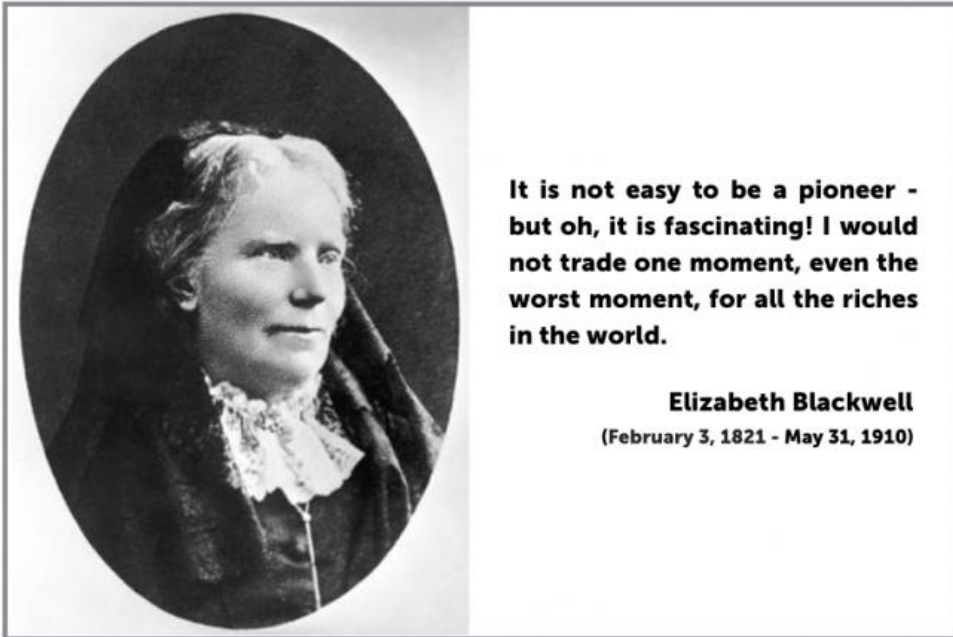
They Defied Expectations of Society & Family

- Left: the first female physicians from India, Japan, and Syria
- Students at the Women's Medical College of Pennsylvania in 1885
- The first women from their respective countries to get a degree in western medicine



L-R: Anandibal Joshi, India; Keiko Okami, Japan; Sabat Islambouli, Syria

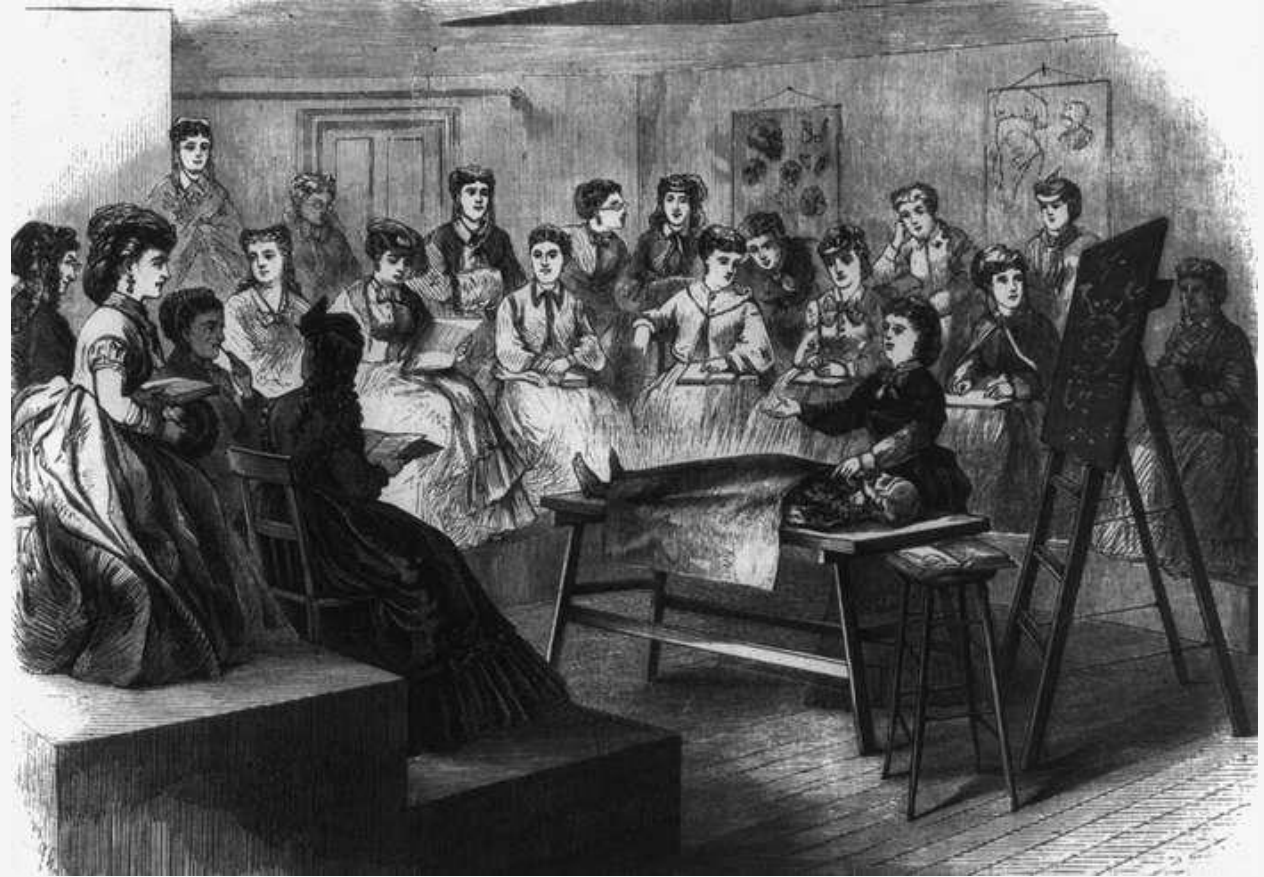
Elizabeth Blackwell 1821-1910



- First Female Physician in the United States
- Inspired to pursue medicine at the urging of a friend who died a painful death from metastatic cancer. This woman pleaded for women doctors to “treat the tumors of women” and to “provide a gentler hand.”
- Rejected repeatedly from over 20 medical schools in the United States, was eventually admitted to Geneva Medical College in upstate New York when the vote was put to the students, students approved her admission “they thought she would never succeed.
- Graduated in 1849 with the Gold Medal, could not get a residency position anywhere, ended up serving as an obstetrical nurse in France.
- She contracted a suppurative eye infection and lost vision in her left eye.

*Woman's Medical College
Illustration of medical
students attending a
lecture at the Woman's
Medical College of the
New York Infirmary,
founded by Elizabeth and
Emily Blackwell*

From: Frank Leslie's Illustrated
Newspaper, April 16, 1870.
Library of Congress, Washington, D.C.



“Between the things girls aren’t supposed to know and the things children aren’t supposed to know, it is a wonder I know anything at all!”

“When I grow up I will know everything about the world that I want to know.”
Elizabeth Blackwell

Emily Howard Jennings Stowe (1831-1903)



- The first female physician in Canada
- Her husband contracted tuberculosis, with several children to support, she decided to pursue medicine.
- 1865 At the University of Upper Canada in Toronto she was told by the dean that “The doors are not open to women, and I trust they never will be.”
- 1867 Graduated from New York Medical College for Women and returned to Canada to practice without an internship or residency
- 1880 13 years after graduation from medical school, she was the second woman granted a license to practice by the College of Physicians and Surgeons of Ontario
- 1883 To her great satisfaction, her daughter, Augustus Stowe-Gullen became the first woman to be granted a medical degree from a Canadian university

*When told
that the
doors never
will be open,
she stated:*

“Then I will make it the business of my life to see that the doors of Canadian Medical Schools will be opened and that women will have the same opportunities as men.”

- While studying medicine in New York, Stowe met with Susan B. Anthony and witnessed the divisions within the American women's suffrage movement. Stowe also attended a women's club meeting in Cleveland, Ohio. Stowe adopted a gradualist strategy which she brought back to her work in Canada.
- After breaking her hip at the Columbian Exposition's Women's Congress in 1893, Stowe retired from medicine.
- In 1896, Emily and her daughter Augusta participated in an all-female "mock parliament," in which the women considered a petition from a male delegation for the right to vote. Stowe, as the Attorney General, used the same arguments that the Canadian Parliament had levelled against female suffragists and denied the petition. Stowe died in 1903, fourteen years before Canadian women were granted the right to vote.

Mary Edwards Walker (1832-1919)



- The first female surgeon in the United States
- 1835 Second female graduate of an American Medical School, Syracuse Medical College, New York
- She went into practice with her husband Albert Miller, a classmate
- Surgical practice failed, some believe since she would not change her last name and practiced as a woman
- 1863 Became the first female surgeon in the U.S. Army after several years of practice as a nurse
- 1865 Received the Congressional Medal of Honor for her work as an Army surgeon , it was revoked in 1917 since she didn't serve on the front line, she refused to return it and took it to her deathbed
- 1977 The honor was reinstated by President Jimmy Carter; as of 2008, she is the first and only woman to have been awarded the Congressional Medal of Honor

American abolitionist, prohibitionist,
prisoner of war and surgeon



Emma K. Willits

*(September 20, 1869 –
April 9, 1965)*

- 1892 she moved to Chicago to enroll in the Women's Medical College of Chicago, then affiliated with (and later absorbed by) Northwestern University
- 1896, Willits served her internship at the Women's Hospital of Chicago
- 1897, Willits moved to San Francisco as a resident at the Children's Hospital (for Women and Children)
- 1900 She completed her residency, opened her own private practice, but maintained her affiliation with Children's as a member of the surgical staff of the Department of Pediatrics, and later became chief of the Department of Surgical Diseases of Children
- 1921 she became the chair of the Department of General Surgery, a position she held until 1934
- She is believed to be the first woman in the United States to head a surgery department
- Willits lived quietly in San Francisco until her death at age 95



Maud Mary Chadburn

*(March 9, 1868 –
April 24, 1957)*

- 1912 Co-founded the South London Hospital for Women and Children with fellow surgeon Eleanor Davies-Colley
- Chadburn qualified as a Licentiate of the Society of Apothecaries (1893), Bachelor of Medicine London (1894), Doctor of Medicine (1898), and B.S. (1899)
- She held posts of assistant anesthetist, curator of the museum and surgical registrar at the Royal Free Hospital
- After the official 'Times' obituary for Chadburn, her adopted daughter wrote "a more personal note of appreciation" to the original obituary. In it she mentioned that "though she never married she adopted three children; and in all she did for them she never forgot her own deeply unhappy childhood. All her medical studies were undertaken on her own initiative..."

Jennie Smillie Robertson 1878-1981



- The first recorded female surgeon in Canada
- 1909 Graduated University of Toronto Medical School
- No Canadian internships or residencies offered to women
- 1911 Completed residency at the Philadelphia Women's Medical College
- She was the surgeon "to perform the first major gynecological surgery in a private home" where she practiced
- Helped establish the Women's College Hospital serving as chair of gynecology 1912-1942
- After retirement, she married her childhood sweetheart, Alex Robertson, at the age 70 commenting "I first met the man I was to marry many years later, in 1898 while I was teaching. At that time I was planning for medicine, not marriage, and I didn't think I could have both."

On her hundredth birthday she said there was not a day in her life she did not want to be a doctor.



*Honoria
Somerville
Keer*

*(December 26, 1883 –
March 20, 1969)*

- A British surgeon during World War I, where she served as Assistant Medical Officer with the Girton and Newnham Unit of the Scottish Women's Hospital for Foreign Service
- Dr Keer received the Croix de Guerre and Médaille d'Honneur (France) and the Order of St. Sava (Serbia) medals for her services during the Great War



Helen Mary Mayo
(October 1, 1878 –
November 13, 1967)



The Mareeba Hospital, c 1917

- 1896 enrolled at University of Adelaide an Australian medical doctor and medical educator, born and raised in Adelaide
- Spent two years working in infant health in England, Ireland and India
- 1906 She returned to Adelaide, starting a private practice and taking up positions at the Adelaide Children's Hospital and Adelaide Hospital
- 1909, she co-founded the School for Mothers, where mothers could receive advice on infant health
- 1914, after unsuccessfully campaigning for the Children's Hospital to treat infants, Mayo co-founded the Mareeba Hospital for infants
- 1927 This organization, which became the Mothers' and Babies' Health Association
- To combat the risks of cross-infection, she instituted a policy of strict isolation of babies from other patients. Each child had their own locker, where their own equipment would be kept, gowns used by nurses to tend to one child would only be used for that child, and blankets, bottles and floors were all sterilized.

Jessie Gray *(1910-1978)*



- First registered female general surgeon in Canada
- 1934 Graduated University of Toronto
“Gold Medal Recipient”
- First female surgical graduate of the Gallie Program at the University of Toronto
- 1941 Named Canada’s “First Lady of Surgery”
- 1946 Chief of Surgery at the Women’s College Hospital
- 1954 Presented the Elizabeth Blackwell Medal
- A trailblazer for women surgeons and an example that women could excel in the male-dominated field of general surgery.
- During her career, she was considered one of the top four cancer surgeons in North America, and she earned many firsts and fellowships in her field.

Association of Women Surgeons

- Association of Women Surgeons (AWS) founded in 1981
- Incorporated 1986
- 1988 Nearly 1,000 members
- 1989 Annual Fall Meeting
- 1995 Governor Position for AWS Representative in the American College of Surgeons
- 1996 – Present Ethicon has awarded in excess of \$500,000 to AWS members
- AWS members serve on every standing committee of the American College of Surgeons and sit on its editorial board
- AWS members participate in NIH panels on the Status of Women in Scientific Careers
- AWS developed a mentoring program for members who need advice regarding their careers at the resident level and beyond

Women In Thoracic Surgery

30 YEAR HISTORY

FOUNDED 1986

*1961 AMERICAN BOARD OF THORACIC SURGERY PROVIDED
CERTIFICATION TO ITS FIRST THREE (3) PIONEERING FEMALE
DIPLOMATS: ANN MCKIEL, NERMIN TUTUNJU, NINA STARR BRAUNWALD*

1980 TOTAL NUMBER OF CERTIFIED WOMEN REACHED 10

*2015 DESPITE STRIDES TO RECRUIT MORE WOMEN IN THORACIC
SURGERY, WOMEN ACCOUNT FOR 3% OF TOTAL ABTS DIPLOMATS EVER
CERTIFIED AND LESS THAN 5% OF PRACTICING CARDIOTHORACIC
SURGEONS*

**North American
Modern Female
Surgeons &
Notable Others**



Nina Starr Braunwald



Institutions:

- Georgetown University Hospital
 - University of California, San Diego
 - National Heart Institute
-

Her Mentors

*Glenn Morrow
Charles Hufnagel*



MODERN MEDICINE
Published weekly, November 7, 1955

DR. CHARLES A. HUFNAGEL
New York, N.Y.

In 1952, Dr. Charles Hufnagel implanted an artificial valve to act as a check, not a replacement for, a damaged aortic valve. He had only 3-5 minutes to operate on the working heart.

Shortly after World War II, Dr. Hufnagel made the first successful graft of a rigid tube, fashioned from lucite, in a blood vessel. In 1952 he performed the first successful insertion of a plastic valve in a human heart. It demonstrated for the first time the possibility of a functionally moving artificial body part.

Dr. Hufnagel performed countless operations in which portions of diseased arteries were replaced with plastic substitutes. In addition, he and his surgical team developed a new heart and lung pump for open heart surgery and a heat exchanger by which the blood of the patient could be heated or cooled.

The Hufnagel aortic ball valve was designed for rapid surgical implantation in the descending thoracic aorta with the use of multiple fixation rings.

Starr and Edwards achieved a design breakthrough with an engineered structure consisting of a stainless steel cage, a fixation ring made from knitted Teflon cloth, and a heat-cured Silastic ball.

Carpentier advanced the concept of "bioprosthesis" which combined biological and mechanical structures to create a tissue-based valve with low thrombogenicity.

Dr. Charles Hufnagel's early work helped to articulate the design criteria for heart valve prostheses: materials had to be chemically inert, compatible with human tissue, atraumatic to blood, and nonthrombogenic (and able to retain structural integrity over many years)..

1952

Nina Starr Braunwald

*1952 FIRST WOMAN TO ENTER TRAINING IN
GENERAL SURGERY AT BELLEVUE HOSPITAL,
NEW YORK CITY*

*1957 COMPLETED SURGERY TRAINING AT
GEORGETOWN*

*1958 STAFF SURGEON AT THE NATIONAL
INSTITUTES OF HEALTH*

*1965-1968 SERVED AS DEPUTY CHIEF OF THE
CLINIC OF SURGERY*

Departed along with her husband Eugene Braunwald to the University of California San Diego when he became chair of medicine

She continued her research and became acting director of the UCSD Division of Cardiac Surgery

*1972 Joined the faculty at Harvard University
Brigham & Women's Hospital*

She served on the Surgery and
Bioengineering Study Section at the NIH

Harvard Medical School Admissions
Committee

Deputy Director of the MD/PhD Medical
Scientist Program

She published 150 peer-reviewed
publications

Despite all of her achievements, she spent
24 years as an associate professor, was
never promoted to full professor

“A True Trail Blazer”



- At young age 32 years of age on March 11, 1960 performed first successful Mitral Valve Replacement in a human
 - She pioneered the use of tissue culture techniques to develop non-thrombogenic cell layers for non-physiologic surfaces
 - This research led to refinement of next-generation pacemakers
-



- Adjusting a test chamber holding an artificial heart valve she developed
- Fabricating a heart valve
- Principal designer of the Braunwald – Cutter Valve (a cloth covered mechanical ball valve) which was implanted in thousands of patients in the 1960's and 1970's
- She also developed a stented aortic homograft for mitral valve replacement

Nina Starr Braunwald

- 1992 died at age 64
- Many scholarships bear her name sponsored by her family
- Association of Women Surgeons established the Nina Braunwald Award
- Thoracic Surgery Foundation for Research and Education awards a Career Development Award in her name
- 2009 President Barack Obama credited her accomplishments in his speech to the nation announcing A Recovery and Reinvestment Act Funding for the NIH

"Three Firsts In American Surgery"

(Kenemy et al Arch Surgery 1993; 55:1055-6.)

*"NO WRITTEN ACCOUNT CAN EVER
ACCURATELY REFLECTS THE HARDSHIPS THEY
(SHE) SUFFERED, OR PROVIDE A TRUE
MEASURE OF THEIR (HER) COURAGE."*

*"HER LIFE AND DEATH DISPLAYED THE TYPE
OF COURAGE REQUIRED OF HER TO BREAK THE
GENDER BARRIER IN ONE OF THE MOST MALE-
DOMINATED SPECIALTIES OF SURGERY."*

Maude Abbott



- 1936, Invented an international classification system for congenital heart disease
- Became the definitive reference guide



Myra Adele Logan



By: Charles Alston's (Myra's husband), a painter, Modern Medicine (oil on canvas) in Harlem Hospital, mural commissioned in 1936 Logan was a medical intern at the hospital then and served as a model for the mural; she appears as a nurse holding a baby.



- Harlem Hospital, New York
- 1943, the first woman to operate on a human heart in only the ninth such operation of its kind anywhere in the world
- First African American woman elected a fellow of the American College of Surgeons

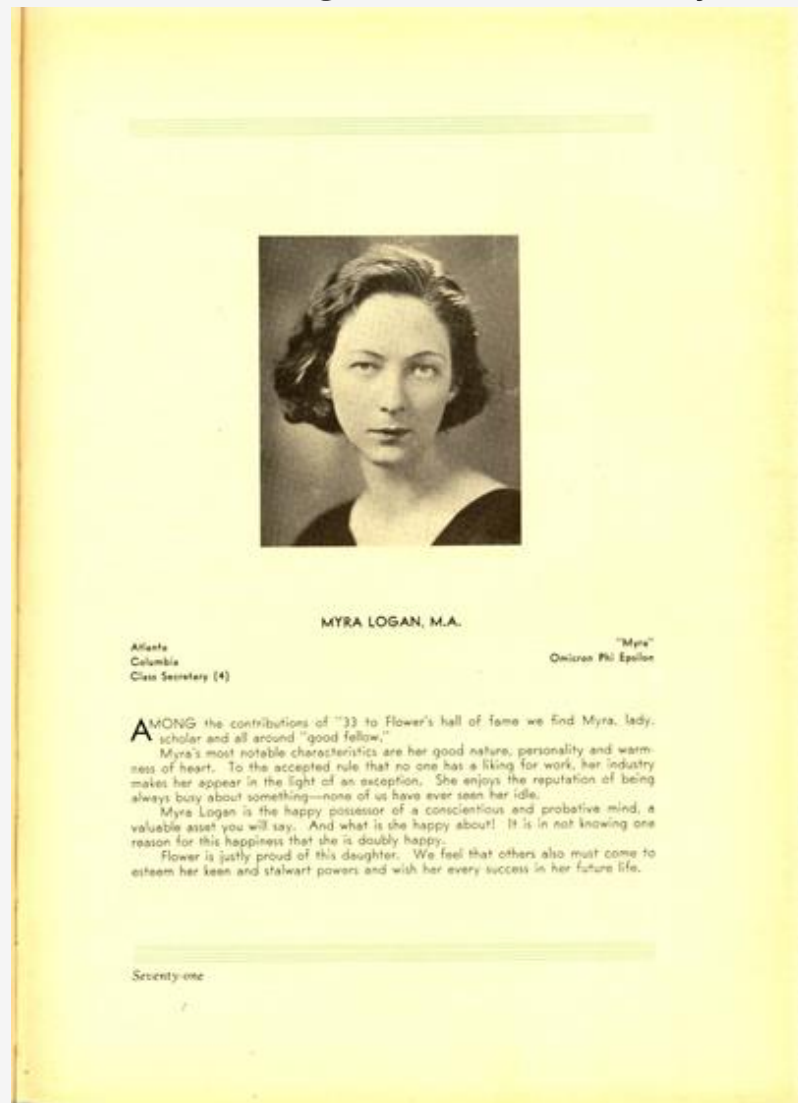


- The first patient Dr. Logan and Dr. Wilkinson performed heart surgery on presented on September 9, 1939. He had a stab wound penetrating the left ventricle and the LAD. Although the laceration was repaired, the patient died 48 hours post-op from a myocardial infarction.
- Their two subsequent patients, one presenting on October 17, 1940, and one presenting on January 1, 1941, had stab wounds penetrating the right ventricle. Both of those patients survived. In total, they operated on 7 patients with stab wounds to the heart by 1948; five survived.
- In 1941, Dr. Logan and Dr. Robert S. Wilkinson presented 2 pts with ventricular lacerations they had repaired at Harlem Hospital.



Charles Alston mural Harlem Hospital

“The world would not be dictated by one race or gender.” – Dr. Myra Adele Logan



Harlem Hospital & A Footnote In History



Harlem Hospital Center Saved The Civil Rights Movement

- Martin Luther King, Jr. Pavilion named in his honor several years after the hospital saved his life
- September 20, 1958, while signing copies of his book “Strive Toward Freedom” in Blumstein’s Department Store on West 125th Street between Adam Clayton Powell, Jr. and Frederick Douglas Boulevards
- Dr. King, age 29, was stabbed in the chest with a seven inch steel letter opener by Izola Curry, a black woman
- The weapon lodged in his chest very close to the aorta, had he sneezed – he likely would have died
- Dr. King asked that Izola Curry not be jailed and instead be treated at a mental hospital
- She was later diagnosed as criminally deranged

Dr. Aubrey de Lambert Maynard, Chief of Surgery headed the team caring for Dr. King. The surgery was conducted by Dr. John W.V. Cordice and Dr. Emil Naclerio.

Izola Ware Curry

June 14, 1916 – March 7, 2015



- Convinced that King and NAACP leaders were surveilling her and conspiring to deny her employment, the delusional Curry approached the civil rights leader as he sat in a Harlem department store signing copies of his first book.
- She plunged the letter opener deep into the 29-year-old King's chest after asking him, **"Why do you annoy me?"** According to a transcript of Curry's post-arrest interrogation, she calmly told investigators that her motive was self-preservation: **"Because after all if it wasn't him it would have been me, he was going to kill me."**
- Curry, who pulled the letter opener from her purse, was also carrying a loaded Galesi-Brescia pistol, which was hidden inside her bra. Curry bought the gun a year earlier for \$26 in Daytona Beach, but told investigators that she had never taken the weapon outside her home--until September 20, the day she stabbed King. Curry claimed that she had no intention to shoot King, but instead needed the pistol for protection in case the reverend's followers attacked her.



- After subsequently being found “in such a state of insanity” that she could not understand the attempted murder charge lodged against her (and, as a result, was incapable of aiding her defense), Curry was committed to the Matteawan State Hospital for the Criminally Insane in upstate Fishkill, New York.
- At age 42 when she entered the state Department of Corrections facility. News of her commitment in November 1958--two months after she stabbed King--appeared in various newspapers, including The New York Times, which devoted three paragraphs to the development. It was the last time Curry’s whereabouts, or her condition, would be the subject of press coverage.

MARTIN LUTHER KING STABBED



A Letter Opener in His Chest. The Rev. Martin Luther King Jr. was stabbed last night by a woman in New York City. The woman, who was arrested, was seen in the photograph above. (AP Wirephoto)

Martin Luther King, Jr.:

- “You know, several years ago, I was in New York City autographing the first book that I had written. And while sitting there autographing books, a demented black woman came up,” King told the Mason Temple audience. “Before I knew it, I had been stabbed by this demented woman. I was rushed to Harlem Hospital. It was a dark Saturday afternoon. That blade had gone through, and the X-rays revealed that the tip of the blade was on the edge of my aorta, the main artery. And once that's punctured, you drowned in your own blood, that's the end of you.” King added, “It came out in The New York Times the next morning that if I had merely sneezed, I would have died.”
- “As he closed the final address of his life, King remarked that, had he sneezed, he would have missed a decade’s worth of milestone events, including passage of the Civil Rights Act, the Selma marches, the Freedom Riders protests, and the March on Washington, where King delivered his “I Have a Dream” speech. Reflecting on what might not ever have been, King said, “I’m so happy that I didn’t sneeze.”



*Martin Luther
King, Jr.*

*January 15, 1929 –
April 4, 1968*

Of all the letters of consolation that poured in to the hospital, he continued, there was one that
“I will never forget.”

“Dear Dr. King,” it read. “I am a ninth-grade student at the White Plains High School. While it should not matter, I would like to mention that I’m a white girl. I read in the paper of your misfortune, and of your suffering. And I read that if you had sneezed, you would have died. And I’m simply writing you to say that I’m so happy that you didn’t sneeze.”

To impassioned applause, Dr. King went on: “And I want to say tonight — I want to say tonight that I, too, am happy that I didn’t sneeze.”

Helen B. Taussig





- The idea for a palliative shunt operation was that of Helen B. Taussig, Chief of Pediatric Cardiology.
- Although she was the daughter of a Harvard professor, Harvard Medical School did not accept women at that time, so she attended Johns Hopkins Medical School.
- Again because of her gender she could not obtain an internship at Johns Hopkins (the one position reserved for a woman was given to a classmate), and so she took a cardiology fellowship instead, and eventually was appointed director of the Pediatric Heart Clinic.
- In the course of caring for children with Tetralogy of Fallot, she noted that those who also had a persistent ductus arteriosus did better until it closed off; it then occurred to her that other children with the tetralogy could be helped by surgical creation of a ductus.
- In about 1938–1939, she took her idea to the leading pediatric cardiac surgeon of that day, Dr. Robert Gross, who allegedly replied, "Madam, I close ductuses, I do not make new ductuses." Taussig had to await the arrival of Alfred Blalock as Chief of Surgery in 1941.

The good physician treats the disease;
the great physician treats the patient
who has the disease. William Osler



Switching Arteries Sidetracks Blood and Oxygen to Otherwise Starved Lungs

Saving Our Doomed 'Blue' Babies

the blood would pick up its life-giving oxygen. Then it would go back to the heart again to move onward through the body.

But could it be done? It is one thing to have a plumber re-arrange a piping system and something quite different to lay bare the human heart, sever one of its main arteries, splice it to another main artery and sustain life in the patient in the process. Dr. Blalock said he would try.

Since the pioneer attempt the operation has been largely successful, although it is one filled with danger. Among the first 70 patients, 14 died. The odds are 5 to 1 for success.

Now that the news of Dr. Blalock's operation is known through the country the list of patients grows daily. Blue little Bonnie Stewart of Florida, daughter of a daddy killed in Spain, wrote to Baltimore with her grandmother. Today Bonnie walks and plays like other children.

The case of six-year-old Mike Schirmer—the boy with the "icky zipper"—shows what can be done.

Six-Year-Old Mike Schirmer of Baltimore Could Walk Only Five Feet Without Resting Before the Operation. He Shows His "Icky Zipper"—the Incision for the Operation.

was no hope that Mike could grow up. But then came new hope, for Dr. Blalock chose the most difficult operation of Dr. Blalock. "They took him to the operating room and brought him back two hours later. It was a miracle.

"After only two weeks of convalescence he came home and he has been on the go ever since. If anyone wants anything he'll run and get it. He's up and down stairs 75 times a day. He climbs on bureaus and tables just for the joy of jumping off. He wears me out. But I love it."

"I had to wheel him everywhere. Strangers would stop his carriage and

branches of the pulmonary artery (its the lungs) are two large blood vessels. One connects the heart and the arm, the other the heart and the head. Dr. Blalock chooses the most difficult operation of Dr. Blalock—and severs it. One end is clamped off and the other closed permanently. The end nearest the heart is then spliced to the nearest branch of the pulmonary artery. The clamps are removed and the blood that would ordinarily flow to the arm goes into the lung. There it becomes enriched with vital oxygen and the baby's blue lips quickly begin to turn red.

What happens to the arm?

Nature has provided other blood vessels which take up the blood load

Little Bonnie Stewart of Florida is Daughter of the 70 Children Saved by the New Johns Hopkins Surgery.

Mike's "icky zipper" is the healing incision over his heart where Dr. Blalock went in to do the operation. But let his mother tell his story:

"Michael could only walk five feet and then he'd have to squat down on the sidewalk and rest."

"I had to wheel him everywhere. Strangers would stop his carriage and



*Maria
Siemionow
(1950-)*

- A Polish transplant surgeon and scientist who led a team of eight surgeons through the world's first near-total face transplant at the Cleveland Clinic in 2008
- The patient, Connie Culp, a 45-year-old woman from a small town in Ohio, was exceedingly disfigured by a close range shotgun blast in 2004
- The procedure took 22 hours
- Siemionow practiced in Cleveland until 2014 when she was appointed Professor of Orthopedics and Director of Microsurgery Research at The University of Illinois, Chicago, IL, where she practices today
- She is regarded as a world leader in nerve regeneration enhancement and in developing minimal immunosuppression regimens following transplantation

Examples: Women In Cardiac Surgery

7% of Cardiac Surgeons are Women:

The Numbers are Changing / Women Now Exceed Men In Workplace

Women comprise more than 50 percent of medical school matriculants

The first time ever that the number of women exceeded the number of men

22 Women became chairs of surgery at academic institutions



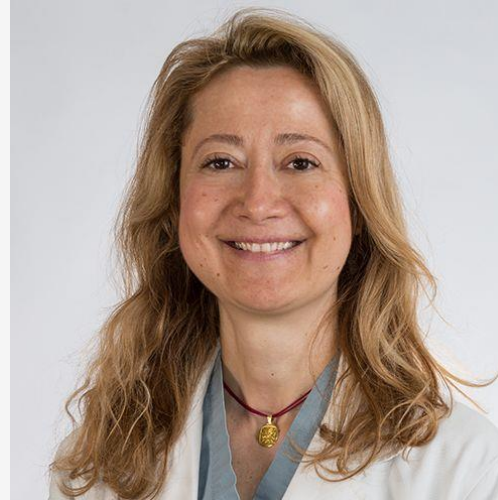
Dr. Erin Annacone
Department of Cardiothoracic
Surgery at Weill Cornell Medicine



Dr. Lorraine Cornwell
Baylor College of Medicine



Lisa M. Brown, MD
UC Davis Medical Center



Dr. Ourania Preventza
Baylor College of Medicine



Mara B. Antonoff
Univ Texas M.D. Anderson
Cancer Center



Kristine J. Guleserian, MD
Medical City Children's-Dallas
Congenital Heart Surgery

“The Future Is Bright and In Good Hands”

Meet South Africa's first female African Cardiothoracic Surgeon



Opening doors for African girls ...

- The story of Dr. Lindiwe Sidali, South Africa's first Female African Cardiothoracic Surgeon
- Describing herself as a "small town girl" Sidali was born and raised in the Eastern Cape everyone had to cook, clean, and look after cattle where

Margaret Allen



- The first female heart transplant surgeon in the world
- Former president of the United Network for Organ Sharing (UNOS)
- 1998 Appointed Professor, Division of Cardiothoracic Surgery, University of Washington School of Medicine, Seattle
- 2000 Appointed Medical Director, The Hope Heart Institute and Chair of Translational Medicine, Seattle
- 2004 Becomes Full Member and Principal Investigator, The Hope Heart Program at the Benaroya Research Institute, Seattle

The End

