

October 24, 2022



Rotary
Rotary Club of Augusta



Presented by Rotarian David Hudson





The Sunshine Report

Presented by Rotarian Bill Keogh

Welcome Guests!



TOGETHER, WE

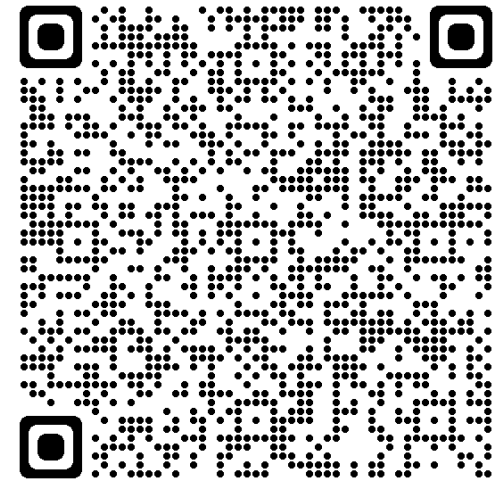
CONNECT

Rotary



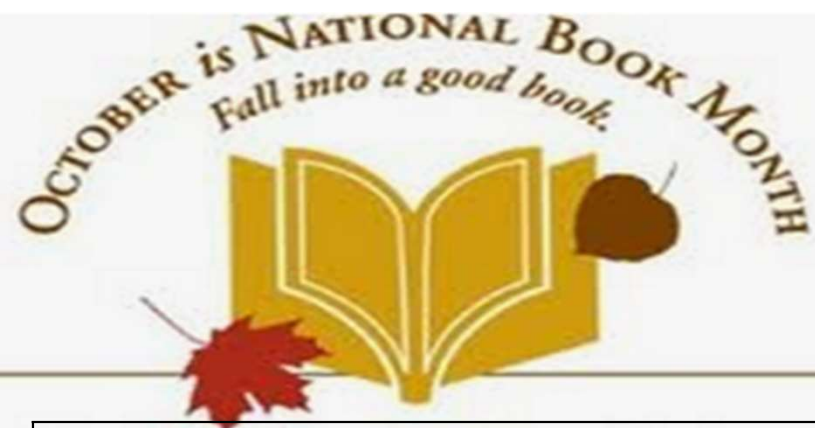
PEOPLE OF ACTION





**Or ask one
of the
people at
your table!**

<https://youtu.be/z1dxvQD3ryQ>



Literacy Committee Announcement

October is National Book Month, the Literacy Committee is asking that:

- You take some time to read your favorite books or just reflect on the importance of books.
- And donate a children's book(s) or make a donation so that we can purchase books for RISE (Realizing Individual Student Success Everyday) Augusta for a FREE Scholastic Book Fair for students
- We will be collecting every Monday this month.

ANNOUNCEMENTS

- Seeking volunteers for technology (Zoom) help at Club meetings
- Next Meeting's speaker is Mark Albertin
- **November 7th**--- Veterans Program (Veterans please respond to Shanda Vaughn's request for your service information)
- **December 5th**---Visit from District Governor Heather Kellen
- **December 19th** ---Holiday Party—Wear your UGLY Holiday sweater
- GRSP Student, Simbai Mutoti spent the weekend in the woods!



Thank you,
Susan and
Lee Jernigan!



INSIDE CART CHALLENGER ERIN ARMSTRONG



AIA, NCARB, LEED AP, Partner



A Project of the Rotary Clubs of North America

Contribute to the blue buckets or online at
mycartfund.Org

OUTSIDE CART CHALLENGER



dickinson |

ARCHITECTS

architecture • interior design • planning

OCTOBER 24th IS

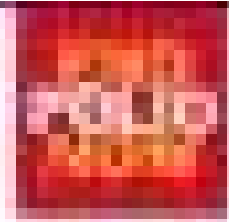
**WORLD
POLIO
DAY**

"Rotary in particular has inspired my own personal commitment to get deeply involved in achieving eradication." Bill Gates



www.rotary.org





We're \$1.2 billion closer to
eradicating a disease.



TODAY'S SPEAKER

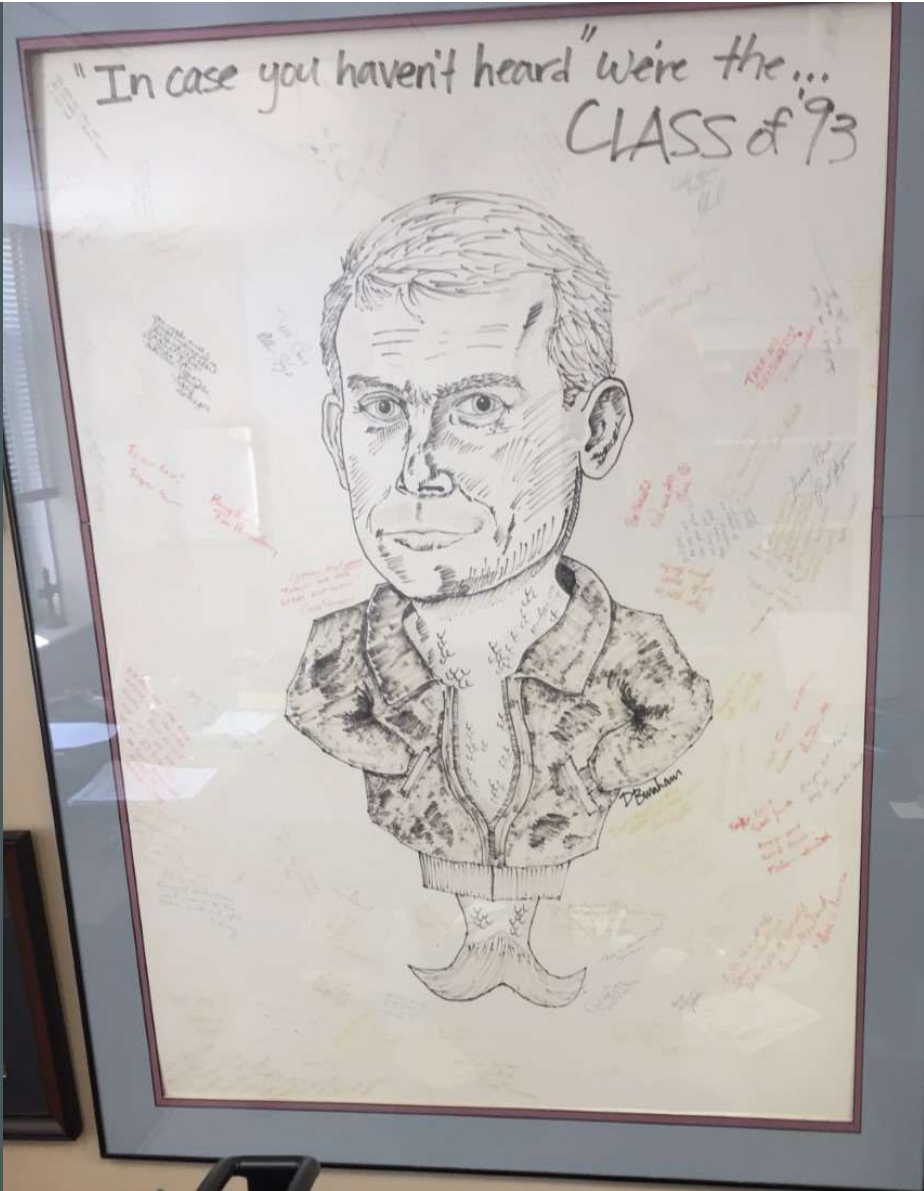


AUGUSTA
UNIVERSITY

Dr. John Fisher
PROFESSOR

Medical College of Georgia

Department of Medicine: Infectious Disease

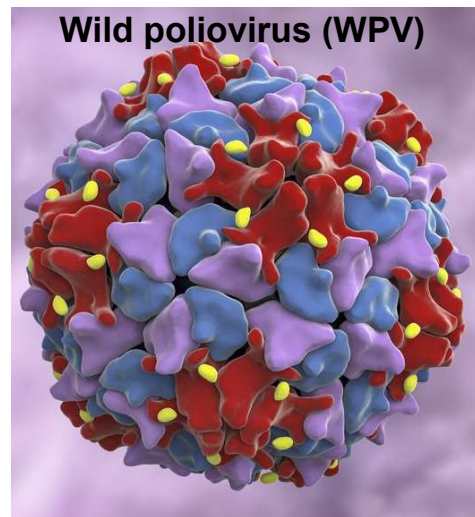


Poliomyelitis today

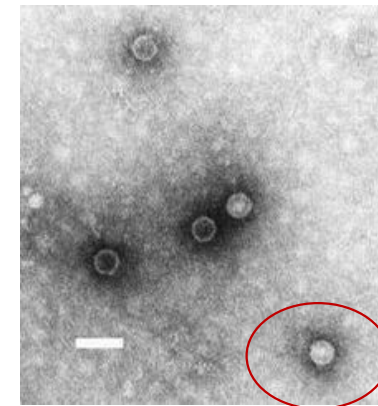


John F Fisher MD

Poliovirus



Enterovirus species C
(3 serotypes)



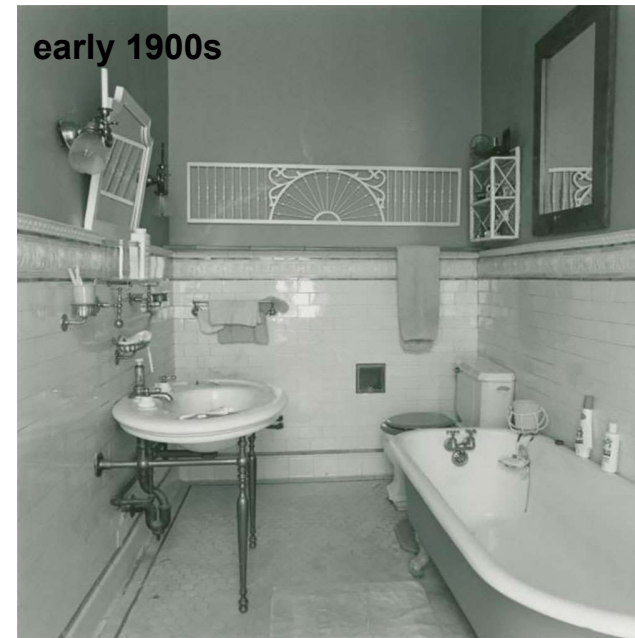
30 nanometers in diameter
(1nm = 1 billionth of a meter)

highly contagious
95% → no symptoms
1 in 150 → paralysis

Poliovirus in 1800s & early 1900s



**infants infected early--poor sanitation
(partially protected by maternal Abs)**



**infection delayed—improved sanitation
(childhood disease; no partial protection → more paralysis)**

1922: Polio became reportable disease



1922 Chevrolet

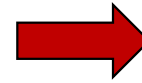
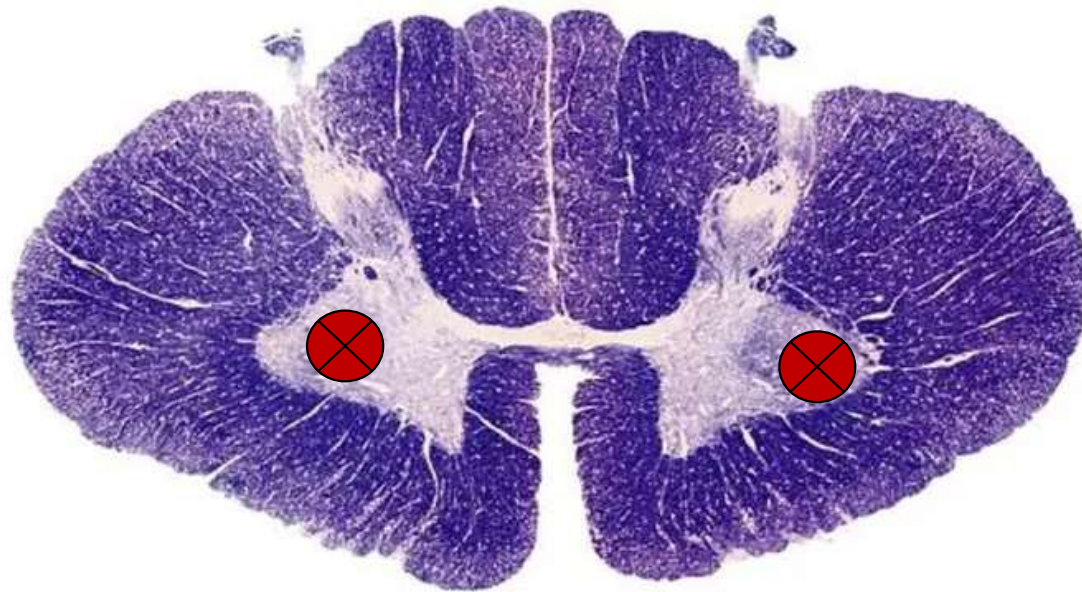


1938 Chevrolet



1938: peak incidence of polio, 39 cases /100K

Polio & spinal cord



loss of respiratory, bladder & bowel control

Results of paralytic polio



Post-polio syndrome

prior paralytic polio, weakness & atrophy
with partial or complete functional recovery

prevalence: 25-80%



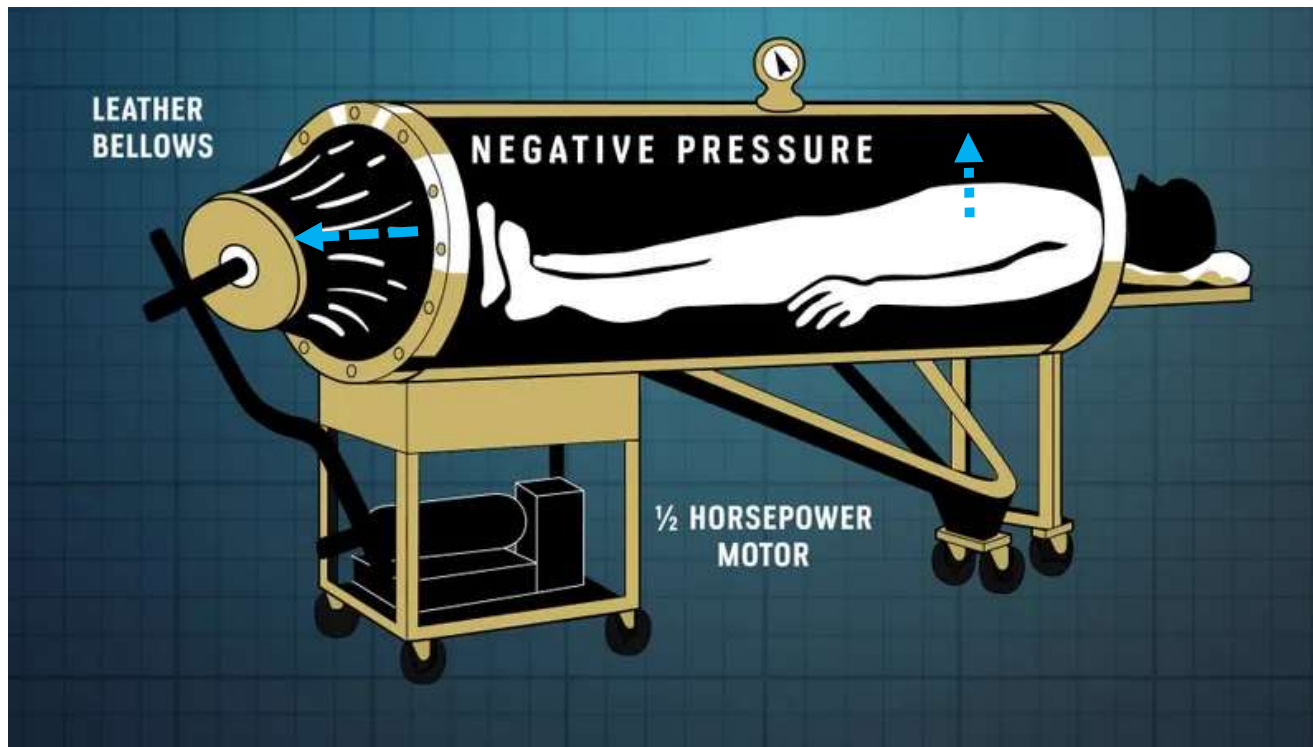
15 years

1. gradual or sudden new muscle weakness +/- generalized fatigue
2. muscle atrophy
3. muscle or joint pain
4. new problems with breathing & swallowing
5. persisting at least 1 yr, exclusion of other causes

cause ?

? decompensation of previously affected nerves
? reactivation of latent virus in neurons

The Iron Lung



Franklin Roosevelt



1938: FDR announced formation of National Foundation for Infantile Paralysis
\$\$\$ initially funded by friends & celebrities



FDR paralyzed from the waist down by polio

Jokingly urged public to send dimes directly to FDR
White House flooded with dimes → “March of Dimes”
(promoted Salk vaccine; Sabin felt shunned)



1938 Chevrolet

Jonas Salk MD



Salk Inst. for Biologic Studies
(La Jolla, CA)

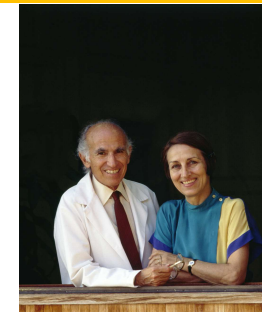
Married Donna Lindsay 1939; 3 children
Divorced 1968: grounds—extreme cruelty



Married Françoise Gilot 1970



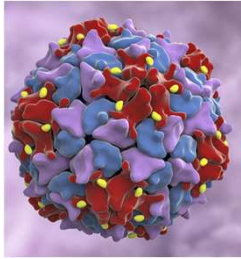
Gilot & Picasso



1914-1995

Born in NYC
City College of NY—B.S.
NYU School of Medicine—M.D.
University of Michigan—research fellowship
University of Pittsburgh—Director of VRL

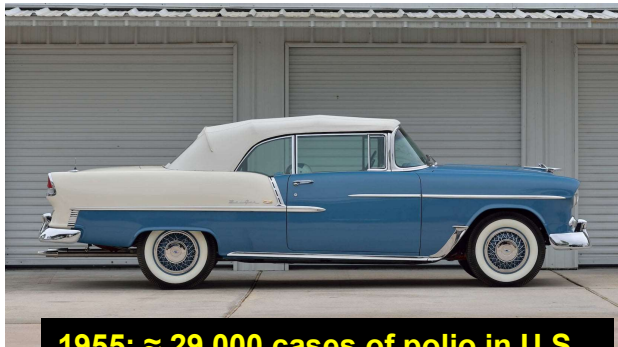
Salk Polio Vaccine (injectable)



inactivated with formaldehyde
(kills virus; antigenic properties preserved)



field trial participants
(1.8 million children)

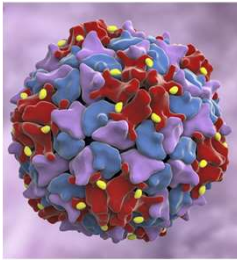


1955: \approx 29,000 cases of polio in U.S.
(field trials of vaccine launched)



1957: $<$ 6,000 cases of polio in U.S.

Salk Polio Vaccine (injectable)



inactivated with formaldehyde
(kills virus; antigenic properties preserved)



1959: 90 countries

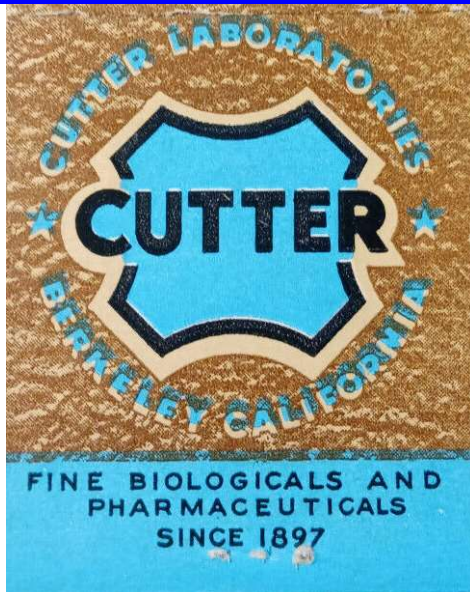


DRAWBACKS

Protection temporary
No prevention of gut
colonization
No prevention of
spread

Cutter incident

April '55: 200K children from 5 Western & Midwestern states vaccinated with improperly inactivated vaccine → 40K abortive polio cases, 200 cases of paralytic polio (10 fatal)

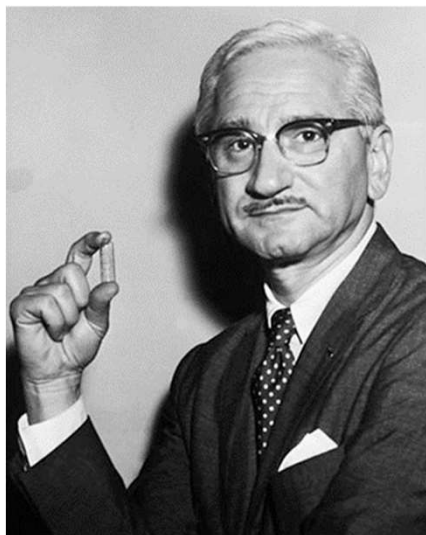


vaccinated children spread polio to others (113 more cases of paralytic polio with 5 fatalities)

1st mass vaccination program abandoned

Salk exonerated, but Salk vaccine considered unsafe by public → Sabin vaccine adopted

Albert Sabin MD



1906-1993

NYU—B.S., M.D

Residency in Medicine, Pathology, Surgery—Bellevue Hospital

Fellowship in Research—Rockefeller Institute

1939: Children's Hospital, Cincinnati

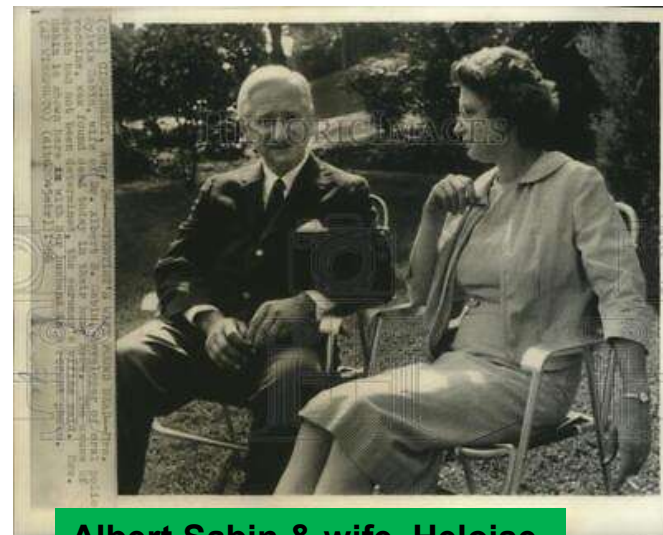
WW II: Lt. Col Army Medical Corps

Head of Pediatric Research—University of Cincinnati

Nobel Prize in Medicine 1954

Developed Oral Polio Vaccine 1955-61—waived commercial profit

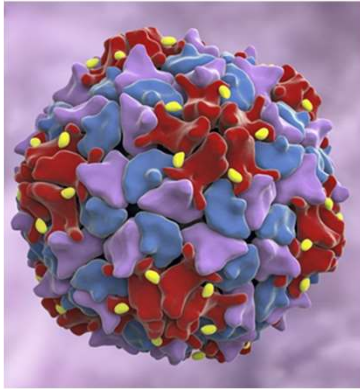
Head of Research, University of South Carolina 1974-82



Albert Sabin & wife, Heloise



Sabin Vaccine (oral)



live, attenuated virus
(weakened by repeated passages through monkeys)



Lasting immunity
Causes gut infection & immunity
Limits spread



Federal prison, Chillicothe, OH
Sabin tested vaccine on 30 volunteers
(no side effects)

Sabin & Russia

**January 1956: Russian scientists visit Sabin's lab at Cincinnati Childrens & invited him to Russia. They also invited Salk.
(Salk declined & regretted it)**



June 1956: Sabin spent 30 days in Russia giving lectures, meeting with scientists & lobbying for his oral vaccine.

Spring 1959: Sabin returned & provided samples of his vaccine. Vaccine tested on 10 million children. Results were good. By December 1960, vaccine given to 77 million people in USSR < 20 yo; 23 million in Eastern Europe

Sabin—Cincinnati trials

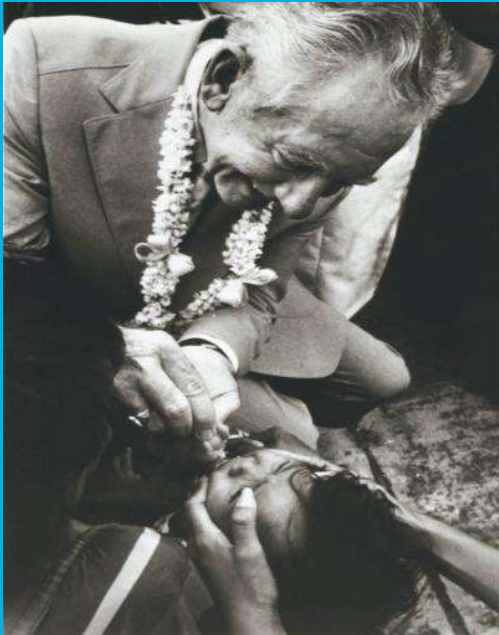
April 1960: Sabin vaccine given to 200K children on “Sabin Oral Sundays.”

August 1960: Surgeon General approved manufacture of vaccine



OPV became preferred vaccine worldwide

**1979: Rotary International begins fight against polio
(multi-year project to immunize 6 million children. Cost: \$760,000)**



**Tennessee lawyer & politician
RI President James L. Bomar
Jr, put 1st drops of Sabin
vaccine into a Filipino child's
mouth → Health, Hunger, &
Humanity (3-H) Grant project.**



1979 Chevy Camaro



PolioPlus



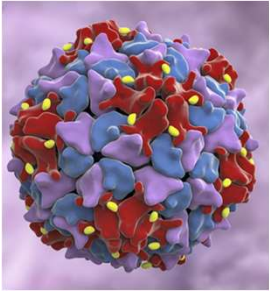
1988 Chevy Suburban

Launched in 1988 → >
2.5 billion children have
received OPV



Program's added (PLUS) benefits
to underserved nations:
access to water,
additional medical treatment,
bed nets, soap, vitamin A drops





Sabin Vaccine (problems)

live, attenuated virus
(weakened by repeated passages through monkeys)



Lasting immunity
Causes gut infection & immunity
Limits spread

Sabin used more in other countries



preferred vaccine by 1966



8-9 cases of paralytic polio/year
between 1980 & 1994
(vaccine strain became virulent again)
The few remaining cases in the West
today are vaccine related



1995-2000, Australia: 53% of stool samples (+)
for vaccine-derived polio virus



2000: U.S. returns to Salk vaccine only

Animosity (Salk vs Sabin)

Public put-down: when another researcher suggested using an approach other than live-virus vaccine, Salk asked Sabin a question about it, Sabin snapped, “Dr. Salk, you should know better than to ask a question like that!”

Salk said later that the experience was like “being kicked in the teeth”; I could feel the hostility and the disapproval.” He remembered that in every future meeting.

“Albert Sabin was out for me from the very beginning. In 1960 he said that he was out to kill the killed vaccine.” Early on at conferences Sabin criticized Salk & questioned the durability of protection from killed viruses

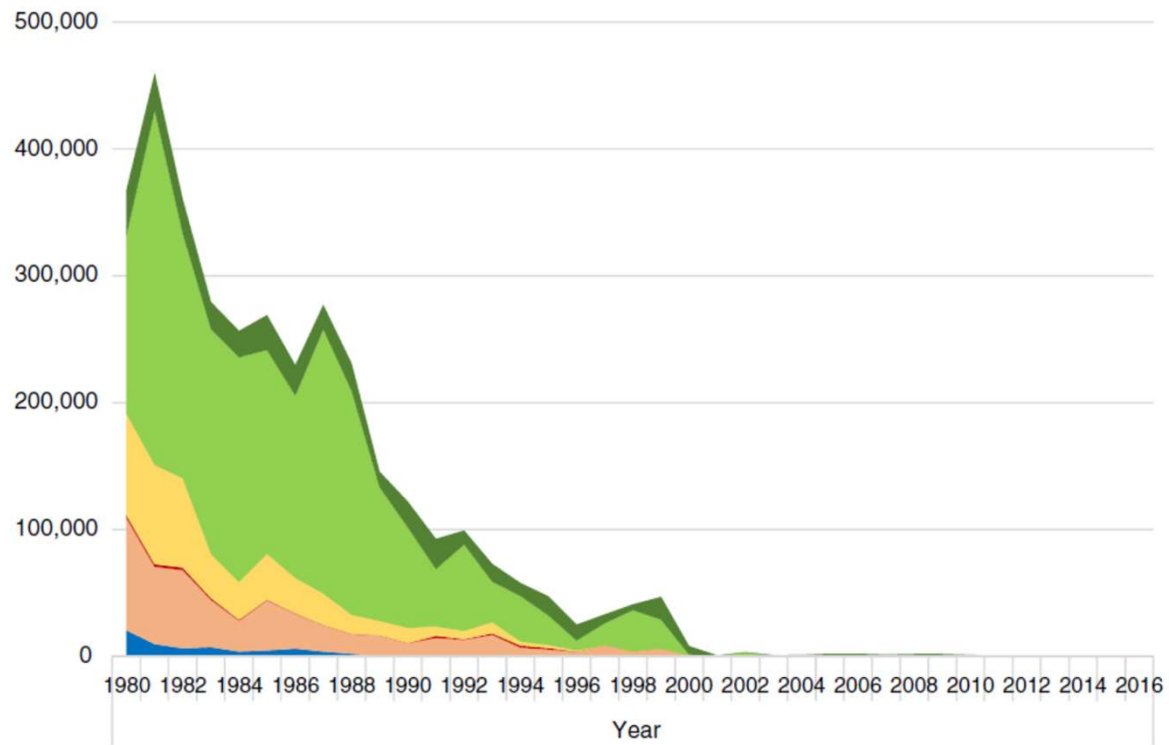


Sabin: brilliant, strong-headed virologist working on polio when Salk was in high school. Despite proof, he refused to believe OPV could cause polio. Of Salk’s vaccine: “It was pure kitchen chemistry. Salk didn’t discover anything.”

Statement by Salk on death of Sabin: He called Sabin’s passing “a great loss,” saying, “The effect of his contributions toward the control of polio will endure long in the future.”

Prevalence of poliomyelitis

Cases of poliomyelitis



Americas

Eastern Med. & Europe

Western Pacific

Southeast Asia

Africa

Isolated polio in the world



1988 Chevrolet Corvette



2021 Chevrolet Corvette

**Pakistan, 1988: 14 cases of wild polio
(consistently present)**



Afghanistan 1988: 1 case of wild polio



**Mosambique 2021: 4 cases Malawi
(linked to cases in Pakistan)**

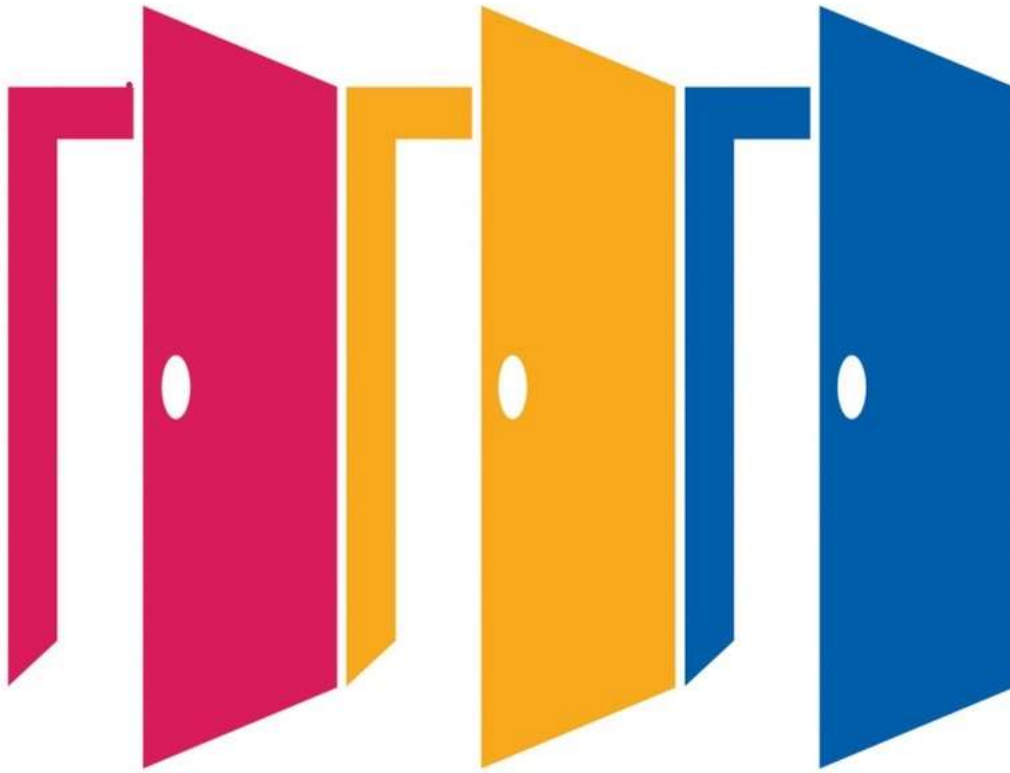




The Four-Way Test

of the things we think, say or do.

- 1** Is it the truth?
- 2** Is it fair to all concerned?
- 3** Will it build goodwill and better friendships?
- 4** Will it be beneficial to all concerned?



Rotary Opens Opportunities

We are Rotary!

https://youtu.be/RmKY_YcxsH0