

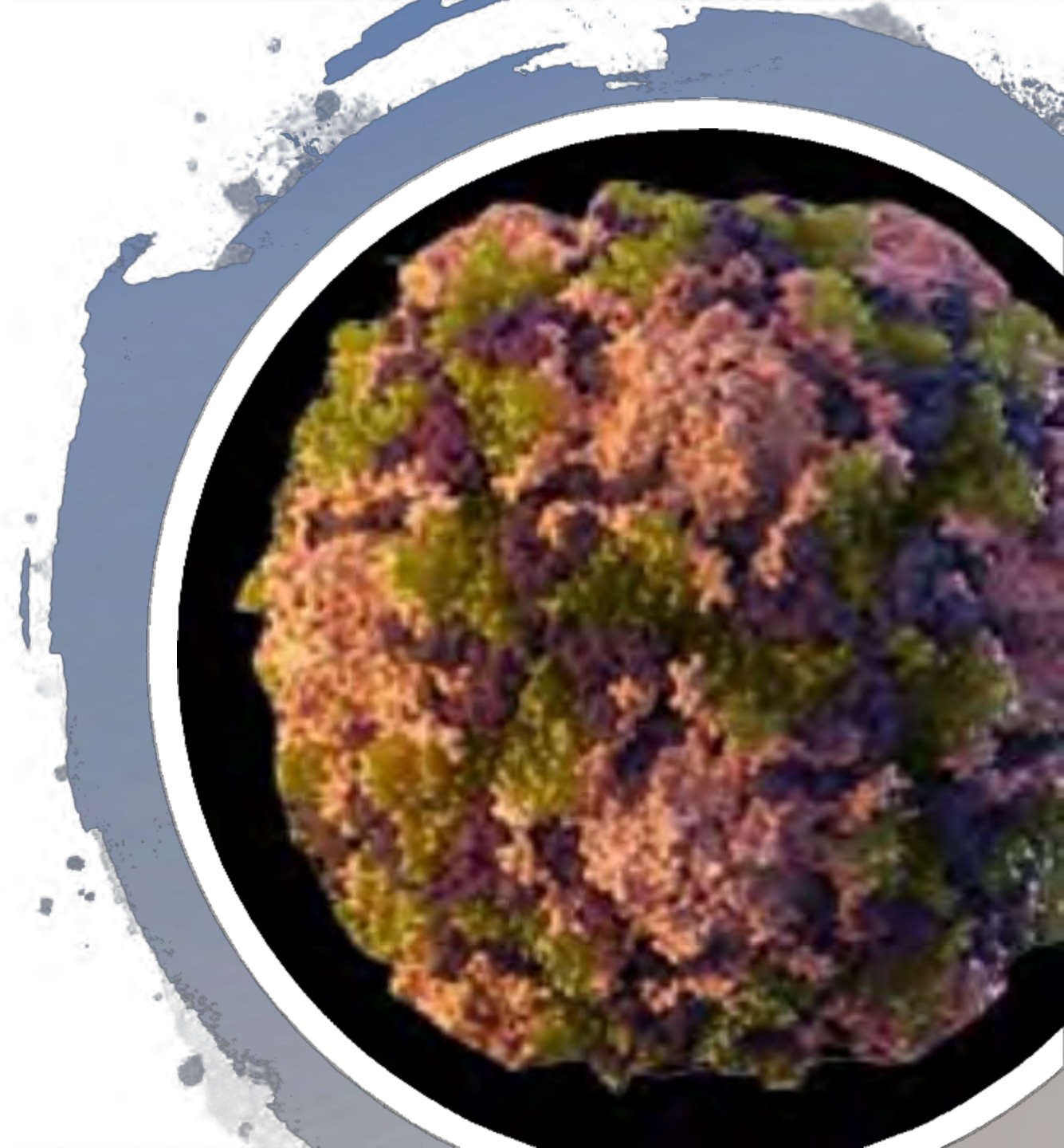


Overview Of Polio Disease

Dr. Julien Lteif

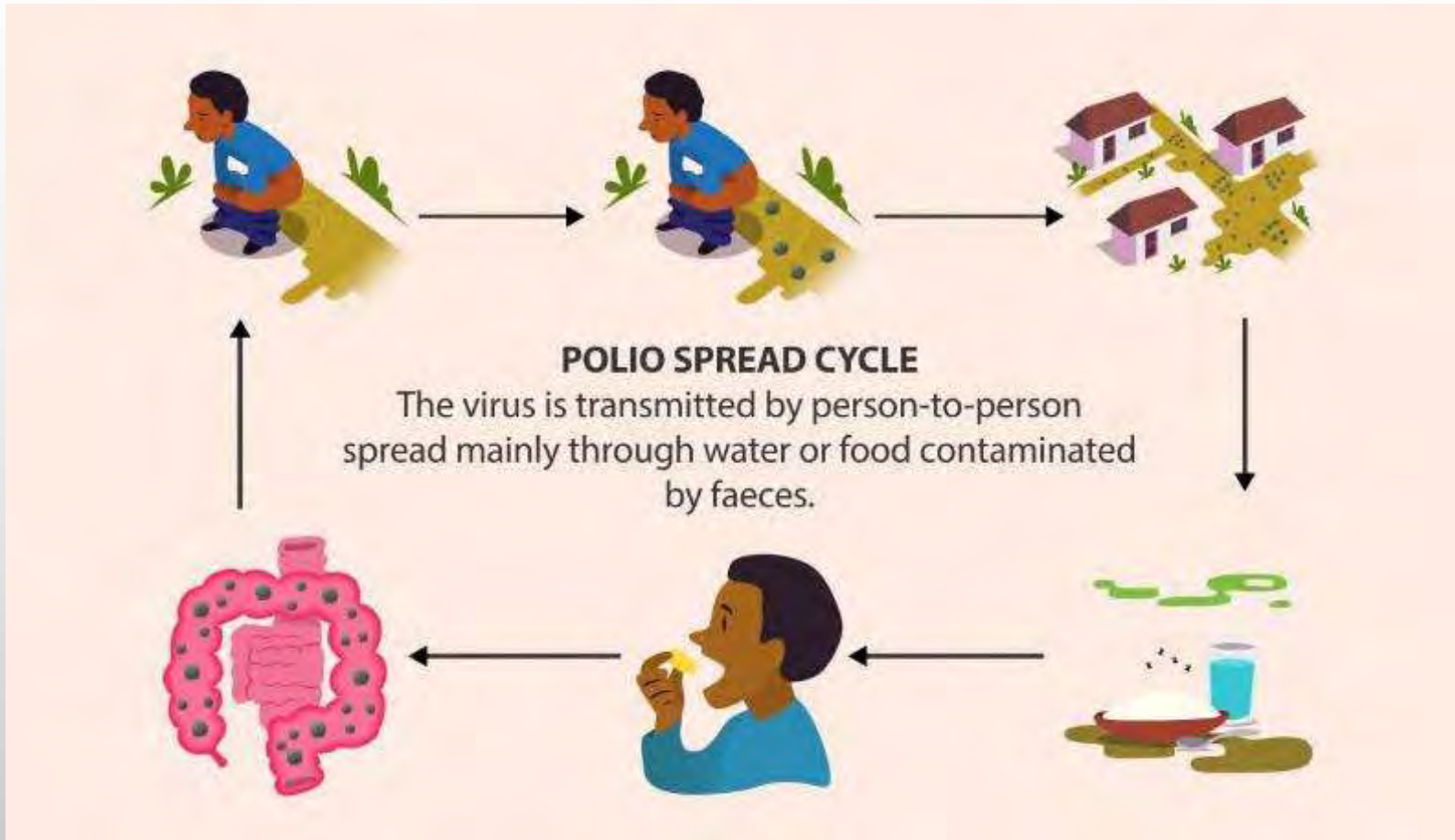
What is polio?

- Polio, or poliomyelitis, is disabling and life-threatening disease caused by the **poliovirus**
- Three serotypes of poliovirus have been identified
 - poliovirus type 1 (PV1)
 - poliovirus type 2 (PV2), and type 3 (PV3)



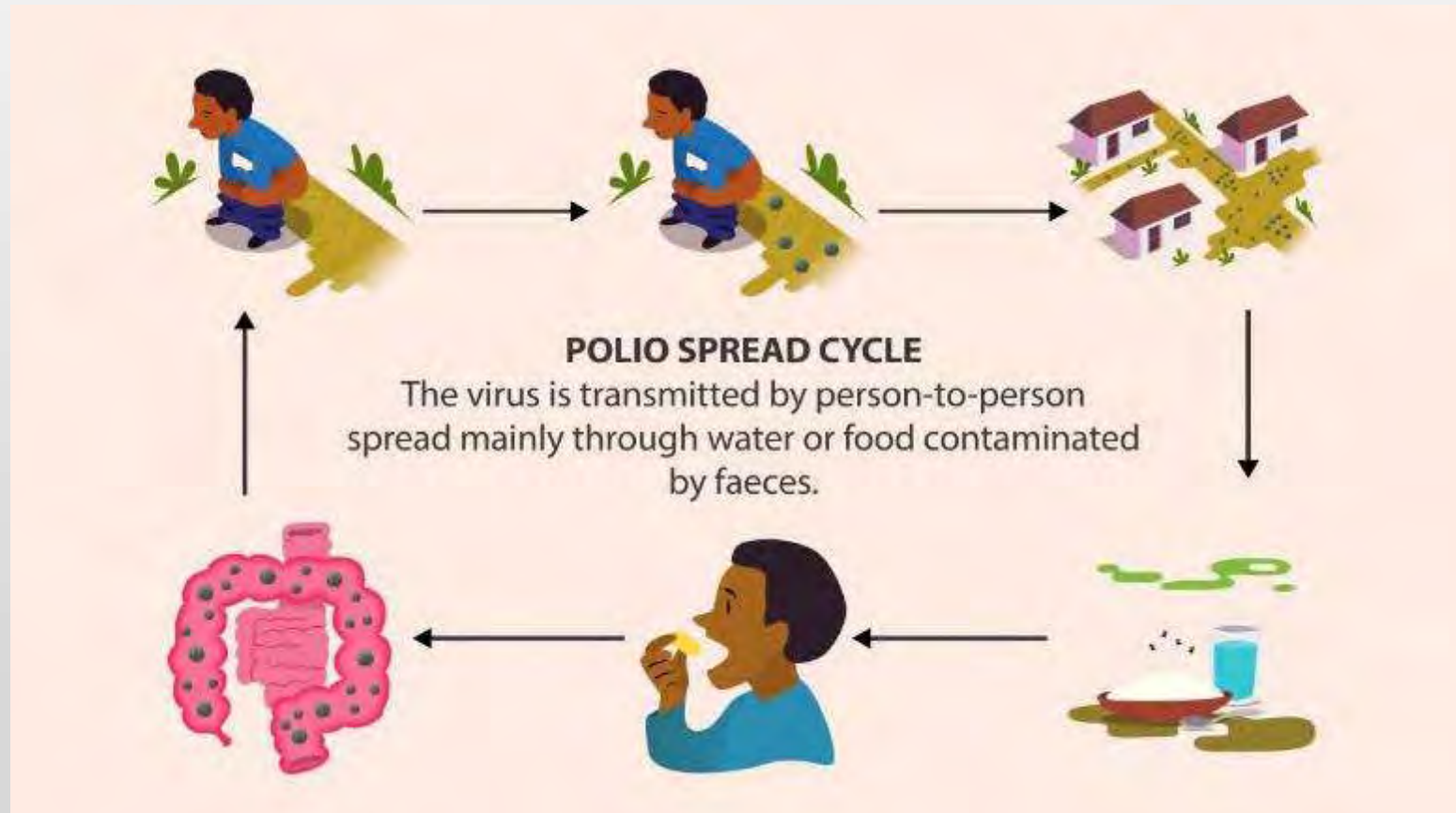
Transmission

- Poliovirus is very contagious and spreads through person-to-person contact.
- It lives in an infected person's throat and intestines.



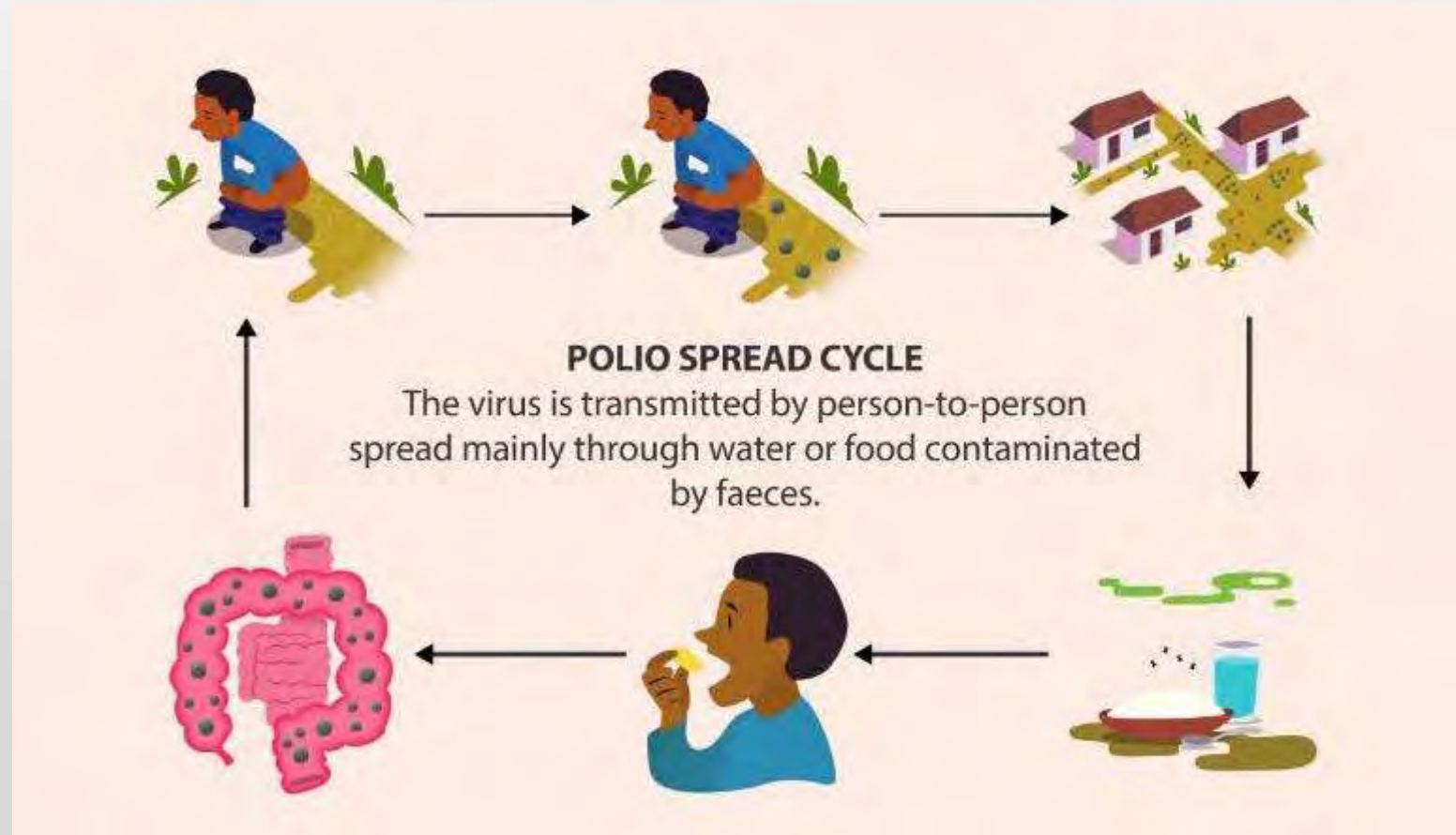
Transmission

- Poliovirus only infects people.
- It enters the body through the mouth and spreads through:
 - Contact with the feces (poop) of an infected person.
 - Droplets from a sneeze or cough of an infected person (less common).



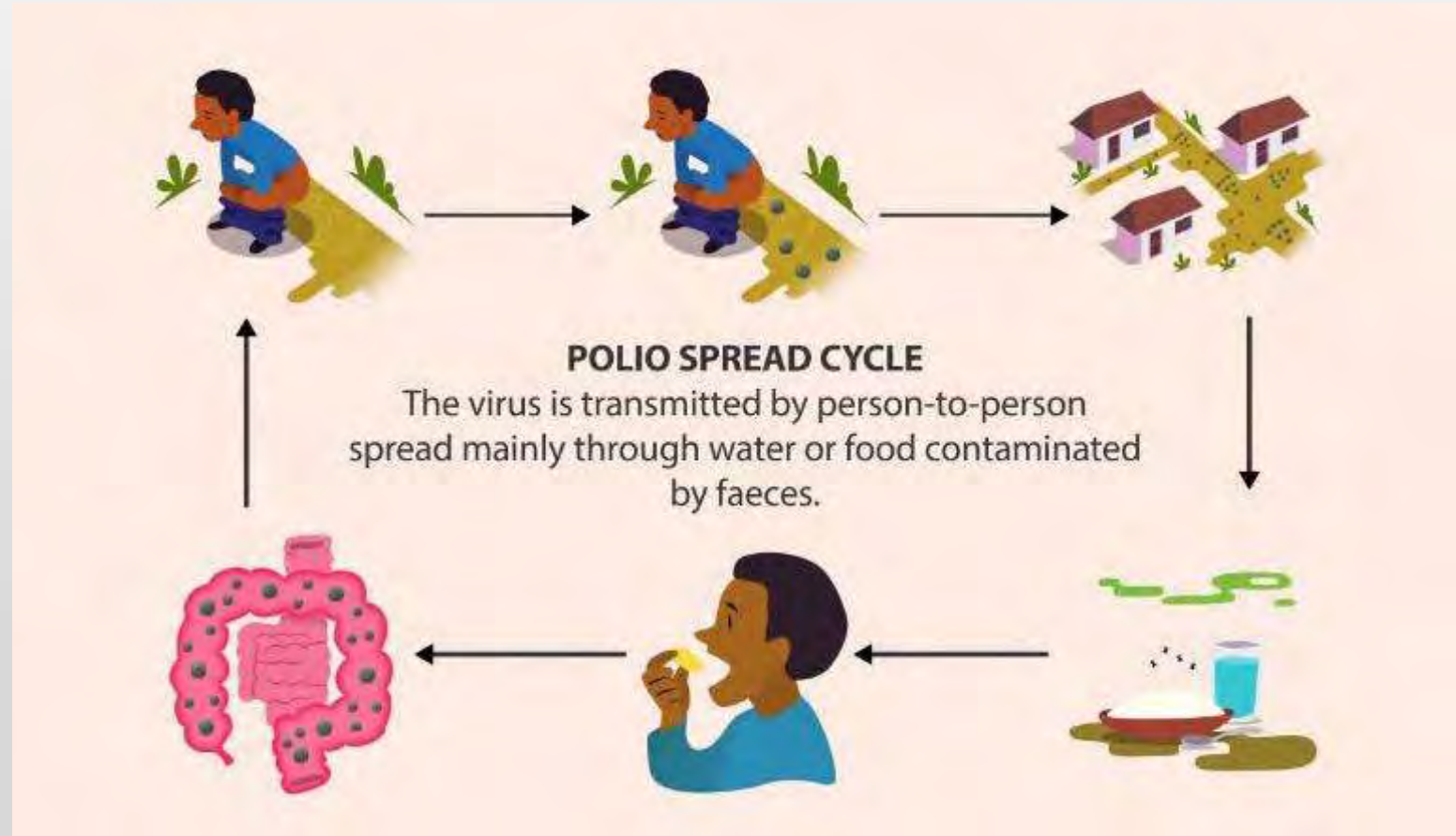
Transmission

- An infected person may spread the virus to others immediately before and up to 2 weeks after symptoms appear.
- The virus can live in an infected person's feces for many weeks.

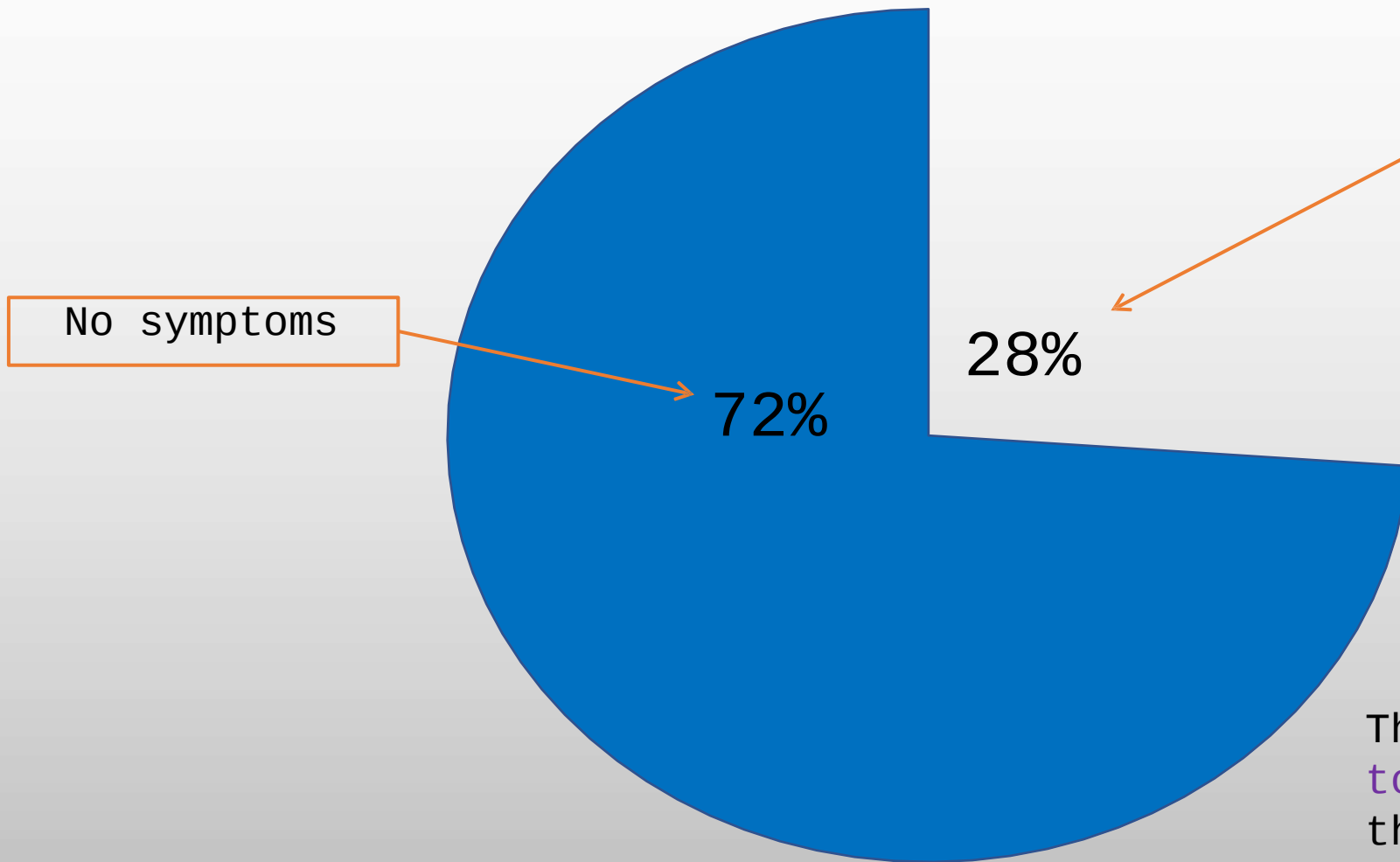


Transmission

- It can contaminate food and water in unsanitary conditions.
- People who don't have symptoms can still pass the virus to others and make them sick.



Symptoms



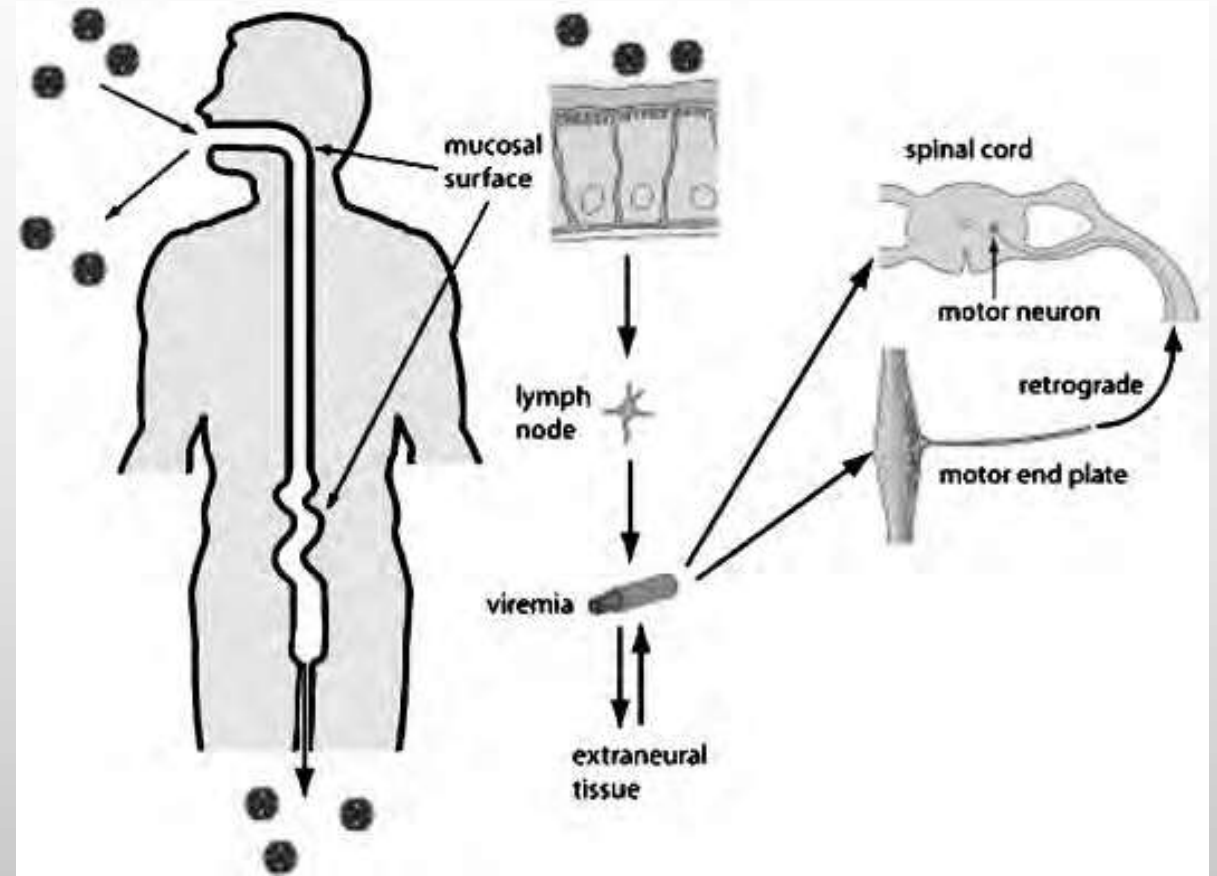
- Flu-like symptoms that may include:

- Sore throat
- Fever
- Tiredness
- Nausea
- Headache
- Stomach pain

These symptoms usually last 2 to 5 days, then go away on their own.

Symptoms

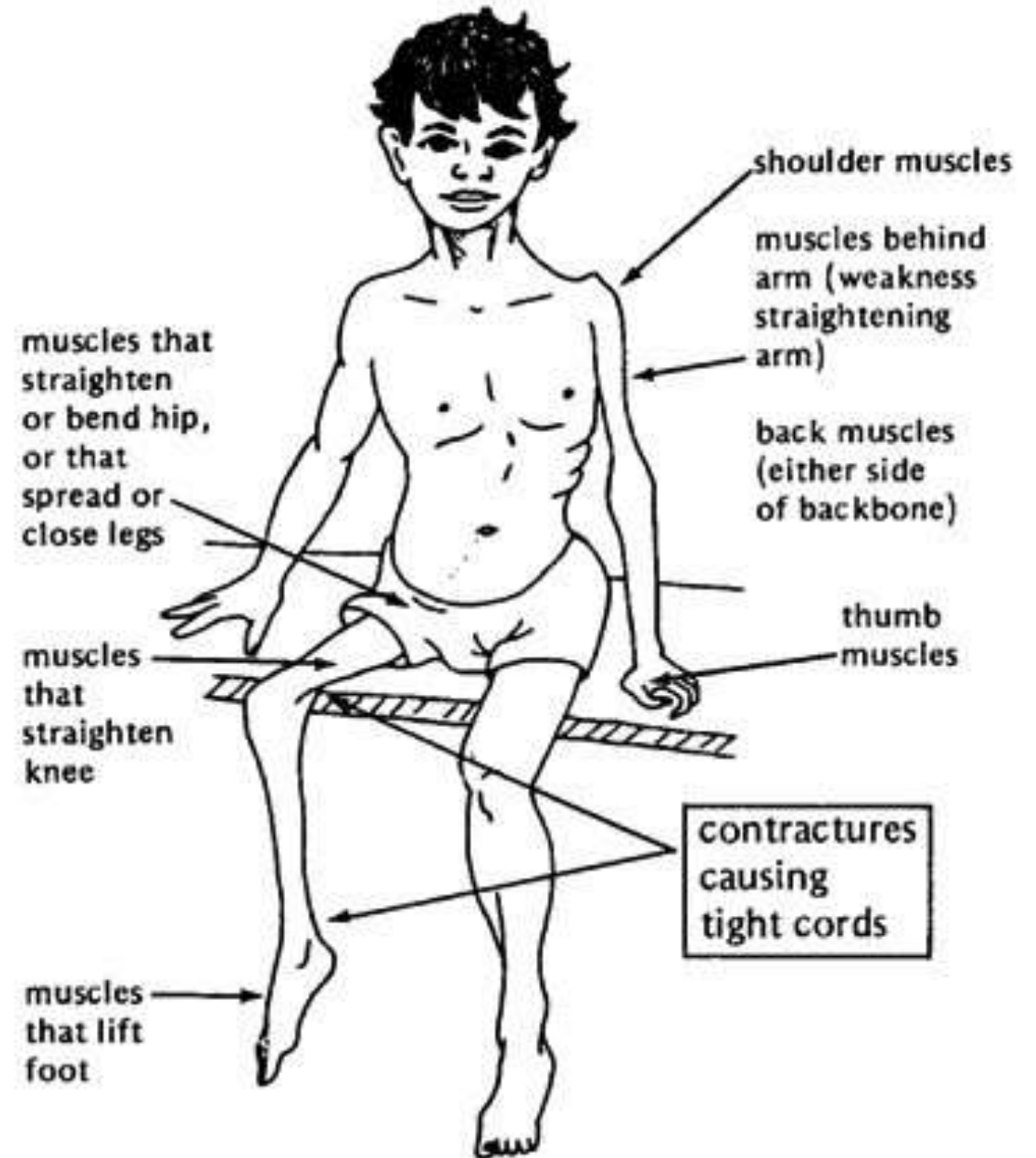
- A smaller proportion of people with poliovirus infection will develop other, more serious symptoms that affect the **brain and spinal cord**.



Symptoms

- Paresthesia
- Meningitis: 1 out of 25
- Paralysis or weakness: in the arms, legs, or both, 1 out of 200 people with poliovirus infection

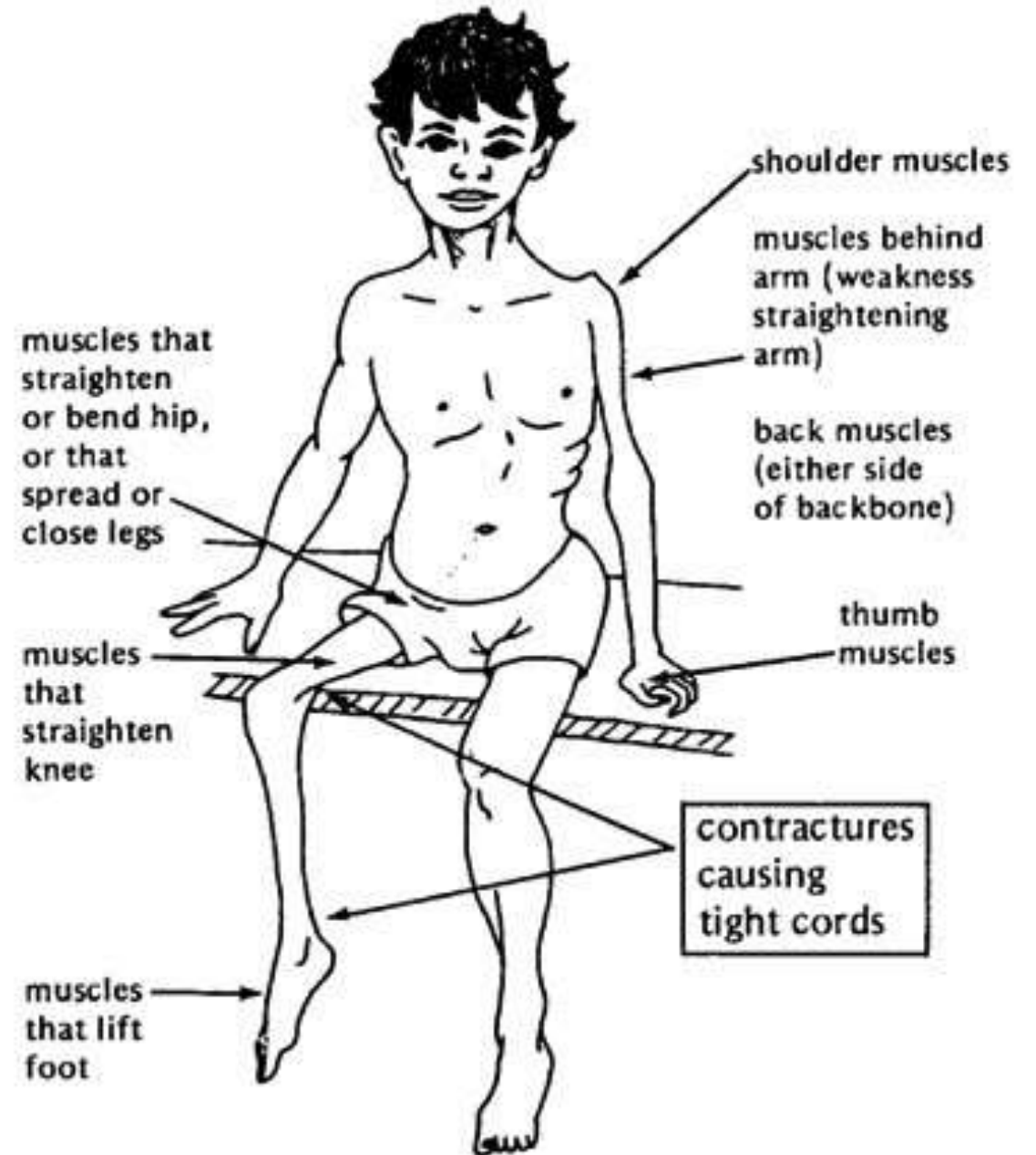
MUSCLES COMMONLY WEAKENED BY POLIO



Symptoms

- Paralysis is the most severe symptom associated with polio, because it can lead to disability permanent and death.
- Between 2 and 10 out of 100 people who have paralysis poliovirus infection die from because the infection affects the muscles that help them breathe.

MUSCLES COMMONLY WEAKENED BY POLIO



Symptoms

- Even children who seem to fully recover can develop new muscle pain, weakness, or paralysis as adults, 15 to 40 years later.
- This is called **post-polio syndrome**.



The result



Treatment

- There is **no cure** for polio; it can only be prevented by **immunization**.
- **Heat and physical therapy** can be used to stimulate the muscles and **antispasmodic drugs** are used to relax the effected muscles.
- This can **improve mobility** but does not reverse permanent polio paralysis.



Prevention

- There are two types of vaccine that can prevent polio:
 - Inactivated poliovirus vaccine (IPV) given as an injection (Salk, 1955).
 - Oral poliovirus vaccine (OPV) which is a live attenuated virus (Sabin, 1962).



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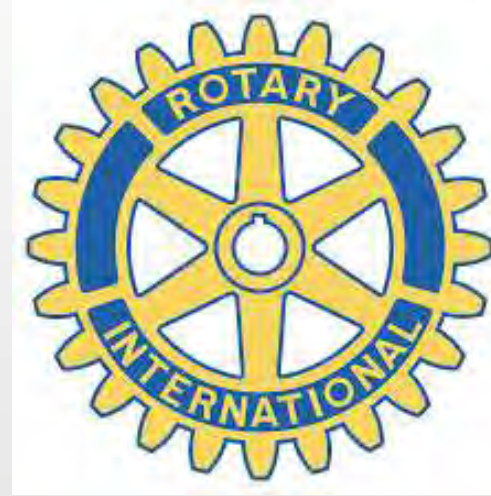
1988

The Forty-first World Health Assembly
adopted a resolution for the worldwide
eradication of polio

GPEI

- This marked the launch of the Global Polio Eradication Initiative (GPEI), spearheaded by:

- national governments
- WHO
- Rotary International
- The US Centers for Disease Control and Prevention (CDC)
- UNICEF
- and later joined by additional key partners including the Bill & Melinda Gates Foundation and Gavi, the Vaccine Alliance.



BILL & MELINDA
GATES foundation



POLIO GLOBAL
ERADICATION
INITIATIVE

POLIO GLOBAL
ERADICATION
INITIATIVE
every last child



Progress



Progress

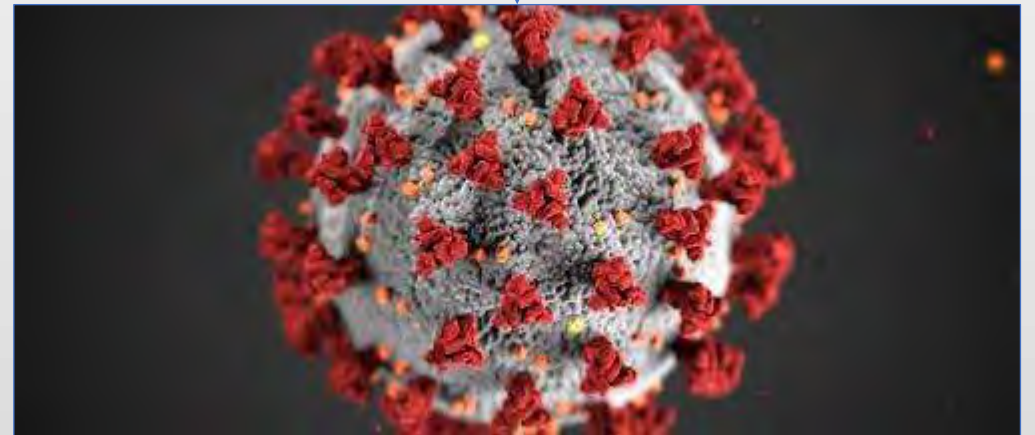
- Wild poliovirus cases have decreased by **over 99%** since 1988:
 - from an estimated 350 000 cases in more than 125 endemic countries then, to 33 reported cases in 2018.
- Of the 3 strains of wild poliovirus (type 1, type 2, and type 3), wild poliovirus **type 2 was eradicated** in 1999 and no case of wild poliovirus type 3 has been found since the last reported case in Nigeria in November 2012.



Progress

- On 25 August 2020, the Africa Regional Certification Commission declared **Africa** free from wild polio.
- A week after, the WHO says a new polio outbreak in Sudan is linked to an ongoing epidemic in Chad.

Guilty?



Coronavirus

46 campaigns to vaccinate children against polio had been suspended in 38 countries

Progress

- More than a dozen African countries are currently battling outbreaks of polio caused by the virus, including Angola, Congo, Nigeria and Zambia.

Countries	Year-to-date 2020	
	WPV	cVDPV
Afghanistan	37	54
Angola	0	3
Benin	0	1
Burkina Faso	0	9
Cameroon	0	4
Central African Republic	0	1
Chad	0	56
China	0	0
Democratic Republic Of The Congo	0	23
Ethiopia	0	17
Ghana	0	11
Guinea	0	8
Myanmar	0	0
Niger	0	4
Nigeria	0	2
Pakistan	67	52
Philippines	0	1
Somalia	0	2
Togo	0	9
Zambia	0	0

The future

A Polio
Free
World

