

VACCINE SAFETY



LIGHTNING STRIKE

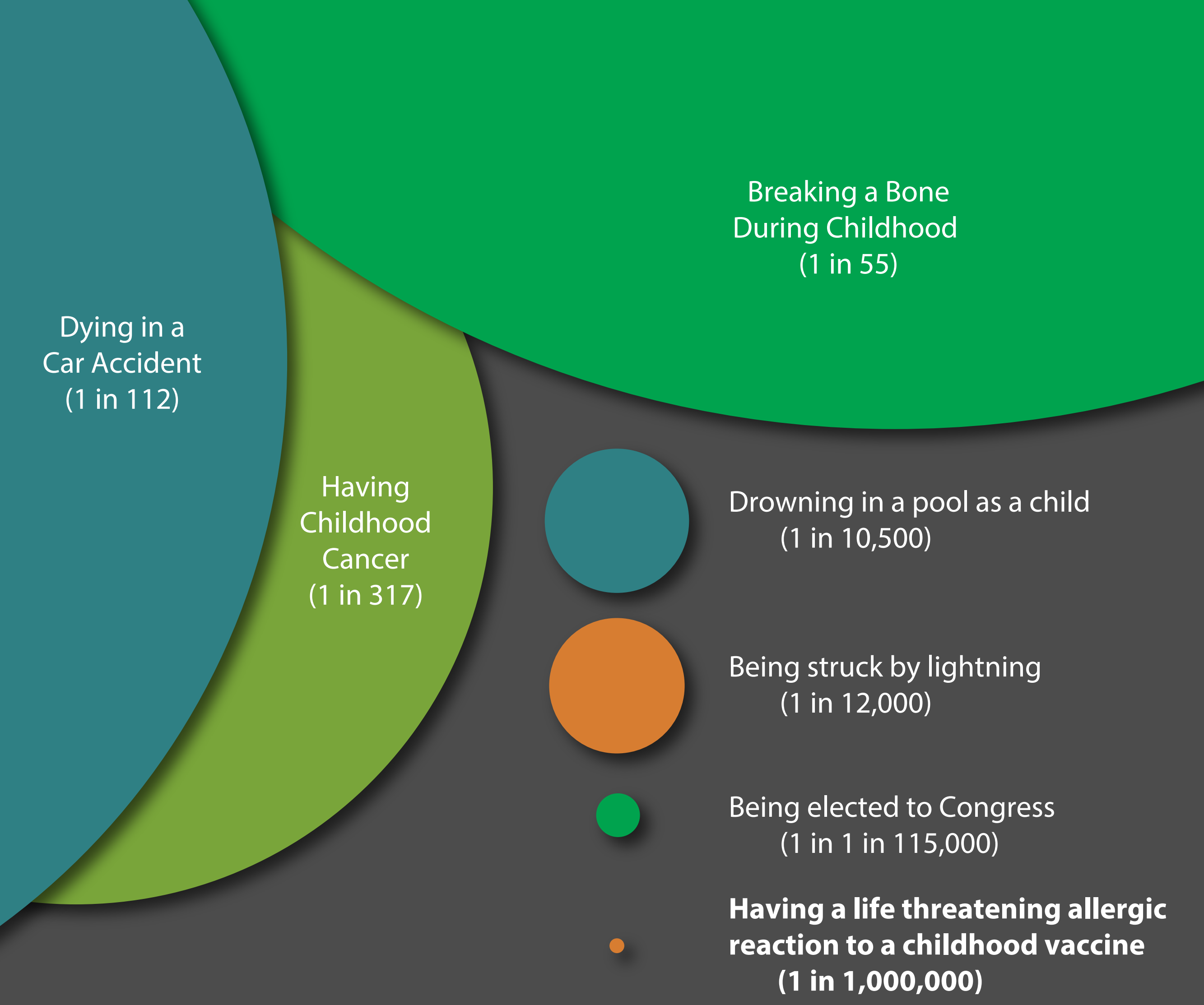
OR



SEVERE REACTION TO A VACCINE

WHICH IS MORE LIKELY?

WHAT ARE THE ODDS?



ADVERSE REACTIONS: REAL BUT RARE

A child's chances of having a severe reaction from vaccination are extremely low

Varicella Vaccine

Protects Against: CHICKENPOX

- NO ADVERSE REACTION
- MILD REACTION (e.g., Soreness or Swelling: 1 out of 5 doses)
- MODERATE REACTION (e.g., Seizure: 1 out of 2,500 doses)
- SEVERE REACTION (e.g., Pneumonia: 1 out of a million doses)

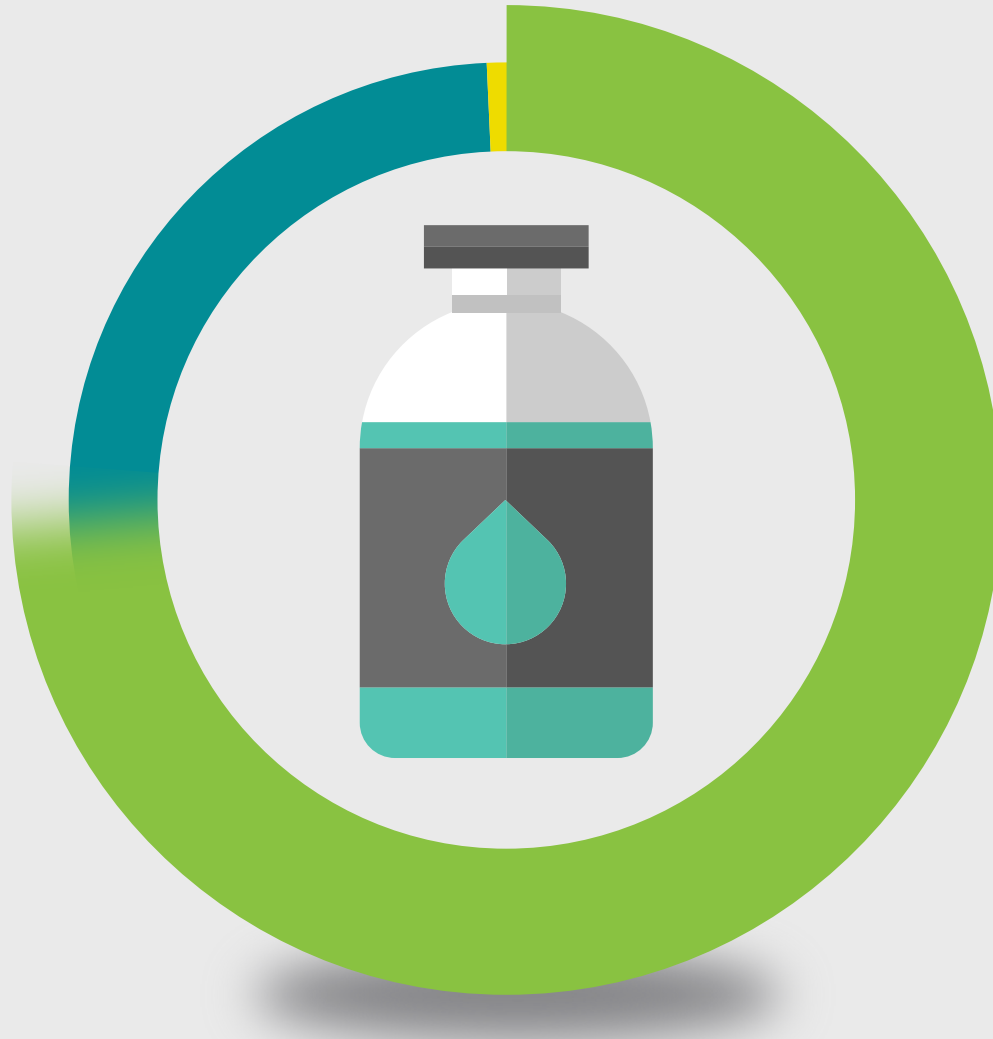


More than 99%
OF CHILDREN HAD NO MODERATE OR SEVERE SIDE EFFECTS

MMR Vaccine

Protects Against: MEASLES, MUMPS, RUBELLA

- NO ADVERSE REACTION
- MILD REACTION (e.g., Fever: 1 out of 6 doses)
- MODERATE REACTION (e.g., Joint Pain: 1 out of 150 doses)
- SEVERE REACTION (e.g., Life threatening allergic reaction: fewer than 1 out of a million doses)

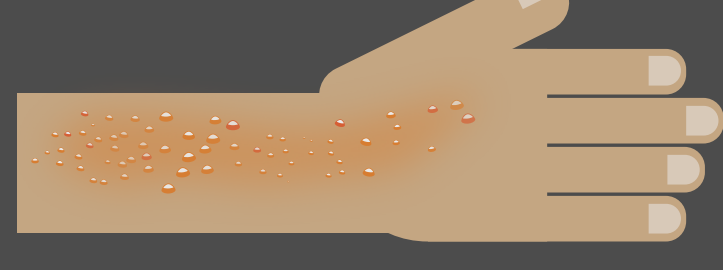


More than 99%
OF CHILDREN HAD NO MODERATE OR SEVERE SIDE EFFECTS

THE DISEASES THAT THESE VACCINES PREVENT CAN HAVE TERRIBLE CONSEQUENCES

VARICELLA (Chicken Pox)

- **SHINGLES**
Half of people who had chicken pox will get painful blisters on their skin that remain for weeks and sometimes suffer nerve damage for years.



RUBELLA (German Measles)

- **BIRTH DEFECTS**
Over half of pregnant women who contract rubella in their first trimester will have a baby with severe defects including profound intellectual disability, blindness, and sometimes stillbirth.

PERTUSSIS (Whooping Cough)

- **DEATH**
1 in 200 babies who get whooping cough die.



THE FACTS ABOUT VACCINES

VACCINES DON'T CAUSE AUTISM



- In 1998, Andrew Wakefield published a small study reporting a link between vaccines and autism. That paper has since been retracted.
- The U.K.'s General Medical Council struck Wakefield from the medical register, concluding he had been "dishonest, irresponsible, and showed callous disregard" for children.
- Since then, studies of hundreds of thousands of children have failed to find any connection between vaccines and autism.

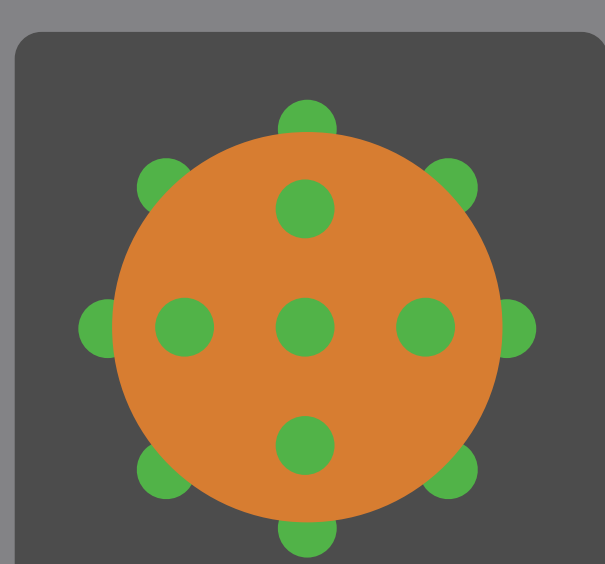
VACCINES DON'T HURT THE IMMUNE SYSTEM

- A multitude of studies are conducted on each vaccine before it's approved.
- They have been proven to be safe for the immune system, even if receiving multiple vaccines at one time.



YOU CAN STILL CATCH THESE DISEASES

- The only disease that has been globally eradicated is smallpox.
- Although vaccines have reduced the incidence of diseases like measles, they are still a serious threat.



THE FLU VACCINE CAN'T GIVE YOU THE FLU

- The injected flu vaccine does not transmit the flu, as it does not contain the live flu virus
- Some people develop mild flu-like symptoms, a sign that the immune system is responding to the vaccine.



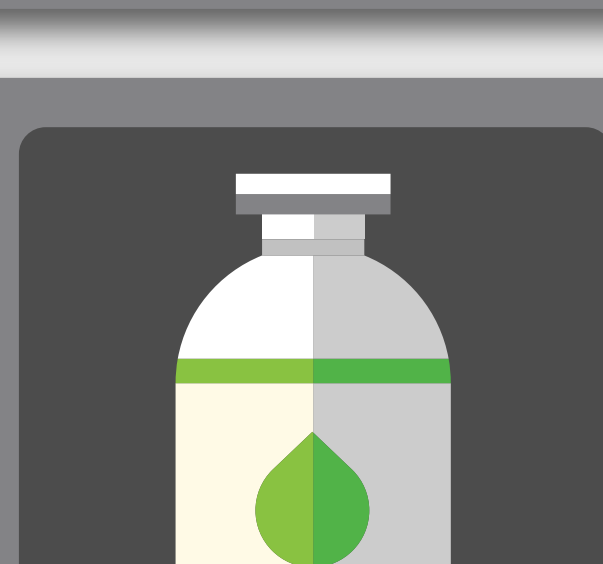
BREASTFEEDING IS NOT A VACCINE



- Breastfeeding mainly helps babies fight intestinal diseases.
- Breastfeeding transfers some antibodies to the baby, but it does not give the baby the ability to make more of these particular antibodies in the future.
- Thus, the immunity conferred by breastfeeding is temporary.
- Vaccines protect people for many years, some work for a lifetime.

VACCINATION IS THE MOST EFFECTIVE WAY TO PREVENT DISEASE

- Good hygiene and healthy living can bolster the immune system, but not enough to replace the need for vaccines.



SOURCES

- YOU CAN GET HELP PAYING FOR VACCINES: <http://www.cdc.gov/vaccines/adults/find-pay-vaccines.html#pay-vaccines>
- Information on specific vaccines in many languages: <http://www.immunize.org/vis/>
- Broken bone during childhood: <http://fivethirtyeight.com/datalab/dear-mona-how-many-kids-break-a-bone/>
- Dying in a car accident: http://www.nsc.org/NSC/Documents_Corporate/2014-Injury-Facts-Odds-Dying-43.pdf
- Childhood cancer statistics: <http://www.acco.org/information/aboutchildhoodcancer/childhoodcancerstatistics.aspx>
- Drowning in pools: <https://answers.yahoo.com/question/index?qid=20110930180058ApcpN>
- Lightning striking odds: <http://www.lightningsafety.noaa.gov/odds.htm>
- Odds of being elected to congress: calculation based on the size of US congress and average term length served considering the age-eligible years of a average lifespan. http://assets.openncrs.com/rpts/R41545_20110107.pdf
- Vaccine side effects: <http://www.cdc.gov/vaccines/vac-gen/side-effects.html>
- Varicella and MMR Vaccine Side Effects: <http://www.cdc.gov/vaccines/vpd-vac/combo-vaccines/mmr/vacopt-faqs-hcp.htm>
- MMR Vaccine Side Effects: <http://pediatrics.aappublications.org/content/68/1/18>
- Shingles: <http://www.cdc.gov/media/pressrel/2008/r080515.htm>
- Congenital rubella syndrome: <http://pharmacologyonline.silae.it/files/newsletter/2010/vol1/48.Gopala.pdf>
- Whooping cough: <http://ideas.health.vic.gov.au/bluebook/pertussis.asp>
- Myths about vaccines: <http://www.cdc.gov/Pages/commonmythsaboutvaccinesdebunked.aspx>
- Retraction of the Lancet paper on autism: http://blogs/health/2010/02/lancet_wakefield_autism_mmr_au.html
- Information on autism and vaccines: <http://www.pbs.org/wgbh/nova/body/autism-vaccine-myth.html>
- Hearing of Andrew Wakefield: <http://briandeer.com/solved/gmc-charge-sheet.pdf>
- Breastfeeding and Immunity: http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Immunisation_common_misconceptions?open

This infographic is a companion to the NOVA special:

VACCINES - CALLING THE SHOTS

which can be viewed at:
www.pbs.org/wgbh/nova/body/vaccines-calling-shots.html