

# MIDDLETON PEDIATRICS

Highlights from our *Caring Well* podcast:  
Understanding Childhood Vaccines (part 1),  
with Dr. Middleton and Sara Pate, APRN

## How Vaccines Work & Why Timing Matters

- Vaccines train the immune system to recognize germs without causing the illness. Think of them as a “wanted poster” for the immune system—helping the body fight off threats quickly.
- Every vaccine works a little differently (killed virus, weakened virus, or just a fragment). That’s why blanket statements about vaccines are often inaccurate.
- Babies’ immune systems are ready to learn from day one. Timing is based on the risk of each disease.

## Hepatitis B Vaccine

- Hepatitis B is a serious infection that can cause liver failure and cancer.
- It’s 100x more contagious than HIV and spreads through tiny amounts of blood or saliva.
- Before vaccination, 15,000–20,000 U.S. children got hepatitis B every year. Now, pediatric cases are nearly eliminated thanks to early vaccination.

## Hepatitis A Vaccine

- Hepatitis A spreads through contaminated food, water, or touch.
- Kids often have mild or no symptoms—but they are “super spreaders.”
- Vaccinating children protects the whole community from outbreaks.

## Polio Vaccine

- Polio is a virus that can cause lifelong paralysis.
- In the 1950s, there were 30,000 U.S. cases of paralysis a year.
- Thanks to vaccines, polio has been eliminated in the U.S., but it still exists elsewhere—so vaccination is still essential.
- Only smallpox has been completely eradicated worldwide.

## Community Protection (Herd Immunity)

- Vaccines protect not just individuals, but entire communities.
- High vaccination rates prevent diseases from spreading.
- Example: measles requires 95% coverage to stop outbreaks.

## Trust & The Big Picture

- Parents want the best for their kids but often feel overwhelmed by conflicting information online.
- The key is relying on trustworthy sources like:
  - Your pediatrician
  - American Academy of Pediatrics ([healthychildren.org](https://www.healthychildren.org))
  - Children’s Hospital of Philadelphia Vaccine Education Center
- Be cautious of influencers or sources selling products.
- Vaccines have saved millions of lives and transformed childhood health compared to 100 years ago. Having the ability to protect children today is a privilege we shouldn’t take for granted.