



ADULT VACCINES OF THE FUTURE

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- Professor Emeritus – OK State Univ-CHS
- AOA's liaison representative for the CDC's
- Advisory Committee on Immunization Practices (ACIP)





CONFLICTS OF INTEREST

1. Consultant for Pfizer: PCV-20 Vaccine
 2. Consultant for Dynavax: Hep B Vaccinee
 3. Consultant for Takedo for Dengue Vaccine
- Representatives of the Kansas Association of Osteopathic Medicine (KAOM) has reviewed, mitigated and approved the presentation





OBJECTIVES: AFTER THE PRESENTATION, THE PARTICIPANT SHOULD BE ABLE TO:

- 1. Discuss some of the adults' vaccines of the future
- 2. Understand the new mechanism of future vaccine development
- 3. Incorporate the new vaccines into a practice when available





REFERENCES

- 1. ACIP slides of Feb. 2023 meeting:
<https://www.cdc.gov/vaccines/acip/meetings/slides-2023-02-22-24.html> (Accessed 2/28/23)
- 2. News about CDC Future Vaccines:
<https://www.bing.com/news/search?q=CDC+Future+Vaccines&qpv=cdc+future+vaccines&FORM=EWRE>.
(Accessed 2/28/23)
- 3. The future of vaccine development:
<https://pubmed.ncbi.nlm.nih.gov/31443989>. (Accessed 2/28/23)





MY NON-PROFIT, POWER OF A NICKEL, WWW.POWEROFANICKEL.ORG TAKES MEDICAL TEAMS TO UNDERSERVED POPULATIONS OF THE WORLD

- Countries served in the past before Covid pandemic included:
 - India
 - Philippines
 - Vietnam
 - Nicaragua (too dangerous presently)
 - Mexica (Tulum area) – too dangerous because of cartel activity
 - Belize
 - Peru
 - Greece (Athens refugees)
 - Ukraine (too dangerous presently)





FREE GIFT TO YOU: DOWNLOAD 2023 CDC VACCINE SCHEDULER APP FOR HEALTHCARE PROVIDERS

Download "CDC Vaccine Schedules" free for iOS and Android devices.



Product Specs

Version: 9.0.1

Requirements: Requires iOS 11.0 or later and Android 5.1 or later; optimized for tablets and useful on smartphones.

Updates: Changes in the app are released through app updates.

Download app free for **iOS**



Download app free for **Android**





SLEEP DEPRIVATION COULD REDUCE VACCINE ANTIBODIES, NEW STUDY FOUND

- - Getting insufficient sleep in the days before or after a vaccination could weaken the vaccine's effectiveness particularly for men, a new study has found
- - Researchers from the U.S., France, the U.K. and Sweden conducted the study, which was published in the journal Current Biology recently
- - Men who reported getting six or fewer hours of sleep per night in the days before and after getting vaccinated, showed a significant reduction in antibody response.





WE NEED TO GET OUR ADULTS' VACCINATIONS BACK ON TRACK

- 3 out of 4 adults are behind on routine vaccines like influenza, tetanus, hepatitis A , Covid and HPV



THE IMPACT OF VACCINES



Disease	Annual cases in the 20th century	Cases in 2020
Smallpox	29,005	0
Diphtheria	21,053	1
Pertussis	200,752	5,398
Polio	16,316	0
Measles	530,217	13
Mumps	162,344	621
Rubella	47,745	6
Hib	20,000	11

CDC Statistics

- From December 2020 through November 2022
 - Estimated that the COVID-19 vaccination program in the U.S. prevented more than 18.5 million additional hospitalizations and 3.2 million additional deaths
 - Without vaccination, there would have been nearly 120 million more COVID-19 infections
- The vaccination program saved the U.S. \$1.15 trillion

Sources:
Annual 20th century morbidity from JAMA, 2007
2020 reported cases from CDC Surveillance System





NAME 14 DISEASES THAT HAVE BEEN NEARLY ELIMINATED BY VACCINES

- **Polio - whoops**
- Smallpox
- Tetanus
- Hepatitis B
- Hepatitis A
- Rubella (German measles)
- Hib (Haemophilus influenzae type b)
- **Measles - whoops**
- **Pertussis - whoops**
- Pneumococcal disease
- Rotavirus
- **Varicella - whoops**
- Diphtheria
- Mumps





WHEN PEOPLE DO NOT GET VACCINATED; LOOKS WHAT HAPPENS: MEASLES IN OHIO AND KENTUCKY



- **Measles Outbreak in Ohio Declared Over After 85 Cases**
 - Feb. 6, 2023 (Health Day News) – A central Ohio measles outbreak among children who were not fully vaccinated is now over
- **U.S. CDC Issues Advisory After Confirmed Measles Case in Kentucky**
 - On Feb. 24, 2023 the Kentucky Department for Public Health identified a confirmed case of measles in an unvaccinated individual with a history of recent international travel





2023 ADULT VACCINE SCHEDULE NOW AVAILABLE

[HTTPS://WWW.CDC.GOV/VACCINES/SCHEDULES/HCP/IMZ/ADULT.HTML](https://www.cdc.gov/vaccines/schedules/hcp/imz/adult.html)

Vaccine	19-26 years	27-49 years	50-64 years	≥65 years
COVID-19 ⓘ	2- or 3- dose primary series and booster (see notes)			
Influenza inactivated (IIV4) or Influenza recombinant (RIV4) ⓘ	1 dose annually			
 Influenza live attenuated (LAIV4) ⓘ	 1 dose annually			
Tetanus, diphtheria, pertussis (Tdap or Td) ⓘ	1 dose Tdap each pregnancy; 1 dose Td/Tdap for wound management (see notes)			
	1 dose Tdap, then Td or Tdap booster every 10 years			
Measles, mumps, rubella (MMR) ⓘ	1 or 2 doses depending on indication (if born in 1957 or later)			For healthcare personnel, (see notes)
Varicella (VAR) ⓘ	2 doses (if born in 1980 or later)		2 doses	
Zoster recombinant (RZV) ⓘ	2 doses for immunocompromising conditions (see notes)		2 doses	
Human papillomavirus (HPV) ⓘ	2 or 3 doses depending on age at initial vaccination or condition	27 through 45 years		
Pneumococcal (PCV15, PCV20, PPSV23) ⓘ	1 dose PCV15 followed by PPSV23 OR 1 dose PCV20 (see notes)			See Notes
				See Notes
Hepatitis A (HepA) ⓘ	2, 3, or 4 doses depending on vaccine			
Hepatitis B (HepB) ⓘ	2, 3, or 4 doses depending on vaccine or condition			
Meningococcal A, C, W, Y (MenACWY) ⓘ	1 or 2 doses depending on indication, see notes for booster recommendations			
Meningococcal B (MenB) ⓘ	2 or 3 doses depending on vaccine and indication, see notes for booster recommendations			
	19 through 23 years			
Haemophilus influenzae type b (Hib) ⓘ	1 or 3 doses depending on indication			

Covid-19 added
Influenza
Td/Tdap
MMR
Varicella
Pneumococcal
Hep A
Hep B
Meningococcal
Haemophilus Inf Type B



Older adult routine immunization schedule is becoming more complex

<https://www.cdc.gov/vaccines/schedules/hcp/imz/adult.html>

	50-64 years	≥65 years
<u>Influenza inactivated</u> (IIV4) or <u>Influenza recombinant</u> (RIV4)	1 dose annually	
<u>Tetanus, diphtheria, pertussis</u> (Tdap or Td)	1 dose Tdap, then Td or Tdap booster every 10 years	
<u>Zoster recombinant</u> (RZV)	2 doses	
<u>Pneumococcal</u> (PCV15, PCV20, PPSV23)	1 dose PCV15 followed by PPSV23 OR 1 dose PCV20 (<u>see notes</u>)	1 dose PCV15 followed by PPSV23 OR 1 dose PCV20

- Potential fall or other regularly scheduled COVID-19 vaccine
- Clinicians may face competing vaccine priorities



VACCINES IN GENERAL

- No vaccine is 100% effective and cannot completely shield one from contracting any disease

However

- Vaccinations are crucial in lowering the risk of contracting a disease and reducing one's chances of becoming seriously ill





WHAT VACCINE CAN PREVENT A TYPE OF PARALYSIS?

Polio

- No cure, but can be prevented
 - Inactivated polio vaccine (IPV) is the only polio vaccine that has been given in the United States since 2000
 - Oral polio vaccine (OPV) is used in other countries, but is a live virus vaccine
- Any recent polio outbreaks in USA?
 - Yes
 - September 13, 2022, found in New York a case of paralytic polio in an unvaccinated adult
 - Several wastewater samples exhibited polio from communities near the patient's residence





CDC' PRESENT RECOMMENDATION FOR ADULTS FOR POLIO VACCINE

- **Unvaccinated adults** who are at increased risk of exposure to poliovirus, should be given
 - Three doses of IPV
 - 0, 1-2 months, 6-12 months after 2nd dose
- Adults who have had three or more doses of polio vaccine in the past and are at increased risk of exposure to poliovirus
 - May get one lifetime booster dose of IPV





WHO ARE AT INCREASED RISK OF FOR POLIO

Situations that put adults at increased risk of exposure to poliovirus include:

- **Travelers** who are going to countries where polio is epidemic or endemic (For additional information, see Polio: For Travelers).
- **Laboratory and healthcare workers** who handle specimens that might contain polioviruses.
- **Healthcare workers or other caregivers** who have close contact with a person who could be infected with poliovirus.
- Unvaccinated or incompletely vaccinated **adults whose children will be receiving oral poliovirus vaccine** (for example, international adoptees or refugees).
- **Unvaccinated or incompletely vaccinated adults living or working in a community where poliovirus is circulating.**





FUTURE ACIP PROBABLE RECOMMENDATION

Proposed Language:

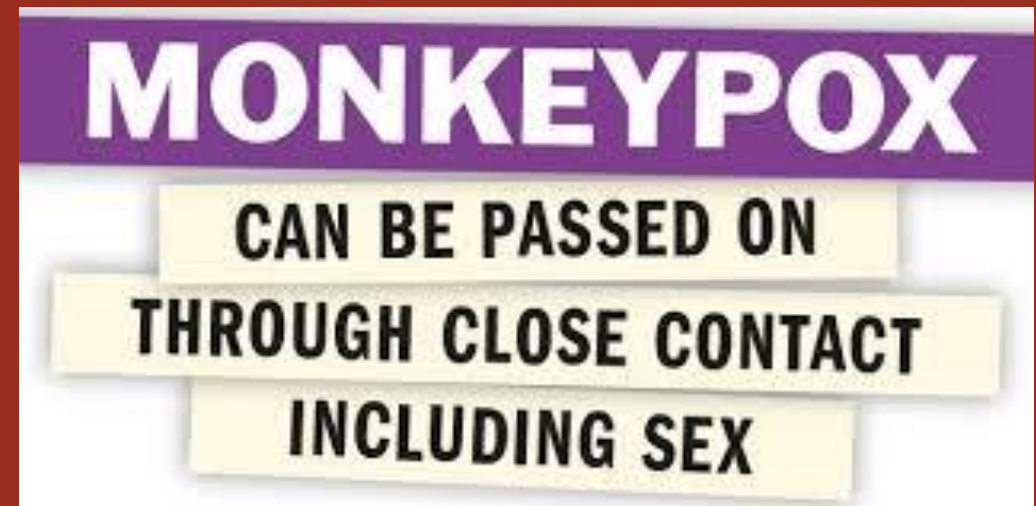
- **Adults who have received a primary series of tOPV or IPV in any combination and who are at increased risk of poliovirus exposure may receive another dose of IPV. Available data do not indicate the need for more than a single lifetime booster dose with IPV for adults.**





CASE

- A 30 y/o homosexual male develops 101 fever with chilling, fatigue, headache and muscle aches. He has a perianal, vesicular rash.
- What is your most likely preliminary diagnosis?
 1. influenza
 2. Covid-19
 3. Pneumococcal
 4. Herpes Zoster Vaccine
 5. Monkeypox (mpox) ←





DISEASE CAUSED A “PANIC” IN US BUT NOW SEEMS TO BE DECREASING?

- Monkeypox's (mpox) decline per NY Times, Oct. 13
 - - Since a peak In Aug, US cases have fallen more than 85%
 - - Found in mostly gay and bisexual men with multiple partners
 - - Rarely deadly: 28 deaths in 72,000 cases reported
- Why?
 - - Vaccines helped slow the virus's spread
 - - Gay and bisexual men reduced sex with multiple partners
 - - Virus simply burned out – requires close contact
 - - Not spread by respiratory droplets



Typical lesions of mPox



How many of you
have seen mPox?

For Monkeypox Patients, Excruciating Symptoms and a Struggle for Care

As New York City and the federal government strain to supply enough vaccines, patients face a private battle to find treatment and relief from serious symptoms.

- Lesions often perianal and/or affecting genitals
- Rectal pain
- Abdominal pain
- Rectal bleeding
- Tenesmus

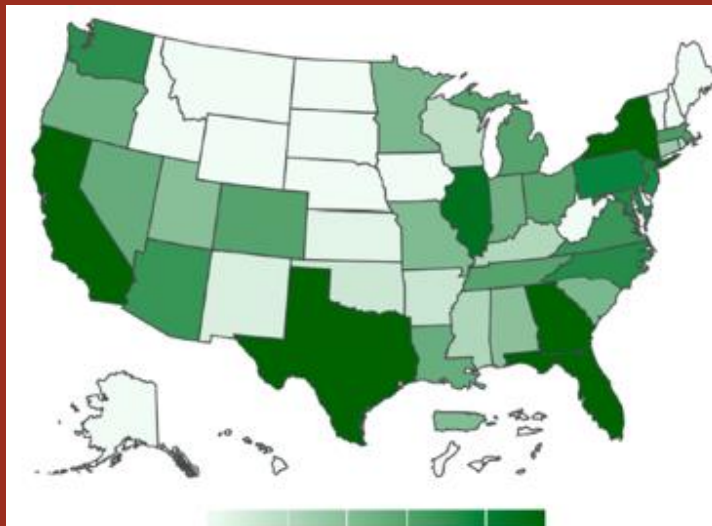




NAME WILL TRANSITION FROM MONKEYPOX TO “MPOX”

WHO, NOV. 28, 2022

- *Both names will be used simultaneously for one year*
 - *Mpox will become a preferred term, replacing monkeypox, after a transition period of one year*
 - *The term “monkeypox” will remain a searchable term in ICD*





FEB. 22, 2022 VOTE BY ACIP FOR MPOX

ACIP recommends the 2-dose* JYNNEOS vaccine series for persons aged 18 years and older at risk of mpox during an mpox outbreak[§]

*Dose 2 administered one month after dose 1

§ Public health authorities determine whether there is an mpox outbreak; a single case may be considered an mpox outbreak at the discretion of public health authorities. Other circumstances in which a public health response may be indicated include ongoing risk of introduction of mpox into a community due to disease activity in another geographic area.





**A 39 YEAR/OLD FEMALE WITH A
HISTORY OF A LYMPHOMA
BEING TREATED WITH IMMUNO-
SUPPRESSIVE THERAPY
DEVELOPS THE FOLLOWING
PAINFUL RASH**

**What vaccine could
have prevented this
disorder?**





TO WHOM SHOULD ZOSTER VACCINE BE GIVEN?

1. Shingrix is recommended for the prevention of herpes zoster and related complications for **immunocompetent** adults 50 years of age and older

- Including those who previously received Zostavax

www.cdc.gov/mmwr/volumes/67/wr/pdfs/mm6703a5-H.pdf

2. On October 20, 2021, ACIP recommended 2 doses of RZV for the prevention of herpes zoster and related complications in adults aged 19 years or older who are or will be immunodeficient or immunosuppressed because of disease or therapy

www.cdc.gov/mmwr/volumes/71/wr/pdfs/mm7103a2-H.pdf





HEPATITIS A (HEPA)

HOW MANY OF YOU HAVE HAD YOUR HEP A VACCINE?

- Remember all homeless need hepatitis A series
- Hep A can be passed from food handlers
- Depending on type of HEPA vaccine, one needs at least 2 doses
 - One dose only gives protection for 2 years and then wanes
- If traveling "South of the Border", you should have HEPA vaccine
 - Can be given as "on the way to the airport" but remember to get second jab in 6-12 months
- If going to be exposed to an international adoption (grandparent), a HEPA vaccine is recommended





WHO IS AT HIGH RISK FOR HEP B DISEASE? THE CDC WANTS TO ELIMINATE HEP B BY 2030!

By sexual exposure

- Sex partners of persons who test positive for hepatitis B
- Sexually active persons who are not in a long-term, mutually monogamous relationship
- Persons seeking evaluation or treatment for STD
- Men who have sex with men (MSM)

Persons at risk for infection by percutaneous or mucosal exposure to blood

- Persons with current or recent injection
- Household contacts of persons who test positive
- Residents and staff of facilities for persons with developmental disabilities
- Health care and public safety personnel with reasonably anticipated risk for exposure to blood or blood-contaminated body fluids
- Persons on dialysis
- Persons with diabetes





CDC UPDATES AND EXPANDS ITS SCREENING RECOMMENDATIONS FOR HEPATITIS B VIRUS INFECTION IN THE US: ELIMINATE HEPB BY 2030

- - Recommending that **all adults be screened for HBV infection and HepC with a test at least once in their lifetimes**
- New guidelines recommend that people who are not vaccinated for hepatitis B, but are at increased risk of HBV infection, receive periodic testing
- - Risk-based testing is expanded to include more conditions:
 - - People incarcerated or formerly incarcerated in a jail, prison, or other detention setting
 - - People with a history of sexually transmitted infections or multiple sex partners
 - - People with a history of hepatitis C virus infection
- - CDC recommends vaccination of all people younger than age 60 years and all people age 60 or older at increased risk (Anyone age 60 or older may be vaccinated)





HIGH RISK AND IN NEED OF HEP B VACCINATIONS CONT.

Others

- International travelers to countries with high prevalence of $\geq 2\%$ HepB)
- Persons with hepatitis C virus
- Persons with chronic liver disease
- Persons with HIV infection
- Incarcerated persons





IMPLEMENTATION GUIDELINES FOR HEP B VACCINATION, CONCLUSIONS

Health care providers should:

- Offer HepB vaccination to the following adults
 - Aged 19–59 years who have not previously completed vaccination
 - Adults \geq 60 years with risk factors for hepatitis B
 - Person seeking protection
- Implement standing orders to administer HepB vaccine
- Offer HepB vaccination in outreach and other settings in which services are provided to persons at risk for HBV infection (e.g., syringe services programs, HIV testing sites, HIV prevention programs, homeless shelters)





MMR — NOW TWO VACCINES AVAILABLE

- Two MMR vaccines are available for use in the United States
 - M-M-R II by Merck
 - PRIORIX by GSK
 - Fully interchangeable for all indications for which MMR vaccination is recommended
 - Now approved for SubQ or IM





A 70 Y/O VOLUNTEER FOR HURRICANE IAN COMES TO YOUR OFFICE FOR A TETANUS BOOSTER (HIS LAST ONE WAS 12 YEARS AGO)

- The patient has not had his Bi-valent COVID-19 booster or his annual flu vaccine
- What recommended vaccine "jabs" should he receive ?



- Can you give the BiValent COVID-19 with other immunizations?
- Yes
 - This patient should receive the following
 - Tdap (or Td) – every 10 years
 - Bivalent COVID-19 - booster
 - One of the recommended influenza vaccines for 65 and older





OUR SANIBEL HOME ENTRANCE AND FRONT YARD BEFORE HURRICANE IAN



After



1/1/2022



69 Y/O MALE HAS AN ACUTE ONSET OF FEVER, MUSCLE ACHES AND COUGH (WINTER SEASON)

- Which of the following would you consider this patient to have:

- Influenza
- Covid-19
- RSV infection.
- Any of the above

Triple- endemic



- His Influenza A test is positive.
- What flu vaccine is recommended by the CDC which could have prevented this patient's illness?

- Fluzone High-Dose Quadrivalent
- Flublok Quadrivalent recombinant flu
- Fluad Quadrivalent adjuvanted flu



FYI: NEW HOME TEST CAN TELL IF YOU HAVE THE FLU OR COVID

- Flu (A or B) and COVID symptoms are easily confused
- A new home test—for flu (A or B) and Covid-19—tells them apart in minutes





TRIDEMIC — JAN 7, 2023

RSV - INFLUENZA AND COVID19

- -The RSV surge and Influenza peaked in Jan/Feb
- -Appears that COVID for most part is decreasing
 - **Recently** coronavirus's omicron subvariant XBB.1.5 has shot up and is very contagious but not as invasive





M-RNA VACCINES MAY BRING US CLOSER TO A FUTURE UNIVERSAL FLU VACCINE

- Messenger RNA (mRNA) vaccine technology has been the big breakthrough
- Take the genetic code for proteins from the flu virus
- Inject it into someone's arm
- The cells of the human host manufacture the antibodies
- mRNA quickly degrades
- Using chemically modified mRNA with only slight local reactions
- Use little packages of fat molecules (liposomes) to make an "effective container" that can be injected
- Stimulates the body to make antibodies





UNIVERSAL FLU VACCINE, SOON?

- The annual flu shot contains pieces of one protein from 4 different influenza strains
- Each year, as the flu itself evolves, the 4 strains used in the flu vaccine are fine-tuned
- In some years, this effort **fails**
- The current flu vaccine process grows the flu virus in chicken eggs, and sometimes it just won't grow and needs to be redone☹
- With mRNA
 - Do not grow in chicken eggs
 - Aren't limited to just 4 strains
- Put ALL 20 known influenza strains in the same vaccine
- Even protects against other flu strains that aren't in the vaccine
- To create the vaccine, scientists simply synthesized the mRNA that encodes the surface protein of the flu, hemagglutinin, from 20 different flu strains



INFLUENZA AS OF MARCH 31, 2023

Seasonal influenza activity remains low nationally.

67.2% of viruses reported were influenza A and 32.8% were B.

Of influenza A viruses detected and subtyped, 58.8% were influenza A(H3N2) and 41.2% were influenza A(H1N1).

Total of **138 pediatric flu deaths** reported so far this season.

At least 26 million illnesses, 290,000 hospitalizations, and **18,000 deaths from flu.**

The majority of influenza viruses detected were similar to season's influenza vaccine.

CDC continues to recommend that everyone ages 6 months and older get an annual flu vaccine as long as flu activity continues.





FDA WANTS ANNUAL COVID BOOSTERS, JUST LIKE ANNUAL FLU SHOTS

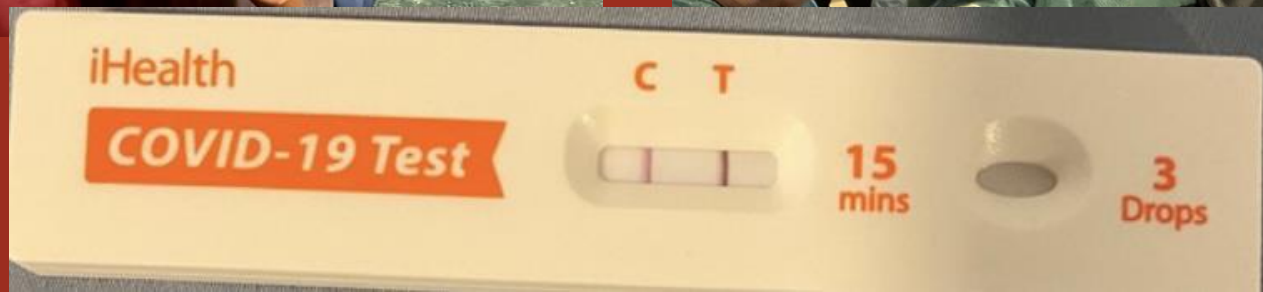
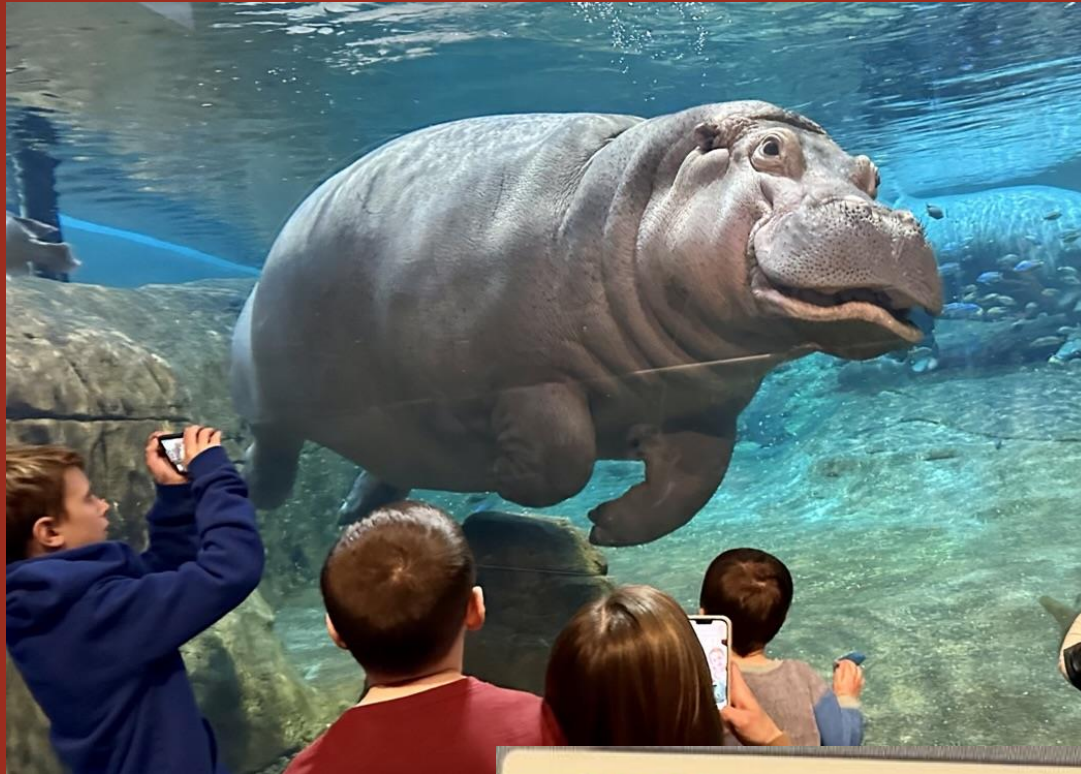
- - The FDA is suggesting a single annual single annual shot
- - The formulation would be selected in June targeting the most threatening COVID-19 strains
- - People could get a shot in the fall when people begin spending more time indoors and exposure increases
- - Some people, such as those who are older or immunocompromised, may need more than one dose
- - Updated (bivalent) boosters Getting a COVID-19 vaccine after you have recovered from COVID-19 infection provides added protection against COVID-19





WHICH ENVIRONMENT IS MOST LIKELY TO SPREAD COVID-19 INFECTION?

Indoor aquarium – no masks





MAYBE BOOSTING SHOULD BE RESERVED FOR OLDER OR VULNERABLE INDIVIDUALS?

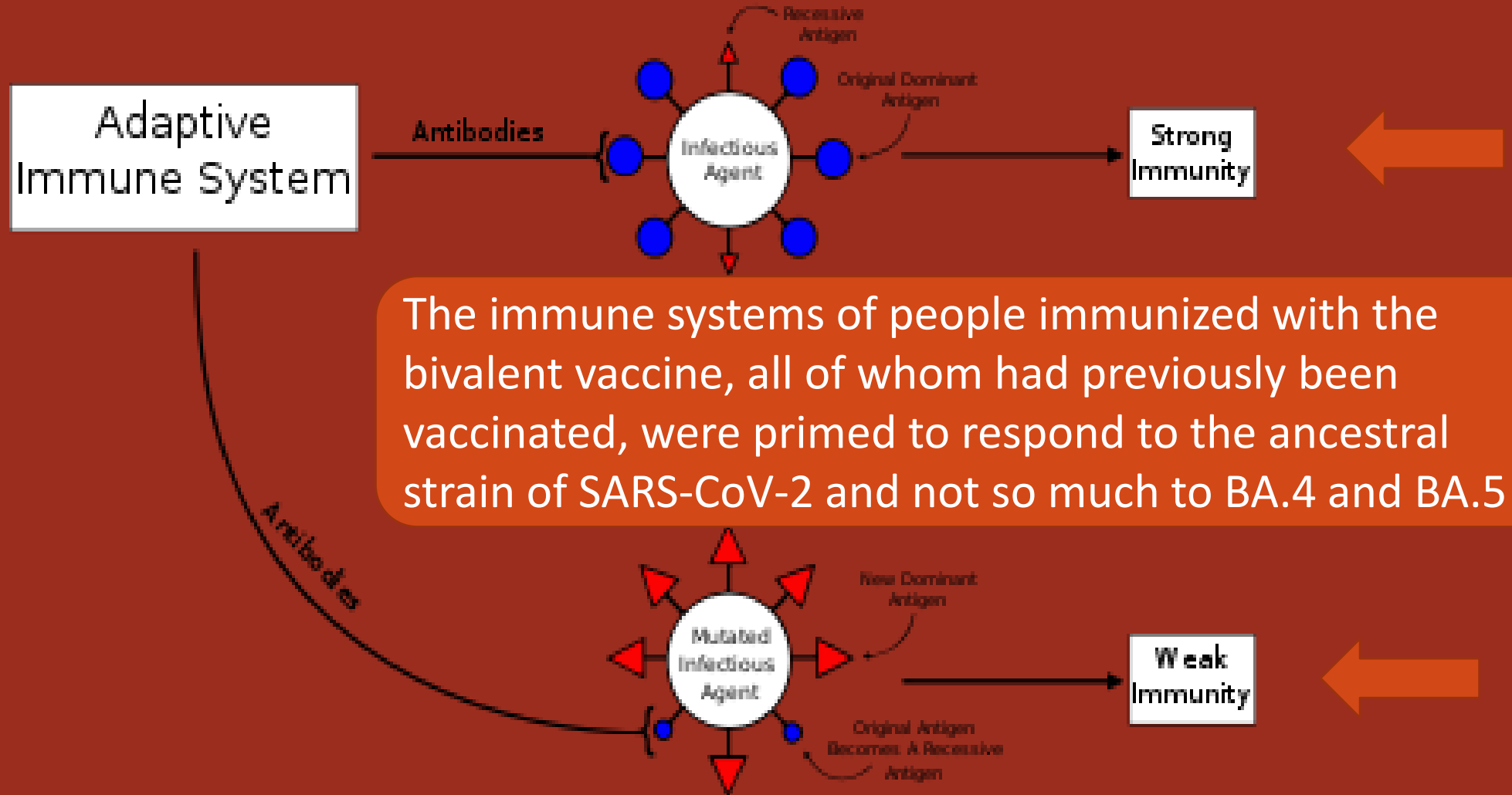
- By the time 10% of the U.S. population had received one of the newly authorized boosters, which were designed to target the ancestral SARS-CoV-2 strain along with BA.4 and BA.5, newer more immune-evasive variants were already outpacing the BA.4/5 Omicron subvariants
- So, **what is imprinting?**



My friend,
Paul Offit,
MD at CHOP



IMPRINTING: THE BODY'S IMMUNE SYSTEM RESPONDS TO THE ORIGINAL ANTIGEN STRONGLY BUT WEAKLY TO VARIANTS?





COVID-19 MYTHS: [HTTPS://WWW.INFECTIONCONTROLTODAY.COM/VIEW/ADDRESSING-COVID-19-MISINFORMATION-WHAT-EXPERTS-GOT-RIGHT-WRONG](https://www.infectioncontroltoday.com/view/addressing-covid-19-misinformation-what-experts-got-right-wrong)

- 1. If one becomes infected and is not vaccinated, there is an increased risk of long COVID
(TRUE)
- 2. Neither type of immunity is adequate, and whether infected or vaccinated, one's immunity will wane, and a booster is beneficial
(TRUE)
- 3. Masking: cloth masks and even surgical masks will not provide optimal protection. Well-fitted N95 masks will provide the greatest protection for COVID-19 infection
(TRUE)





COVID-19 MYTHS CONT.

- 4. Myocarditis: A large study published in the Am Heart Journal Circulation found that the risk of myocarditis post-vaccination was lower than post-COVID-19, except for young males after the second dose of the Moderna vaccine
 - (True)
- 5. Pfizer/BioNTech vaccine contains a lower dosage and would be expected to have a higher safety profile in this age group. In addition, vaccinations also decrease the chances of severe COVID-19 and reduce the incidence of heart attacks, strokes, and Long COVID
 - (TRUE)
- 6. One in 5 people gets Long COVID
 - (TRUE)





COVID-19 CONCLUSIONS

- For high-risk individuals, which includes about half of the United States' population:
 - Best to keep current on vaccinations
 - Use masking in poorly ventilated indoor environments
 - Along with testing and seeking medical care if one becomes infected





RESEARCHERS CALLING FOR NEW GENERATION OF COVID-19 VACCINES

- - Vaccines that provide broader and more long-term protection against the disease
- - Sprays or drops given through the nose or mouth could do a better job of stopping transmission
- - Vaccines that target multiple parts of the virus or several variants at once could reduce the need for continuous boosters
- - Vaccine makers and the FDA are working together to develop variant-specific shots for the fall, which they say will offer better protection





CONCLUSIONS — COVID-19 VACCINES

- - Remain our single most important tool to protect people against serious illness, hospitalization, and death
- - **BiValent mRNA vaccines** are now available and recommended for:
 - - For those who are moderately to severely immunocompromised
 - - Adults over 50



ADULT RESPIRATORY SYNCYTIAL VIRUS

RSV disease remains a significant unmet medical need among adults

- Every year, RSV cases in adults result in substantial clinical and economic burden^{1,2,3}
- Older adults and adults with underlying conditions are at increased risk of RSV

Risk factors for severe RSV infection



Older age^{1, 4}
Especially for those
aged ≥ 60 years



Comorbidities¹
Adults at highest risk
include those with
chronic heart or lung disease



Weak immune status¹
Adults with weakened immune
systems are particularly
vulnerable





RSV VACCINE SUCCEEDS IN PHASE III TRIAL OF OLDER ADULTS

- An important study came out in the *New England Journal of Medicine (NEJM)*, which found that a candidate vaccine against RSV was highly effective in preventing lower respiratory tract disease (Pfizer)
- The study also found the vaccine prevented severe disease.
- The vaccine was compared to placebo and the study was blinded, meaning that participants and the scientists carrying out the analysis were not aware of who got what
- The study had nearly 25,000 participants and was carried out across 17 nations





RSV VACCINE: FDA ADVISERS VOTE IN FAVOR OF APPROVAL FOR VACCINES FOR OLDER ADULTS

WEDNESDAY, MARCH 1, 2023

- - The FDA, which typically follows the committee's recommendations, is expected to decide on approval of the vaccines in May
- - Over the course of a two-day meeting, vaccine advisers to the US Food and Drug Administration voted in favor of approval for RSV vaccines for adults over the age of 60
- - The vaccine candidates, made by Pfizer and GlaxoSmithKline, could become the world's first approved vaccines against the common virus





A PROBLEM????

■ Possible Guillain-Barre risks

■ KEY POINTS

- - A majority of the FDA's advisors said the safety and efficacy data supports using Pfizer's RSV vaccine in adults ages 60 and older
- - But several FDA advisors said there could be a significant safety issue after two vaccine recipients out of about 20,000 developed Guillain-Barre syndrome
- - Other advisors were frustrated by a lack of efficacy data on people with weak immune systems and nursing home residents





PFIZER'S RSV VACCINE, GIVEN DURING PREGNANCY, COULD BE AVAILABLE AS EARLY AS THIS SUMMER

- A new RSV vaccine, administered to pregnant mothers to protect the child, may be available as early as summer 2023
- When vaccinated, the mother's body starts to make antibodies that can quickly recognize and destroy the virus and infected cells. Those maternal antibodies "then cross the placental barrier and provide protection in the newborn infant"





MY WIFE IS IN A RSV STUDY

- Study design:
 - - 2 receive actual vaccine
 - - 1 receives a placebo
 - - My wife most likely received the RSV vaccine
 - - Why do I think that is the situation?
 - * I had to cook and do the dishes for 24 hrs..... She was in bed with fatigue, a sore arm and headache for 24 hrs. ☹️







Contact Information

If additional questions or would like to
be put on my ACIP notes

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If interested in a Power of a Nickel
International Mission

www.powerofanickel.org