ONE OF THE BEST WAYS TO BE HEALTHY

VACCINES
Vaccines

What you need to know:
- Polio (IPOL/OPV)
- Tetanus or Tdap
- Hepatitis A
- Hepatitis B
- Hepatitis A/B
- MMR (Measles/Mumps/ Rubella)
- Gardasil for Cancer Prevention
- Pneumonia Vaccine
- Menactra (Meningitis Vaccine)
- Varivax – Varicella
- Zostavax
- Flu Shots
POLIO

ONE OF THE BEST WAYS TO BE HEALTHY
Paralysis of the large muscles and muscles of respiration.
POLIO

Crippled from young age

Iron Lung
Polio

What is Polio?
- A disease caused by a virus
- Kills people by paralysis of muscles of respiration

Vaccine became available in 1955
- Discovered by Jonas Salk
- “The Salk Vaccine”—oral vaccine
- Currently, no new cases in USA in over 20 years
- Disease common in the world
- IPOL and OVP– 3 doses and one booster
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TETANUS & TDAP
TETANUS (Lockjaw) causes painful tightening of the muscles, usually all over the body leading to “locking” of the jaw so the victim cannot open his mouth or swallow.
- DIPHTHERIA causes a thick covering in the back of the throat leading to breathing problems, paralysis, heart failure, and even death.
Pertussis—Whooping cough

http://www.pkids.org/diseases/pertussis.html

Pertussis is usually passed by a caregiver
Pertussis—Whooping cough

http://www.pkids.org/diseases/pertussis.html
Tetanus or Tdap (Tetanus Diphtheria Acellular Pertussis)

Who should get Tdap vaccine and when?

- All adults should be vaccinated with TDAP–tetanus, diphtheria and acellular pertussis
- TDAP is one shot and it replaces the traditional TD

U.S. Department of Health and Human Services: Centers for Disease Control and Prevention National Immunization Program; Vaccine Information Statement; Tdap (7/12/2006); 42 U.S.C. 300aa-26
HEPATITIS A

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Hepatitis A

- Jaundice
- Itching
- Nausea
- Vomiting
- Dark urine
- Clay colored stools
- Extreme fatigue
Hepatitis A

- How is it spread?
  - Contaminated food
  - Contaminated water

- Who should be vaccinated
  - Anyone who eats out
  - Anyone who goes to the ocean
  - Anyone who travels
Hepatitis A Vaccine—
Two doses six months apart

TWO SHOTS 6 MONTHS APART

WASH YOUR HANDS OFTEN

U.S. Department of Health and Human Services: Centers for Disease Control and Prevention National Immunization Program; Vaccine Information Statement; Hepatitis A (8/25/98); 42 U.S.C. 300aa–26
HEPATITIS B

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Hepatitis B is a serious disease that affects the liver. It is caused by the hepatitis B virus (HBV). HBV can cause:

- Acute (short-term) illness.
- Chronic (long-term) infection.
  - Liver damage (cirrhosis)
  - Liver cancer
  - Death
- CONTAGIOUS
Hepatitis B

- **Routes of transmission**

Health Care Workers are at greatest risk due to blood contamination.
Hepatitis B
Hepatitis B

- Who should be vaccinated?
  - **EVERYONE**
  - Mandatory for children prior to starting 7th grade
  - All Health Care Workers
  - All Adults

- 3 SHOTS
  - FIRST SHOT
  - ONE MONTH LATER
  - SIX months after the first
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MMR
MEASLES
MUMPS
RUBELLA
Measles, Mumps, and Rubella (MMR) Vaccine

Why get vaccinated?

- Measles, mumps, and rubella (German measles) are serious diseases. They spread when germs pass from an infected person to the nose or throat of others.

- German Measles cause:
  - Rash
  - Cough
  - Fever
  - Severe malaise
  - Encephalitis
  - Death
Measles, Mumps, and Rubella (MMR) Vaccine

- Mumps causes:
  - Fever
  - Headache
  - Swollen glands under the jaw
  - Malaise

- Can lead to:
  - Hearing loss
  - Meningitis (Infection of brain and spinal cord coverings)
  - Males can have painful, swollen testicles—sterility
Rubella causes: (3 day measles)
- Rash
- Mild fever
- Swollen glands
- Arthritis
- Malaise
- Pregnant women can lose their babies

Rubella babies will be born with birth defects such as:
- Deafness
- Blindness–cataracts
- Polycystic kidneys
- Heart disease
- Brain damage
- Other serious problems
Measles, Mumps, and Rubella (MMR) Vaccine

- **Benefits of the vaccine**—prevent measles, mumps, and rubella

- **MMR Schedule:**
  - Children and adults need a total of 2 MMR vaccines.
    - 12–15 months of age and a booster prior to 1st grade
    - 4–6 years of age or before middle school or junior high school
  - Adults two doses 4 weeks apart.
Measles, Mumps, and Rubella (MMR) Vaccine

Who should **NOT** get the vaccines?

- Pregnant women
- Immunocompromised patients
- Anyone on long term steroids
- Cancer patients on chemotherapy or X-ray
- People with HIV/ AIDS

U.S. Department of Health and Human Services: Centers for Disease Control and Prevention National Immunization Program; Vaccine Information Statement; (6/10/94); 42 U.S.C. 300aa-26
Varicella–Chickenpox

ONE OF THE BEST WAYS TO BE HEALTHY
Varicella–chickenpox

- What is varicella?
  - Varicella is a common childhood disease that causes a rash, pox, itching, fever, pain, and fatigue.
Varicella

- **Chickenpox**
  - Complications include
  - severe skin infections,
  - scars,
  - pneumonia,
  - brain damage,
  - sterility and
  - death.
Shingles: Herpes zoster

A person who has had chickenpox can get a painful rash called shingles in later life.

Adults over age 60 should have one Zostavax, the shingles vaccine
HPV
HUMAN
PAPILLOMAVIRUS

ONE OF THE BEST WAYS TO BE HEALTHY
HPV (Human Papillomavirus) Vaccine – Gardisil

What is HPV?
- Genital human papillomavirus (HPV) is the most common sexually transmitted virus in the US.

- HPV causes
  - **Cervical Cancer**
    - 10,000 women get cervical cancer every year
    - 3,700 die from it
  - **Throat cancer**
  - **Vaginal warts**
  - **Esophageal cancer**
  - **Tongue, mouth cancer**
  - **Penile cancer**
HPV

- HPV—human papilloma virus

Warts on the Penis
HPV

- HPV—Human papilloma virus

HPV on the labia

HPV on the Cervix
HPV

- HPV—Human papilloma virus

Michael Douglas—esophageal cancer

Throat, esophageal and mouth cancer
HPV

- Which HPV viruses cause cancer?
HPV (Human Papillomavirus) Vaccine – Gardisil

Who should get the vaccine and when?

MEN and WOMEN

Insurance will pay for the vaccine for women 13–26
Some insurance pays for young men

- Given in a 3–dose series
  - 1\textsuperscript{st} dose – Now
  - 2\textsuperscript{nd} dose – 2 months after Dose 1
  - 3\textsuperscript{rd} dose – 6 months after Dose 1

Who should not get the vaccine
- Pregnant women
- Severe allergies to yeast or other components of the vaccine
PNEUMONIA VACCINE
ONE OF THE BEST WAYS TO BE HEALTHY
Pneumococcal Polysaccharide Vaccine

Why get vaccinated?

- **Pneumococcal disease** is a serious disease that causes much sickness and death. Pneumococcal disease kills more people in the US each year than all other vaccine-preventable diseases combined.

- **Pneumococcal Polysaccharide vaccine (PPV)** protects against 23 types of Pneumococcal bacteria.

- The elderly and children under 2 are especially at risk for the disease.
Pneumonia

- Pneumococcal Pneumonia
Pneumococcal Polysaccharide Vaccine

Who should get PPV?

- All adults 65 years of age or older
- Anyone over 2 years of age who has a long-term health problem or a condition that lowers immunity, such as:
  - Heart or lung disease
  - Diabetes
  - Sickle cell disease
  - Alcoholism – Cirrhosis
  - Lymphoma, leukemia
  - HIV infection or AID
  - Organ transplant
  - Splenectomy
Pneumococcal Polysaccharide Vaccine—Pneumovax

- **Vaccine Schedule**
  - Usually one dose is sufficient
  - A second dose is recommended for people older than 65 or who have had a splenectomy
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MENINGITIS
What is Meningococcal disease?

- Meningococcal disease is a serious illness, caused by a bacteria that affects the brain, meninges and spinal cord.

- Meningococcus is the leading cause of bacterial meningitis in children 2–18 years old. In the US, college freshmen who live in dormitories have an increased risk of getting Meningococcal disease.

- 10–15% die

- 11–19% lose their arms or legs, have nervous system problems, become deaf or mentally retarded, or suffer seizures or stroke.

Preventing the disease through use of Meningococcal vaccine MENACTRA is of great importance.
Meningitis

- Meningococcal Vaccine
Meningococcal Vaccines

Meningococcal Vaccine

- Two Meningococcal Vaccines are available in the US:
  - Meningococcal Polysaccharide Vaccine (MPSV4) has been available since the 1970s
  - Meningococcal Conjugate Vaccine (MCV4) was licensed in 2005—Menactra

- MCV4 should also be better at preventing the disease from spreading from person to person
Meningococcal Vaccines

Who should get Meningococcal Vaccine and when?

- MCV4 is recommended for all children at their routine preadolescent visit (11–12 years of age)
- Other adolescents who want to decrease their risk of Meningococcal disease can also get the vaccine
- College students living in dorms
- Microbiologists who are routinely exposed to Meningococcal bacteria
- US military recruits
- Anyone traveling to, or living in, a part of the world where Meningococcal disease is common, such as parts of Africa
- Anyone who has a damaged spleen, or whose spleen has been removed
- Anyone who has an immune system disorder
- People who might have been exposed to meningitis during an
Influenza Shots

- Flu shots
- EVERY YEAR

- Risks associated with the flu
  - Heart attack
  - Stroke
  - Autism if contracted during pregnancy