

**IT'S STILL
WORTH A SHOT**
 (OR, WHY YOU SHOULD STILL GET THE
 INFLUENZA VACCINE EVEN WHEN IT
 ISN'T VERY EFFECTIVE)

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**HOW HAS
INFLUENZA
AFFECTED YOU?**
 OR YOUR FRIENDS, FAMILY, OR LOVED ONES?

Missouri one of the states hardest hit by influenza
 The flu is Killing Up to 4,000 Americans a Week
 Flu-pocalypse? 2017 flu season could
 be worse, vaccine expert warns
 More than 1,000 flu cases reported in
 St. Louis County for third week in a
 row
 Flu cases reach record high in St.
 2018 could be a record year in KC for flu diagnoses in
 children, doctors say
 Missouri hit with over 50,000 flu cases this season
**App Data: Missouri Is Most Flu-Ridden State
 With Kansas A Close Second**
 Hospitals Overwhelmed by Flu Patients Are
 Treating Them in Tents

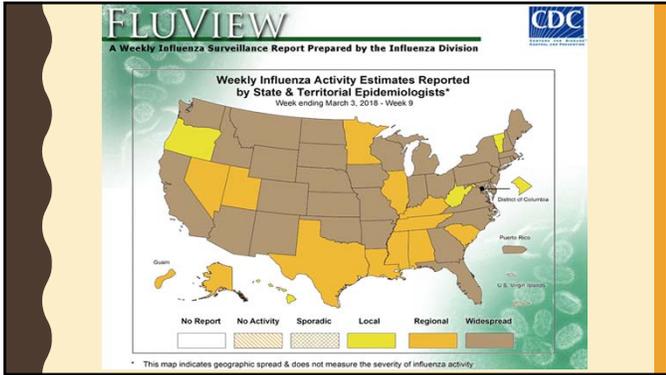
Officials Admit Flu Vaccine 2017 Likely Worthless
 CDC: 2017-18 Flu Season in U.S. Dominated by H3N2 Viruses
 Recent news about flu shot effectiveness causing confusion
Flu shot not so effective this year
 The flu shot offers lousy protection against this year's worst strain. Blame eggs.
 Less effective flu shot helping kick up cases
This Year's Flu Vaccine Effective? Not Everyone is Convinced
 Usual — And the vaccine may not help

NATIONAL STATISTICS

- Flu activity began increasing early November and rose sharply from December through early February
- National Center for Health Statistics (NCHS) mortality surveillance data
 - 8.8% of the deaths occurring week ending February 17, 2018 (Week 7) were due to pneumonia & influenza (above the epidemic threshold of 7.4%)
- 119 influenza-associated pediatric deaths reported so far this season

INFLUENZA-ASSOCIATED HOSPITALIZATIONS

- 24,644 lab-confirmed influenza-associated hospitalizations Oct 1, 2017 to Mar 6, 2018
 - 19,765 (80.2%) had influenza A virus
 - 4,596 (85.7%) had H3N2 and 765 (14.3%) had H1N1
 - 4,724 (19.2%) had influenza B virus
 - 79 (0.3%) had influenza A and influenza B co-infection
 - 76 (0.3%) had influenza virus untyped
- Overall hospitalization rate was 86.3/100,000 population
 - Adults aged ≥65 years 370.6/100,000
 - Adults aged 50-64 years 93.6/100,000
 - Children aged 0-4 years 62.5/100,000



MISSOURI STATISTICS

Figure 2. Number of Laboratory-positive¹ Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 9 (February 25 – March 3, 2018)²

Age Group	Week 9 Cases	Week 9 Rate ³	2017-2018 ⁴ Season-to-Date	2017-2018 ⁴ Season-to-Date Rate ³
00-04	514	137.30	18,502	4,942.30
05-24	1,009	62.89	42,579	2,653.70
25-49	621	32.45	23,651	1,236.01
50-64	445	35.99	16,823	1,360.67
65+	528	55.29	17,516	1,834.29
Total	3,117	51.24	119,071	1,957.22

¹Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
²Influenza season begins week ending October 7, 2017 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSiv)
³Incidence Rate per 100,000 population

- ### MISSOURI STATISTICS
- Influenza-like illness (ILI) activity was above baseline for the Missouri Outpatient ILI Surveillance Network (ILINet) at 2.72% and hospital emergency room visit chief complaint data at 3.44%
 - Percentage of respiratory specimens testing positive for influenza in Missouri laboratories **decreased** during Week 9
 - During Week 8, 91 deaths involving Pneumonia and Influenza (P&I) reported to the Bureau of Vital Records
 - Season-to-date total of 1,400 P&I associated deaths

WHY DOESN'T THE SHOT ALWAYS WORK?

- Process to make flu vaccines is old
- Strains chosen to be part of the vaccine are chosen several months ahead of the flu season
- Flu viruses mutate constantly, and several strains circulate at any given time
- Immune response differences

WHY IS IT STILL WORTH A SHOT?

- CDC estimates influenza has caused 9.2 million to 35.6 million illnesses each year since 2010
 - Resulted in 40,000 to 710,000 hospitalizations
 - 12,000 to 56,000 deaths
- Years with good coverage
 - Effectiveness hovers between 50 and 70%
 - Years when H3N2 circulates, tends to be less protective
- Cochrane Review updated February 2018
 - NNV=71 in healthy adults to prevent one case of influenza
 - NNV=29 in healthy adults to prevent one case of an influenza-like illness

EVEN WHEN IT DOESN'T WORK VERY WELL...

- Community, or herd, immunity protects only if enough people get vaccinated
- Flu vaccines never provide 100% protection
- If you do get the flu, it will likely be less severe than if you had not gotten a flu shot
- Even in years when the vaccine is less effective, it can still limit severe disease and death
- The flu vaccine may prevent you from getting the flu, prevent epidemics, and reduce the cases of severe flu infection
- MMWR reported on vaccine effectiveness 2/16/18
 - 2017 flu season vaccine has 36% overall effectiveness
 - Effectiveness against H3N2 was much lower at 25%

HIGH-RISK POPULATIONS

- Patients over 65 years old and children are more susceptible to developing complications
 - Their immune systems may not work as well
 - Hygiene may also play a part
 - Goal is to reduce the risk of complications, hospitalizations, and death
- Cochrane Review updated February 2018
 - NNV=5 in healthy children (ages 2-16 years old) to prevent one case of influenza
 - NNV=12 in healthy children (ages 2-16 yo) to avoid one case of ILI

The influenza vaccine is still the best way to protect yourself from getting the flu!!

I'LL JUST TAKE TAMIFLU IF I GET SICK

- Yes, but...
 - If you get sick, you have been infected with only one strain of the flu virus
 - You are still at risk of becoming infected with any other circulating strains
 - The flu shot can protect you from 3 or 4 different strains

ACTIONS TO TAKE ANYWAY

- Avoid close contact with people who are sick
- Limit contact with others as much as possible if you are sick
- If you have a flu-like illness, stay at home at least 24 hours after your fever is gone
- Cover your nose and mouth with a tissue when you cough or sneeze; be sure to throw it away after you use it
- Wash your hands with soap and water or an alcohol based hand rub if soap and water are not available
- Avoid touching your eyes, nose, and mouth
- Clean and disinfect surfaces and objects that may be contaminated with germs

TOP 10 REASONS TO GET A FLU SHOT

1. It can save your life
2. You won't have to take sick days
3. You are an eligible candidate
4. It is available everywhere
5. Over 65? There is a flu shot just for you
6. You cannot get the flu from the flu shot
7. It is often free or inexpensive
8. It is unlikely you will have serious side effects
9. You increase your odds of staying healthy if you get the flu shot early
10. Not only do you benefit, but so do your friends, family, and co-workers

QUESTIONS?

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