

# THE CORRELATION BETWEEN INFLUENZA AND ITS EFFECT ON CHRONIC CONDITIONS HAS BEEN EXTENSIVELY STUDIED

IN STUDIES OF ADULTS, INFLUENZA VIRUS WAS SHOWN TO HAVE A MARKED TRIGGERING EFFECT ON CARDIOVASCULAR EVENTS

ADULTS WERE SHOWN TO BE

**~6-10X** more likely to suffer a first **HEART ATTACK** in the first week

after laboratory-confirmed influenza virus infection

Kwong 2018: N = 364, IR = 6.05 (95% CI: 3.86-9.50), Age ≥35  
Warren-Gash 2018: N = 1989, IR = 9.80 (95% CI 2.37-40.5), Age ≥40

ADULTS WERE SHOWN TO BE

**~8X** more likely to suffer a first **STROKE** in the first 3 days

after laboratory-confirmed influenza virus infection

Warren-Gash 2018: N = 1989, IR = 7.82 (95% CI: 1.07-56.9), Age ≥40

**References:**

Kwong JC, Schwartz KL, Campitelli MA, et al. Acute myocardial infarction after laboratory-confirmed influenza infection. *N Engl J Med.* 2018;378:345-353.  
Warren-Gash C, Blackburn R, Whitaker H, McMenemy J, Hayward AC. Laboratory-confirmed respiratory infections as triggers for acute myocardial infarction and stroke: a self-controlled case series analysis of national linked datasets from Scotland. *Eur Respir J.* 2018;51. doi:10.1183/13993003.01794-2017

IN A STUDY OF PEOPLE WITH DIABETES, INFLUENZA INFECTION MAY BE ASSOCIATED WITH

**3X** the risk of **HOSPITALIZATION**

**4X** the risk of **ICU ADMISSION**

**2X** the risk of **DEATH**

Meta-analysis

**Reference:** Hulme KD, Gallo LA, Short KR. Influenza virus and glycemic variability in diabetes: a killer combination? *Front Microbiol.* 2017;8:861.

ESTIMATES OF THE EFFICACY OF INFLUENZA VACCINE IN HELPING TO PREVENT ACUTE MYOCARDIAL INFARCTION (AMI) RANGE FROM 15% TO 45%

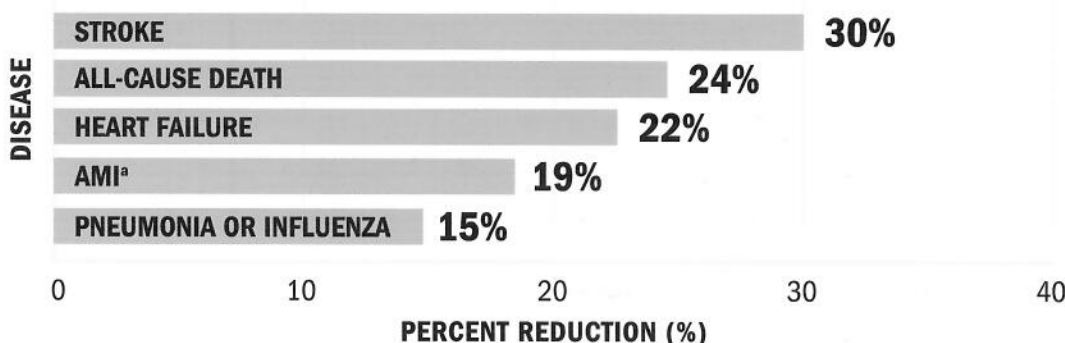
**EFFICACY OF ACCEPTED CORONARY INTERVENTIONS AND INFLUENZA VACCINE IN SECONDARY PREVENTION OF MYOCARDIAL INFARCTION**

Coronary intervention	Intervention efficacy/effectiveness against AMI
Smoking cessation	32%-43%
Statins	19%-30%
Antihypertensive drugs	17%-25%
Influenza vaccines	15%-45%

Meta-analysis

**Reference:** MacIntyre CR, Mahimbo A, Moa AM, Barnes M. Influenza vaccine as a coronary intervention for prevention of myocardial infarction. *Heart.* 2016;102:1953-1956.

IN A STUDY OF INFLUENZA VACCINE EFFECTIVENESS AGAINST HOSPITALIZATION AND DEATH IN PEOPLE WITH TYPE 2 DIABETES, VACCINE RECIPIENTS WERE SHOWN TO HAVE SIGNIFICANT REDUCTIONS IN



<sup>a</sup> Not statistically significant (95% CI: 0.62-1.04).

**Reference:** Vamos EP, Pape UJ, Curcin V, et al. Effectiveness of the influenza vaccine in preventing admission to hospital and death in people with type 2 diabetes. *CMAJ.* 2016;188:E342-E351.

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