

## GRIPPE: MEMENTO MORI

*GRIPPE, the pet pestilence of the Angel of Death, will soon return to Oregon communities. The atmosphere in these areas will acquire an epidemic constitution containing the specific causes of grippe, aided and abetted by miasmata contained in poisonous emanations arising from putrefying animal and vegetable matter and other toxic substances. The danger posed by such influences may be aggravated by atmospheric electricity and magnetic fluxes in addition to malevolent conjunctions of the planets, especially Mars, Jupiter and Neptune.*

*The illness often takes the form of a simple fever with low mortality in the majority of persons having a proper balance between the four humours - blood, phlegm, black bile, and yellow bile. For others, with predisposing or excitatory causes affecting this optimal balance, the illness may often manifest as violent continuous or intermittent fevers with an alarming risk of death. Predisposing causes include aging for 65 years or more, heart conditions, breathing difficulties and other diseases of bodily organs. Specific adjuvants must be administered to reverse this imbalance, strengthen the blood and lessen sickness and deaths. The excitatory causes include intemperate and dissolute living, poor hand-washing habits, failure to protect against noxious exhalations, and exposure to the noon sun and southerly winds. It should be apparent that these latter causes are less amenable to control but should still warrant cautions against persisting in such states during these dangerous times. This issue is being circulated to warn of the impending calamity.*



**T**HE FOREGOING MEMENTO is written in terms of theorems relevant to epidemic diseases prior to universal acceptance of contagium vivum some hundred years ago. Although God's wrath was not mentioned as a cause or precursor of epidemics, recent studies have found church-going to be protective against both infectious and chronic diseases.<sup>1,2</sup> Returning to the present, the following is largely based upon the Advisory Committee on Immunization Practices (ACIP) Recommendations for the 1998-1999 influenza season.

### SPECIFIC CAUSES

Last season A/Sydney quietly invaded the Pacific Northwest and 82 type A isolates were recovered from specimens submitted to our Public Health Laboratory. Type B isolates have not been identified in Oregon since the season of 1996-1997. Types A and B may be anticipated during the coming season.

### THE 1998-1999 VACCINE

The vaccine for the imminent season is new. The vaccine employed during the 1997-1998 season should not be used. The new trivalent influenza vaccine will include A/Beijing/262/95-like(H1N1), A/Sydney/5/97-like(H3N2), and B/Beijing/184/93-like hemagglutinin antigens.

### TIMING OF VACCINATIONS

Beginning in September when vaccine typically becomes available, no opportunity should be lost during routine health care visits or hospitalizations to vaccinate susceptible persons at high risk for influenzal complications. Given the recent patterns of arrival in Oregon, the optimal time for organized vaccination campaigns to protect persons at elevated risk is from October through mid-November. But regardless of the level of influenza transmission, vaccine should not be withheld from susceptibles.

### WHOM TO IMMUNIZE?

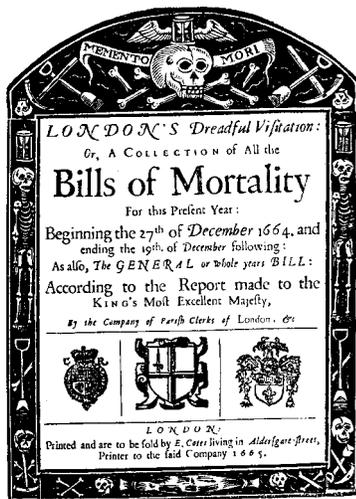
#### High Risk

Although influenza vaccination is cost-effective even for healthy working adults, it is recommended that the following groups (at "high risk" of complications) be given priority for vaccination due to increased morbidity and mortality.

- Persons 65 years of age or older
- Residents of nursing homes and other chronic-care facilities that house persons of any age who have chronic medical conditions
- Adults and children who have chronic disorders of the pulmonary or cardiovascular systems, including children with asthma
- Adults and children who have required regular medical follow-up or hospitalization during the preceding year because of chronic metabolic diseases (including diabetes mellitus), renal dysfunction, hemoglobinopathies, or immunosuppression (including immunosuppression caused by medications)
- Children and teenagers (aged 6 months-18 years) who are receiving long-term aspirin therapy and therefore might be at risk for developing Reye syndrome after influenza
- Women who will be in the second or third trimester of pregnancy during the influenza season.

#### Vectors

Persons who are infected, clinically or subclinically, can transmit influenza virus to high-risk persons whom they care for or live with. Some persons at high risk (e.g., the elderly, transplant recipients, and persons with AIDS) can have a low antibody response to influenza vaccine. Efforts to protect these members of high-risk groups against influenza can be improved by reducing the likelihood of influenza exposure



from their caregivers. Therefore, the following groups should also be vaccinated:

- physicians, nurses, and other personnel in both hospital and outpatient-care settings;
- employees of nursing homes and chronic-care facilities who have contact with patients or residents;
- providers of home care to persons at high risk (e.g., visiting nurses and volunteer workers); and
- household members (including children) of persons in high-risk groups.

#### Hoi Polloi

Vaccination should also be provided to any individual 6 months of age or older with a desire to escape febrile illness and hospitalization, or who wish simply to reduce the probability of premature death.

#### Vaccine Usage

Children under the age of 13 should only get split-virus formulations. Two doses at least one month apart may be necessary in those under 9 years, if not previously vaccinated. With the sole exception of children under 9 not previously vaccinated, two doses are not otherwise recommended. Whole or split formulations may be employed for those 13 years of age and older.

Intramuscular delivery is required. Specific doses are:

- 6-35 months of age—0.25 ml (split)
- 3-12 years of age—0.50 ml (split)
- 13 years & older—0.50 ml (either)

A minimum of two weeks may be necessary following a single dose, or

the second dose in children under 9 years, to develop protective antibodies. If influenza is rampant in the community, consideration might be given to coverage with an antiviral drug during this interval.

Vaccine should not be administered to persons known to have anaphylactic hypersensitivity to eggs or other components of influenza vaccine without appropriate medical evaluation and possible desensitization. In addition, avoiding vaccination of persons known to have developed Guillain-Barré syndrome within 6 weeks of a previous influenza vaccination seems prudent.

Influenza vaccine may be administered at different anatomic sites concurrently with other adult vaccines without increasing side effects. Children at high risk for influenza-related complications can receive influenza vaccine at the same time they receive other routine vaccinations, including pertussis vaccine. Because influenza vaccine can cause fever in young children, concurrent administration of DTaP is preferable to DTP.

#### VACCINE REACTIONS

The most frequent side effect of vaccination is soreness at the site of IM administration that usually lasts 24 to 48 hours and rarely leads to disruption of daily activities. Additionally, two types of systemic reactions have occurred:

Fever, malaise, myalgia, and other systemic symptoms can occur and are most often observed in persons who have had no previous exposure to the antigens in the vaccine (e.g., young children). They usually begin 6-12 hours after vaccination and last 1-2 days.

Elderly persons and healthy young adults experience no higher incidence of such reactions than placebo controls.

Immediate—presumably allergic—reactions (e.g., hives, angioedema, allergic asthma, and systemic anaphylaxis) rarely occur following vaccination. Most such reactions are likely due to hypersensitivity to residual egg protein. Persons with a history of such reactions should seek medical consultation regarding revaccination.

#### ADDITIONAL INFO

The ACIP recommendations were published this year on May 1 (MMWR 1998;47[No. RR-6]:1-21). Copies are available on the Internet (<http://www.cdc.gov> and <ftp://ftp.cdc.gov>) and and by calling (503/731-4020) or faxing (503/731-3095) the Immunization Program. Additional informational items, including vaccine information sheets, brochures and fact sheets, may also be requested. Such information as well as influenza surveillance data may be accessed on the OHD web site (<http://www.ohd.hr.state.or.us/cdpe/acd/>). If you refer your patients elsewhere for immunizations, SAFENET (800/723-3638) maintains a list of clinics throughout Oregon.

#### OREGON FLU SURVEILLANCE

We anticipate resuming lab surveillance of influenza virus activity through our Public Health Laboratory on or about November 1. The details will appear on these pages in coming weeks.

#### REFERENCES

1. Fischer M, Hedberg K, Cardosi P, et al. Tobacco smoke as a risk factor for meningococcal disease. *Pediatr Infect Dis J* 1997;16:979-983.
2. Kark JD, Shemi G, Friedlander Y, et al. Does religious observance promote health? Mortality in secular vs religious kibbutzim in Israel. *Am J Public Health* 1996;86:341-6.