

Case Study, Chapter 47, Vaccines

You are standing in line at the grocery store pharmacy waiting to get your yearly flu vaccine. The person in front of you is speaking very loudly and is saying "The yearly vaccine is just a way for the pharmacies and grocery stores to make money. If it's the flu why do they have to do this every year?" (Learning Objectives 2, 6).

1. The yearly influenza vaccine is what form of immunity? **Active artificial**
2. As a nurse, how would you explain the need for yearly booster vaccines for the influenza virus?

The vaccine has a life span of 3 - 6 months and allows for configuration changes from year to year to target predominate strains of the virus for that year.

Case Study, Chapter 48, Immunostimulant and Modulating Drugs

A client who was recently diagnosed with carcinoma is receiving chemotherapy, which is making them severely neutropenic. The physician orders filgrastim (Neupogen) 5 mcg/kg/day IV until ANC is adequate (Learning Objectives 3, 6, 8).

1. If the client weighs 61 kilograms, what will today's dose of filgrastim be for the treatment? **305mcg**
2. Filgrastim comes in a 300-mcg and a 480-mcg vial, which one should the nurse select to draw up the medication for this client? **480mcg**
3. Filgrastim is what type of immunostimulant drug, and what is its mechanism of action?

CSF. Filgrastim binds to the G-CSF receptor and stimulates the production of neutrophils in the bone marrow. As a G-CSF analog, it controls proliferation of committed progenitor cells and influences their maturation into mature neutrophils.