

## Herpes Zoster

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## Learning Objectives

- List factors associated with herpes zoster
- Summarize the results of the Shingles Prevention Study
- Identify appropriate candidates to receive the herpes zoster vaccine
- Describe common adverse events associated with administration of herpes zoster vaccine

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## Herpes Zoster (Shingles)

- Reactivation of varicella zoster virus (VZV)
- Not caused by exposure to person with chickenpox or zoster
- Associated with:
  - Aging
  - Immunosuppression
  - Intrauterine exposure
  - Varicella at age < 18 months

Centers for Disease Control and Prevention. Epidemiology and Prevention of Vaccine-Preventable Diseases. Adkinson W, Hanthberky J, McHenry L, Wolfe S, eds. 10th ed. 2nd printing. Washington DC: Public Health Foundation, 2008.

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## Epidemiology

- 500,000 to 1 million episodes annually
- Lifetime risk > 20%
- 50% of persons living to age 85 will develop zoster
- Associated with significant morbidity in older adults

Centers for Disease Control and Prevention. Epidemiology and Prevention of Vaccine-Preventable Diseases. Adkinson W, Hamborsky J, McIntyre L, Wolfe S, eds. 10th ed. 2nd printing. Washington DC: Public Health Foundation, 2008.

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## Clinical Presentation

- Unilateral, painful, vesicular cutaneous eruption with a dermatomal distribution
- Usually involves trunk or 5<sup>th</sup> cranial nerve
- Pain and paresthesia 2-4 days prior to eruption of vesicles
- No seasonal variation

Centers for Disease Control and Prevention. Epidemiology and Prevention of Vaccine-Preventable Diseases. Adkinson W, Hamborsky J, McIntyre L, Wolfe S, eds. 10th ed. 2nd printing. Washington DC: Public Health Foundation, 2008.

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## Complications

- Postherpetic neuralgia (PHN)
  - Pain in area of occurrence that persists after lesions have resolved
  - May last > 1 year
  - 9-34% of herpes zoster cases will develop PHN
- Ocular nerve and organ involvement
  - Severe sequelae

Centers for Disease Control and Prevention. Epidemiology and Prevention of Vaccine-Preventable Diseases. Adkinson W, Hamborsky J, McIntyre L, Wolfe S, eds. 10th ed. 2nd printing. Washington DC: Public Health Foundation, 2008.

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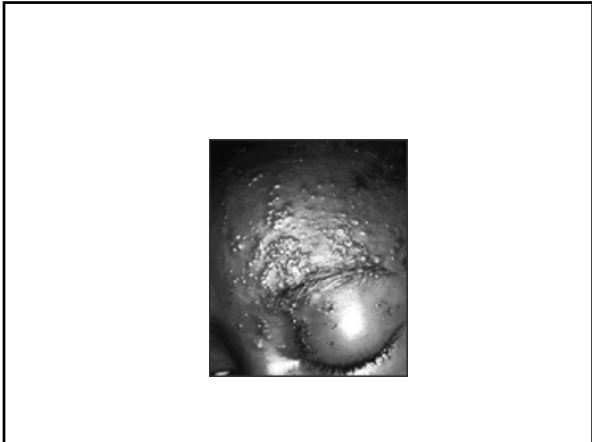
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### Herpes Zoster Vaccine

- FDA approved in May 2006
- Lyophilized preparation of live, attenuated VZV
- Contains higher titer of VZV than varicella and MMRV vaccines
- Does not contain preservatives

Centers for Disease Control and Prevention. Epidemiology and Prevention of Vaccine-Preventable Diseases. Adkinson W, Hamborsky J, Michalson L, Wolfe S, eds. 10th ed. 2nd printing. Washington DC: Public Health Foundation, 2008.

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### The Shingles Prevention Study

- Randomized, double-blind, placebo-controlled trial of 38,500 immunocompetent patients >60 years old
- Compared with placebo vaccine group had:
  - 51% fewer episodes of zoster
  - Lower efficacy for older recipients
  - Less severe disease
  - 66% less postherpetic neuralgia

NEJM 2005;352(22):2271-84.

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Should the herpes zoster vaccine be given to patients with unknown chickenpox history?

A. Yes

B. No

C. I'm not sure

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Indication

- For prevention of herpes zoster in persons 60 years and older, including those who had a previous episode of herpes zoster
- Vaccinate persons with chronic medical conditions unless contraindication exists
- Should not be used for post-exposure management of chickenpox or zoster

Centers for Disease Control and Prevention. Epidemiology and Prevention of Vaccine-Preventable Diseases. Adkinson W, Hanthberky J, McIntyre L, Wolfe S, eds. 10th ed. 2nd printing. Washington DC: Public Health Foundation, 2008.

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Administration

- Single dose of 0.65 ml
  - Unknown if booster is needed
- Reconstitute with diluent
- Inject subcutaneously in upper arm
- Must administer within 30 minutes of reconstitution

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## Adverse Effects

- Local reactions
  - Pain or tenderness
  - Erythema
  - Swelling

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## Contraindications / Precautions

- Severe allergic reaction to vaccine component or prior dose
  - Neomycin
  - Hydrolyzed gelatin
- Immunosuppression
- Pregnancy
- Moderate or severe acute illness
- Recent blood product

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## Storage and Handling

- Store frozen at 5°F (-15°C) or lower at all times
- Store diluent at room temperature or refrigerate
- Discard if not used within 30 minutes of reconstitution

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Adult Immunization Training  
Herpes Zoster

[Click here to take the post-test](#)

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