Health News You Can Use: The Shingles Vaccine and Dementia By Jack Schwartz and Dave Knutson, MD Health Services Committee

If you've ever had shingles (herpes zoster), you know how distressing it can be. Shingles occurs when the varicella-zoster virus (the same virus responsible for chickenpox) is reactivated. It typically causes a painful rash with small blisters on one side of the face or body and can also cause other complications.

Fortunately, vaccination is highly effective in preventing shingles. The first shingles vaccine, Zostavax, used a live virus. It was approved by the FDA in 2006. Then, in 2017, the FDA approved a newer vaccine, Shingrix, which is based on recombinant DNA technology. Because clinical trials showed that Shingrix had higher and more long-lasting efficacy than Zostavax, the CDC advised that Shingrix was preferred. Now, Shingrix is the only shingles vaccine available in the US.

New evidence suggests that the shingles vaccine might have another benefit—reducing the risk of dementia. A very recent study in the journal Nature (Eyting et al., Nature 641, 438-446 (2025)) explored the relationship between shingles vaccination and dementia risk. The researchers took advantage of a "natural experiment" to mimic the controlled conditions of a clinical trial. When the older vaccine, Zostavax, was introduced in Wales in 2013, only people born after a specific date were eligible. This fact enabled the researchers to later look at dementia rates in two large groups: those who were born just after the date, who got the vaccine, and those born just before the date, who missed out. These groups differed solely by the accident of birth date. Therefore, any difference in dementia risk would reflect the vaccine, not other characteristics that could affect risk. The relative risk of a dementia diagnosis in the vaccinated group was 20% lower than in the unvaccinated group. Evaluating a subsequent natural experiment in the United States, researchers likewise found an association between Shingrix, the newer vaccine, and lower risk of dementia for both men and women, with the risk reduction greater for women. (Taquet et al., Nature Medicine 30, 2777-2781 (2024).)

How might the vaccine protect against dementia? The answer is still a matter of hypothesis, not firm knowledge. Some researchers believe that by preventing reactivation of the varicella-zoster virus and thus preventing shingles, the vaccine reduces inflammation and stress on the immune system,

which in turn are thought to contribute to the development of dementia. This is plausible, but more research is needed.

For Riderwood residents, the key point is that if you've never been vaccinated against shingles, haven't gotten Shingrix, or don't know your vaccination status, talk to your primary care physician about it. This is an individual decision, considering both the known and possible benefits of the vaccine and its side effects, which include pain at the injection site and low-grade fever. The new evidence about dementia risk makes this conversation with your doctor even more important.