Shingles Vaccine May Help Prevent and Slow Dementia, New Studies Suggest

Emerging research indicates that the **shingles vaccine** may not only reduce the risk of developing dementia but could also slow disease progression in individuals already diagnosed. These findings, reported in recent studies from Stanford Medicine and earlier research published in *Nature*, add to the growing evidence linking viral infections, particularly herpes viruses, with cognitive decline and neurodegenerative diseases.

The implications are significant, given that dementia is projected to rise sharply in the coming decades. A 2024 study estimates that the **lifetime risk of dementia after age 55** could reach 42%, a much higher figure than previously anticipated. Finding accessible preventive and therapeutic strategies has become a public health priority.

How Shingles and Dementia Are Connected

Shingles, also known as herpes zoster, is caused by the **varicella-zoster virus**, the same virus responsible for chickenpox. After an initial infection, the virus remains dormant in nerve tissue for years. While it often stays inactive, it can reactivate later in life, causing shingles—a painful rash often accompanied by nerve pain.

According to the **Centers for Disease Control and Prevention (CDC)**, roughly one in three Americans will develop shingles during their lifetime. The risk increases with age, which is why the CDC recommends vaccination at age 50 or older. The shingles vaccine, administered in two doses, is about 90% effective at preventing shingles in older adults.

Researchers are now exploring the link between shingles and **dementia**, noting that herpes viruses like varicella-zoster may affect brain function and contribute to cognitive decline. Dormant viruses in the nervous system can trigger inflammation and may accelerate the accumulation of proteins such as beta-amyloid and tau, which are strongly associated with Alzheimer’s disease and other forms of dementia.

Evidence From Recent Studies

A study conducted at **Stanford Medicine** and published in *Cell* on December 2, 2025, investigated whether shingles vaccination could influence dementia outcomes. The researchers

found that vaccinated individuals not only had a lower risk of developing dementia but also showed slower disease progression if they were already living with the condition.

Dr. Pascal Geldsetzer, assistant professor of medicine at Stanford and senior author of the study, commented in a recent interview:
"We observed an effect on the probability of dying from dementia among individuals who already have the disease. This suggests that the shingles vaccine may have therapeutic potential, not just preventive benefits."

These findings support earlier work published in *Nature*, which also pointed to a connection between herpes virus exposure and cognitive decline. Together, the studies strengthen the hypothesis that **viral infections may contribute to dementia risk** and that targeting these infections could provide new pathways for prevention and treatment.

How the Shingles Vaccine Might Work

While the precise mechanisms are still being studied, researchers propose several potential ways the shingles vaccine could influence brain health:

1. **Preventing Viral Reactivation**
   By stopping dormant varicella-zoster virus from reactivating, the vaccine may reduce inflammation in the nervous system. This inflammation has been linked to neuronal damage and the accumulation of proteins that contribute to cognitive decline.

2. **Protecting Against Herpes Viruses in General**
   Some studies suggest that herpes simplex virus and other related viruses may similarly affect brain function. Vaccination may indirectly protect the brain by reducing the overall viral burden in the nervous system.

3. **Strengthening the Immune System**
   The vaccine may bolster immune function more broadly, slowing **immunosenescence**, or the gradual decline of the immune system that occurs with age. A stronger immune response could help prevent both infections and the secondary effects of chronic inflammation on the brain.

Although these hypotheses are promising, scientists caution that more research is needed to **fully understand the mechanisms** by which the shingles vaccine may impact dementia risk and progression.

Dementia: A Growing Global Concern

Dementia affects more than **55 million people worldwide**, according to **Alzheimer's Disease International**, and the number is expected to rise rapidly due to aging populations. The burden is significant, both for individuals and healthcare systems, making preventive strategies increasingly important.

The potential dual role of the shingles vaccine—preventing shingles and possibly mitigating dementia risk—offers a hopeful avenue for public health interventions. If future studies confirm these findings, widespread vaccination could become a key component of **dementia prevention strategies** for older adults.

Broader Implications for Vaccination

The Stanford study aligns with a growing body of research suggesting that vaccines may have **protective effects beyond their original purpose**. For example, influenza and pneumococcal vaccines have also been linked in some studies to reduced cognitive decline in older adults. These findings challenge the traditional view of vaccines as purely disease-specific and highlight their potential role in **maintaining overall brain health**.

Dr. Geldsetzer emphasized the unexpected nature of the findings:
"Seeing therapeutic benefits among people who already have dementia was surprising. It shows that vaccines may do more than we realize and could offer a way to slow disease progression, not just prevent illness."

Recommendations and Next Steps

Currently, the CDC recommends that adults receive the shingles vaccine starting at age 50. Given the emerging evidence, experts suggest that older adults, especially those at risk for dementia, may want to prioritize vaccination as part of a **brain-health strategy**.

Researchers continue to call for additional studies to:

- Confirm the protective and therapeutic effects of the shingles vaccine on dementia
- Determine how long the vaccine's potential benefits last
- Investigate whether similar vaccines targeting other herpes viruses could also reduce cognitive decline

Understanding these factors could inform public health policies and **preventive healthcare approaches** for aging populations.

Takeaway

The shingles vaccine, long recommended to prevent a painful and debilitating rash in older adults, may offer unexpected **neuroprotective benefits**. While more research is necessary, early evidence indicates that vaccination could reduce the risk of dementia, slow its progression, and even lower mortality in people already living with the disease.

For adults over 50, getting vaccinated against shingles could be a simple and effective step toward **protecting both physical and cognitive health** in later life.