

# Vaccination against shingles

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## Executive summary

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Health Council of the Netherlands



In 2016, the Health Council of the Netherlands advised against vaccinating older people against shingles, due to the limited protection offered by the only available vaccine at that time (Zostavax®, ZVL). There is now a new vaccine on the market: Shingrix® (Recombinant Zoster Vaccine, RZV). For this reason, the State Secretary for Health, Welfare and Sport has once again requested advice about vaccination from the Health Council of the Netherlands. The standing Committee on Vaccinations has prepared this advice.

### **Disease burden is reason to consider vaccination**

Shingles occurs mainly among older people. A severe complication that may occur is long-term nerve pain (post-herpetic neuralgia, PHN). According to the Committee, the disease burden due to PHN is the main reason for considering vaccination against shingles. Every year, around 88,000 people see their general practitioners because of an episode of shingles. In about 5% of cases, pain that lasts longer than three

months occurs. The likelihood of long-term pain increases with age. Shingles causes about 500 hospital admissions annually. It is difficult to say how many people die because of shingles every year, as these patients often have multiple disorders. It is estimated that the annual number of deaths due to shingles is around twenty.

### **Efficacy and safety of RZV**

The new vaccine, RZV, is highly effective: in clinical studies in adults aged 50 and older it prevented around 90% of shingles and PHN cases, regardless of the age at which vaccination took place. During the first four years after vaccination protection waned very slowly. As the vaccine has not been available for long, there are no data about the long-term efficacy of the vaccine and its effectiveness (meaning how well it works outside the scope of a clinical study) yet. The efficacy is expected to remain high enough in the long term. RZV is safe. Vaccination does often have temporary side effects, such as muscle pain and pain at the site of injection. These can be a

nuisance but do not last longer than three days. Serious side effects are rare. Therefore, the benefits of vaccination against shingles (health benefits) outweigh the risks (side effects) according to the Committee.

People with immune deficiencies were excluded from participating in the RZV efficacy trials.

Based on the composition of the vaccine and the first results from clinical studies in specific groups of patients, there is no reason to assume that the vaccine will not be safe for this group.

### **New data about ZVL does not lead to new conclusions**

In 2016, the committee concluded that the effectiveness of ZVL was insufficient to advise vaccination of older people in the Netherlands: the duration of protection was too short.

Moreover, ZVL is not safe for people with immune deficiencies because it is a live attenuated vaccine. Meanwhile, new studies have been published about vaccination with ZVL in countries where the elderly are offered this vaccine. These show that the effectiveness of



the vaccine against shingles falls from 60-70% in the first year after vaccination to 20-30% after seven or eight years. The effectiveness against PHN may possibly still be around 45% after eight years according to one study. However, these results are uncertain due to the large drop-out proportion in the group studied, which increases the chance of bias. New research into the safety of the vaccine for people with weakened immune systems did not lead to a different conclusion than in 2016: the vaccine is unsuitable for them.

### **Vaccination with RZV only cost-effective at lower price**

The cost-effectiveness of vaccination with RZV in people aged 60 to 70 is unfavourable at the current price. The cost-effectiveness ratio is around €42,000 per year of life gained in good health (quality-adjusted life year, QALY). This is significantly higher than the reference value of €20,000 per QALY that is often used for preventive interventions in the Netherlands.

### **Recommendation**

In principle, the committee is in favour of vaccinating older people against shingles using RZV. This is a question of collective interest, as it offers significant protection against an illness that can cause a lot of pain. The disease burden for shingles is a valid reason for vaccination, but it is relatively low compared to other diseases such as pneumococcal and influenza infections and it only rarely causes death or permanent residual symptoms. That is why the committee considers it important that the cost-effectiveness ratio of vaccination is not too far from the often used reference value of €20,000 per QALY. To reach that goal, the price of the vaccine would have to decrease considerably.

If vaccination is introduced, the committee recommends paying additional attention to informing older people, especially about the short-term but discomforting side effects that they can expect and about the fact that two doses of vaccine are needed for full protection.

The committee recommends vaccinating at the age of 60, as this will result in the greatest health gain and is more cost-effective than vaccinating at other ages. To ensure that all older people are protected from shingles, it also recommends that people who are older than 60 when vaccination is implemented be given the opportunity to be vaccinated. The committee realises that the implementation of such a vaccination programme is a complicated organisational matter. In order to determine whether implementation is successful, it recommends keeping track of the participation rate and of how many people complete the full series of two vaccinations. It also recommends following the scientific research into RZV to see whether the results give cause to adapt the programme, for instance by lowering the age of vaccination.



The Health Council of the Netherlands, established in 1902, is an independent scientific advisory body. Its remit is “to advise the government and Parliament on the current level of knowledge with respect to public health issues and health (services) research...” (Section 22, Health Act).

The Health Council receives most requests for advice from the Ministers of Health, Welfare and Sport, Infrastructure and Water Management, Social Affairs and Employment, and Agriculture, Nature and Food Quality. The Council can publish advisory reports on its own initiative. It usually does this in order to ask attention for developments or trends that are thought to be relevant to government policy.

Most Health Council reports are prepared by multidisciplinary committees of Dutch or, sometimes, foreign experts, appointed in a personal capacity. The reports are available to the public.

This publication can be downloaded from [www.healthcouncil.nl](http://www.healthcouncil.nl).

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