



<b>Title</b>	<b>General Childhood Vaccination Against HPV 16 and 18 Aimed at Preventing Cervical Cancer</b>
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<b>Reference</b>	SBU Alert report no 2008-01. Johansen K, Norlund A, Vilhelmsdotter Allander S. SBU. ISSN 1652-7151. www.sbu.se/published

## Aim

To assess the scientific evidence with reference to the following questions:

- Can general childhood vaccination against human papilloma virus (HPV)16 and 18 prevent high-grade cervical intraepithelial neoplasias (CIN)?
- Do children develop an immune response after vaccination against HPV 16 and 18 equivalent to that found in young women after vaccination?
- Can general childhood vaccination against HPV 16 and 18 reduce future morbidity and mortality from cervical cancer in Sweden?
- Is general childhood vaccination against HPV 16 and 18 in combination with organized cervical cancer screening programs cost effective in Sweden?

## Conclusions and results

Vaccination against viral infections is a relatively new principle in cancer prevention. Vaccines against HPV aim at preventing cervical cancer. Current vaccines target HPV types 16 and 18.

- In young women aged 15 to 26 years with no signs of HPV 16 or 18 infection at the start of the study, vaccination provided over 90% protection against high-grade cervical intraepithelial neoplasias (CIN) positive for HPV 16 or 182 (Evidence Grade 1).
- After vaccination, children initially developed an immune response equal or superior to that achieved in young women after vaccination (Evidence Grade 2).
- The effect of general childhood vaccination against HPV 16 and 18 on future morbidity and mortality from cervical cancer in Sweden is not known.
- The effect of general childhood vaccination against HPV 16 and 18 on the willingness of vaccinated women to participate in organized screening programs needs to be determined.
- Scientific evidence on the cost effectiveness of

general childhood vaccination against HPV 16 and 18, combined with cervical cancer screening, is uncertain and hence found to be insufficient.

## Recommendations

No recommendations.

## Methods

A systematic literature search was conducted primarily via electronic databases (PubMed and Cochrane Library and EMBASE) until August 13, 2007. For inclusion in the systematic review, articles needed to meet predetermined criteria: the results of the studies should be relevant to the questions posed by the project, ie, have appropriate endpoints and study design. Ethical and economic implications were considered.

## Further research/reviews required

Follow-ups exceeding 5,5 years are not available regarding the vaccines' capacity to protect against HPV 16 and 18 infections. The need for booster doses to achieve lifelong protection has not been established. Cervarix contains a relatively new adjuvant, but there are no results from long-term follow-ups after vaccination of children. The antibody level mediating protection against HPV 16 and 18 infections is not known, nor is there a standardized method to measure antibody levels after HPV vaccination. Rigorous, systematic follow-up is required to assess the effects of general vaccination against HPV 16 and 18.