



**Title** Effect of Replacing Amalgam Fillings on the Suspicion of Adverse Health Effects from Amalgam

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**Reference** Report no 10-2006

## Aim

To assess the health effects of replacing amalgam fillings in persons with suspected adverse effects from amalgams.

## Conclusions and results

The Norwegian Directorate for Health and Social Affairs requested the Norwegian Knowledge Centre for the Health Service (NOKC) to perform this health technology assessment (HTA). This HTA report will be one of 3 documents used in working on guidelines for physicians and dentists.

Quality is low in the identified studies that address the effects of amalgam removal on health problems. The main findings from the synthesis of study results are:

- Most oral lichenoid lesions in contact with amalgam fillings completely heal or improve after removal of amalgam fillings.
- Lesions extending beyond the contact area, or not in contact with amalgam fillings, show little or no effect on healing after removal of the amalgam fillings.
- The intensity of oral and general symptoms associated with amalgam fillings was reduced after removal of fillings, but remained above the level observed in a representative control group. After removing the amalgam fillings the mercury level in urine and blood temporarily increased before being reduced to an acceptable level. Amalgam removal in healthy subjects was shown not to affect the kidneys as measured by the glomerular filtration rate.
- No studies of sufficiently good scientific quality were found that reported a reduction in signs and symptoms of general disorders after removal of amalgam fillings.

## Methods

A review team of external professionals carried out the HTA. The systematic literature search and evaluation

was performed in accordance with general HTA principles. In all, 1647 abstracts were reviewed by NOKC professionals at step 1. The review team evaluated full-text publications in pairs, reading 157 studies at step 2. Forty-six studies remained for internal and external validation assessment at step 3. In total, 17 studies were found to be relevant and of sufficient quality according to checklists and were included in the evidence base for evaluating the health effects of removing amalgam fillings.