

<b>Title</b>	Evaluation of extension multi-unit prostheses (cantilever bridges) and resin-bonded multi-unit prostheses (resin-bonded bridges)
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<b>Reference</b>	ISBN number: 978-2-11-139138-3, link to full report in French: <a href="http://www.has-sante.fr/portail/jcms/c_2060963/fr/evaluation-des-protheses-plurales-en-extension-bridges-cantilever-et-des-protheses-plurales-colles-bridges-colles?xtmc=&amp;xtcr=2">http://www.has-sante.fr/portail/jcms/c_2060963/fr/evaluation-des-protheses-plurales-en-extension-bridges-cantilever-et-des-protheses-plurales-colles-bridges-colles?xtmc=&amp;xtcr=2</a>

## Aim

Assessment of the longevity and complications of cantilever bridges and resin-bonded bridges in the treatment of single-tooth replacement, especially in comparison with standard techniques (conventional bridges, single crowns on implant), with a view to its reimbursement by the National Health Insurance system in France.

## Results

Four systematic reviews, 17 prospective studies and 15 retrospective studies were available for analysis.

In the systematic reviews, the 10-year survival rate was estimated at 82% [78-85] for cantilever bridges. The main complications reported were loss of vitality of the abutments and loss of retention. At 5 years, the rate was estimated at 88% [82-92] for resin-bonded bridges. In a period of 10 years, in the clinical studies, for the resin-bonded bridges, the survival rates found varied from 64 to 96%. The differences may be explained by the methodological differences between the studies and the various types of bridges used (materials, location, number of elements). The main complication reported was loss of retention. As a comparison, the 10-year survival rate found in the systematic reviews was 89% [76-95] for conventional bridges and 89.5% for single crowns on implants.

However, the analysis of the literature did not allow a formal conclusion to be made as to the clinical performances of these bridges, especially compared with standard techniques. There have been very few randomised controlled studies, the majority of data come from series of non-comparative cases, the literature was inaccurate and the data were heterogeneous (patients, bridge type, number of elements, etc.). Moreover, no professional recommendation about these practices was available. Nevertheless, the results in terms of efficacy and safety of these bridges does not seem very different between the comparators.

The work group felt that these bridges currently represent valid methods of treatment of edentulism given their efficacy and safety results (results from the literature and personal experience). The group in particular specified the indications identified in the literature (general reviews and reference works) and set the conditions for performing these bridges. It said that its position was based on the technical progress made in the field of resin bonding over

the past 10 years and on the currently increasingly significant concept of minimally invasive or ultraconservative dentistry.

## Conclusions

Based on these elements, HAS believes that extension bridges and resin-bonded bridges are valid methods of treatment of single-tooth edentulism and can be reimbursed by the National Health Insurance system in France.

The most common form of cantilever bridge has one or two contiguous abutment(s) and an extension, generally oriented mesially. However, the choice of the number of abutments and the orientation of the extension is based on clinical conditions, location of the edentulism and characteristics of the abutment teeth. In other terms, use of abutment teeth that have already been treated or are to be treated is recommended. The use of the cantilever bridge is not recommended if all adjacent teeth are healthy unless prior consideration has ruled out the other alternatives.

Resin-bonded bridges are used in single-tooth edentulism bordered by healthy teeth or teeth with minimal restorations, as a final or temporary prosthesis. This technique may represent an alternative to conventional replacement techniques (classical bridge, implant), especially in young patients. Resin-bonded bridges are also recommended when the implant context is adverse or contraindicated. Respect of the conditions of implementation, including respect for the resin-bonding protocol, is essential for the longevity of these reconstructions.

The therapeutic selection is guided by the general and local clinical conditions; the prognosis depends on its proper indication with respect to clinical parameters and the rigour of procedures from design of the prosthesis to final placement. The younger the patient, the more important the objective of tissue preservation is for the practitioner.

## Methods

This assessment is based on:

- a critical analysis of the literature (systematic reviews, clinical studies, general reviews, reference works) identified by an automatic systematic search in the databases and a manual search (websites of learned

societies, bibliography of identified documents, etc.) and selected on objective criteria;

- collection of the argued position of a work group comprised of two healthcare professions performing these procedures in France (dental surgeons and oral medicine specialists).

Thus, the conclusions of the assessment are based on the data collected.

## Written by

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