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Guide for success and survival of common dental restorations

Each mouth is unique and it is therefore reasonable that the longevity of a restoration will vary in each individual. The practice policy is to try and conform to "evidence based dentistry". The following summary is based on current scientific literature available. It is intended to be used as a guide so that our patients can make an informed choice. It is not to be misinterpreted as a warranty! Please ask if you require any clarification. The percentages relate to those still in place after given number of years. (> = greater ; < = less)

Fillings

Amalgam: 90% in place > 10 yrs (capsulated) dispersed phase, high copper based > survival.
Composite without dentine bonding: Good 2-3 survival rate. > 5yrs showed signs of failure
Composite with dentine bonding: Mostly tested in cervical (neck area) cavities where failures are greater. Enamel (if present) etching and mechanical retention helped. Bonding reduces sensitivity.
Other materials: No preparation technique with GIC reasonable retention rates. GIC with composite sandwich technique poor survival rates. Gallium also higher failure rates.

Inlays (Onlays)

Tooth coloured No difference between composite and porcelain. Both > 5 yrs
Gold Consistently highest longevity. 99% present at 20 yrs. 75% at 25 yrs.

Crowns

All ceramic crowns (no long term data available): Procera single crowns 94% after 5 years; Inceram single crowns 94-98 % after 3 years; IPS Empress 95 % after 2 years.

Single crowns: Mean survival is 9.5 years (mostly bonded ceramic).

Gold crowns consistently good performance lasting decades.

If teeth root filled post cementation greater chances of failure
Porcelain Veneers 91 % present over 10 years. Greater failure rate if partially bonded to dentin.

Bridges

All Bridges: 85% at 10 years 65% at 15 years-no difference between cantilevers and fixed-fixed

Adhesive Bridges: 92-96% 1-11 years. The greater the number of abutments, the greater the risk of failure. UK study showed average 9.8 yrs survival rate.

All ceramic bridges: (not enough data for long enough) 82-90% at 3 years

Front bridges more successful than *back*. Most successful upper canine to canine; least successful where bridge spanned from front to back; generally longer the bridge, greater the risk; where ¾ crowns used greater chances of failure; bridges less successful in< 20 yr than 21-35 year olds; root filled teeth make very poor bridge retainers.

Removable Partial Dentures 74-83% from 4-14 years
Root Canal Therapy 53-95% Presence of peri-apical area lowers success by 10-20%. Re-treatment success further reduced by 20-30 %.
Teeth becoming dead after crowns/bridges 15 % after 5 years

Implants 82-99% for multi year analysis. Lower front>upper front>lower back>upper back>grafted areas