

## Management of failed direct restorations

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## Aim

- To provide a sound knowledge on how to manage failed/failing amalgam restorations

## Objectives

- Define success, survival and failure
- Overview clinical signs of restorations failure/deterioration.
- Describe best management for failing/failed restorations

## The journey of a restoration

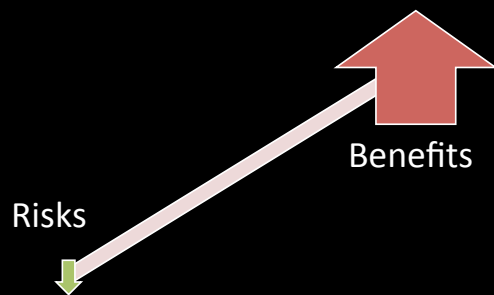
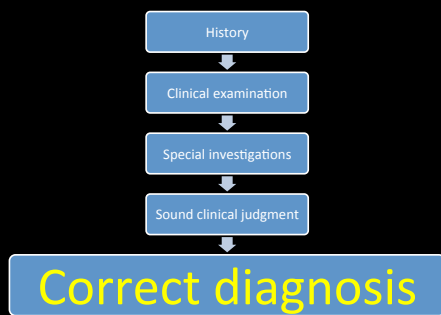
Either



OR



### Rational treatment

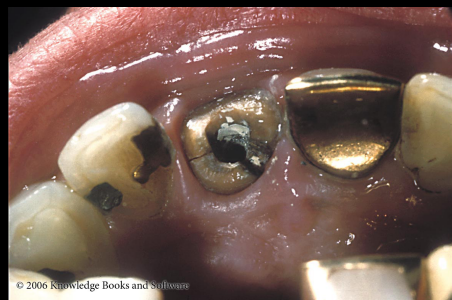


## Definitions

- Success

- Survival

- Failure



## Failure of amalgam restorations

- Ditching



## Pitting



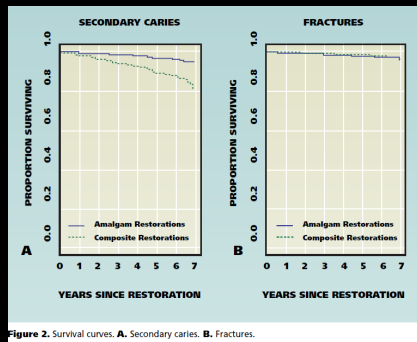


Figure 2. Survival curves. A. Secondary caries. B. Fractures.

Bernardo et.al JADA 2007

## When to repair& When to replace

- locally repaired rather than totally replaced whenever possible!

## Ryge criteria 1973

### Alpha:

- Excellent, fulfilling all quality criteria; tooth and/or surrounding tissues are adequately protected
- 2 Highly acceptable, though one or more criteria is not ideal; minor modifications can be made to the restoration but is not necessary

### Bravo:

- Sufficiently acceptable but with minor shortcomings in areas where any instrumentation may result in damage to the tooth; no adverse effects are anticipated

- Charlie:  
Unacceptable but repairable
- Delta:  
Unacceptable and must be replaced

## Recall appointments

- Baseline: 1Week-1 month
- Then 1,2,3 years

Table 11 (cont.)

4	Fracture of an adjacent cusp is a relatively common occurrence in teeth with large amalgam restorations. Frequently the cause of fracture is mechanical trauma and the exposed dentine of the cusp base is sound.	Where there is fracture of a cusp adjacent to a large amalgam restoration and the cusp base is sound it may not be necessary to replace the entire restoration.
6	Fracture of a cusp adjacent to an amalgam restoration may result from secondary caries.	Where cusp fracture is caused by caries, partial/total removal of any adjacent amalgam restoration may be necessary to allow composite core removal.
6	If incorrect contouring of the contact area of an amalgam restoration leads to a complaint of pain/discomfort during eating or to bleeding on brushing or flossing, then modification should be considered.	Amalgam restorations with defective contact areas generally require modification.
7	Many patients notice the appearance of older amalgams which have corroded and discoloured adjacent tooth substance.	Amalgam restorations which have corroded margins should not necessarily be replaced, even if this is requested by the patient.
8	Genuine allergic reactions to amalgam are rare.	Only when appropriate consultant advice indicates sensitivity to the constituents of amalgam should such restorations be replaced with another material.
9	Many amalgam restorations show evidence of marginal defects (ditching) often within short periods of placement.	The presence of marginal defects alone does not indicate that an amalgam restoration should be replaced.
10	The probe will 'catch' at the margins of many amalgam restorations.	'Catching' of the probe alone should not be used as an indication for the replacement of an amalgam restoration.
11	A visible void/cavitation at the margin of an amalgam restoration may indicate the presence of secondary caries.	Amalgam restorations with a visible void/cavitation at a margin (other than limited ditching) should be investigated for secondary caries and repaired or replaced as necessary.
12	A white spot lesion in association with a marginal defect in an amalgam restoration may indicate either an arrested lesion or active secondary caries.	The presence of a white spot lesion adjacent to a marginal defect in an amalgam restoration should be investigated. Where possible it should be managed preventively (e.g. by dietary advice and the application of fluoride). When secondary caries is present the amalgam should be repaired locally at the earliest opportunity.

