Restorative Dentistry
Restorative Options

- Inlays
- Pinlays
- Onlays
- Three Quarter Crown
Restorative Options

- Seven Eighth Crowns
- Full Gold Crowns (Full Bevel)
- Full Bonded Porcelain Crowns (Full Bevel)
- Full Bonded Porcelain Crowns (Butt Margin)
Planning Considerations

- Retention
- Occlusal Clearance
- Margin Design
- Smooth Contour
Margin Design

- Chamfer
- Chamfer with Bevel
- Shoulder
- Shoulder with a Bevel
The Effect of Crown Taper on Retention
Ideal Practical Taper
5 - 6 Degrees
Increased Taper results in Great Loss of Retention
Less Taper risks the Possibility of Undercuts
Loss of Retention

- Ideal Taper 5-6 Degree
- 15 Degrees 2/3 Loss of Retention
- 25 Degrees ¾ Loss of Retention
Inlay Preparation

5-6 Degree Taper
Onlay Preparation
Variations in Occlusal Coverage
Principle
Cover Working Cusps
Normal Tooth to Tooth Relationship
Crossbite Relationship

Working Cusp
Tooth to Tooth Relationship

Onlay both Cusps
Cover Working Cusps
Bevel Non-working Cusps for Aesthetic Reasons
Cover
All Core Material
"Aesthetic" Onlay
"Aesthetic" Onlay

Cover Working Cusps
"Aesthetic" Onlay

Bevel Non-working Cusps for Aesthetic Reasons
Buccal Tip Finish
Buccal Tip Finish

Most Easily Burnishable
Buccal Tip Finish

Not Burnishable

A B C D
Buccal Tip Finish

Not Burnishable

A B C D
Retention
Full Crown Preparation
5-6 Degree Taper
2 mm Occlusal Reduction
Shoulder
Bevel
Smooth Edges
Full Crown Preparation with Full Bevel

- 5-6 Degree Taper
- Shoulder
- Bevel
- 2 mm Occlusal Reduction
- Rounded Edges
Occlusal Clearance

Round Sharp Edges
Occlusal Clearance

Not Enough Clearance
Occlusal Reduction

Correct

Incorrect
Occlusal Reduction

Correct

Not Enough Clearance
Under Prepared
Under Prepared
Results in Over-contour
Results in Over-contour
Over-contour allows Plaque Build-up in the Protected Areas
Curve of Spee
Initial Clearance due to Tilting
Only a Very Small Amount of Occlusal Reduction required
2 mm Clearance
2 mm Clearance
Path of Insertion
Path of Insertion

Correct

Incorrect
Solutions to Non-parallel Abutments
Three Quarter Crown
Recontour the Adjacent Contact
Fit a Coping
Accuracy Difficult
Easiest Option
Crown Preparation
Crown
Dovetail Attachment
The End