

Quiz 2

CHAPTER 6 — Treatment Planning for Single-Tooth Restorations

1. All-Ceramic Crown (All Porcelain)

- A crown made entirely of ceramic. It is the treatment of choice when **full coverage and maximum esthetics** are required. It is commonly used for incisors but is less resistant to fracture than metal-ceramic crowns.

2. Cemented Restoration

- A restoration fabricated outside the mouth from **cast metal, metal-ceramic, or all-ceramic material** and then luted or bonded to the tooth.

3. Ceramic

- A tooth-colored restorative material used when **high esthetic demands** are present. It can be used for inlays, veneers, crowns, and other restorations.

4. Ceramic Veneer (Laminates)

- A thin ceramic restoration placed on the facial surface of an anterior tooth. It provides an esthetic alternative to a crown and requires **minimal tooth preparation**.

5. Complex

- A **complex amalgam** is an amalgam restoration reinforced with pins or other auxiliary retention. It is used for moderate-to-severe lesions when less than half of the coronal dentin remains.

6. Composite Resin

- A restorative material used mainly for **minor to moderate lesions in esthetically critical areas**. Its use in posterior teeth is limited because of problems with abrasion resistance and polymerization shrinkage.

7. Composite Resin Inlay (Bench-Polymerized Inlay)

- An indirect composite resin restoration fabricated on a cast in the dental office or laboratory. Bench polymerization provides greater hardness and reduces the amount of polymerization shrinkage at the margins.

8. Esthetics

- The appearance of the restoration is an important factor, especially when the tooth is in a highly visible area or the patient has high cosmetic expectations. Ceramic is preferred when full coverage is needed in such areas.

9. Full Metal Crown (All-Metal Crown)

- A conventional crown made entirely of metal. It provides **maximum retention** and requires less tooth reduction than crowns containing ceramic. It is generally used

where esthetic demands are low, such as posterior teeth.

10. **Glass Ionomer**

- A restorative material useful for **small lesions**, especially Class V lesions caused by erosion or abrasion, root caries, and some incipient proximal lesions. It can also be used as an interim restoration for rampant caries and releases fluoride.

11. **Intracoronar Restorations**

- Restorations that fit **within the anatomical contours of the tooth crown**. They are used when sufficient remaining tooth structure exists to retain and protect the restoration.

12. **Metal**

- A restorative material used for restorations such as metal inlays, onlays, and full crowns. Metal restorations are particularly useful when esthetic requirements are low and strength and retention are important.

13. **Metal-Ceramic Crown (PFM)**

- A crown combining a **metal substructure with ceramic**. It provides maximum retention while also satisfying high esthetic requirements and can be used as a fixed partial denture retainer.

14. **MOD Onlay**

- An extracoronar restoration used for **moderately large lesions** on premolars and molars. It provides occlusal coverage, can accommodate a wide isthmus, and may replace up to one missing cusp on a molar.

15. **Needs of the Patient**

- The patient's needs should take precedence over the dentist's convenience. The restorative material and design should be selected according to the patient's clinical condition, esthetic requirements, oral environment, finances, and other treatment considerations.

16. **Partial Veneer Crown (Partial Coverage Crown)**

- A crown that leaves one or more axial surfaces uncovered. It is used when one or more axial surfaces remain intact and at least half of the coronal tooth structure remains. It provides moderate retention.

17. **Plaque Control**

- A good plaque-control program is necessary for the success of cemented restorations. The patient must maintain proper brushing, flossing, and dietary practices to control the disease process responsible for tooth destruction.

18. **Plastic Restorations**

- Restorations inserted into the cavity preparation as a **soft plastic mass** that hardens in place. They are retained through mechanical undercuts or adhesion.

19. Simple Amalgam

- An amalgam restoration without pins or other auxiliary retention. It is traditionally used for **one- to three-surface, minor-to-moderate lesions** in areas where esthetics is not critical.

The 5 Factors on Which Design and Material Selection Are Based

1. **Destruction of tooth structure** – The greater the destruction, the more important it is to use a restoration that provides strength and protection.
2. **Esthetics** – Highly visible teeth or patients with high esthetic demands may require ceramic or partial coverage restorations.
3. **Plaque control** – Good oral hygiene is necessary for the long-term success of cemented restorations.
4. **Financial considerations** – The patient's financial situation should be considered, while allowing the patient to make an informed choice.
5. **Retention** – Full-coverage crowns provide the greatest retention and are especially important for short teeth and certain abutments.

Thoughtful Treatment Planning

- **Thoughtful treatment planning** means selecting a restorative material and design that are appropriate for the **needs of the patient**, rather than choosing a restoration simply for the convenience or efficiency of the dentist.

CHAPTER 7 – Treatment Planning for the Replacement of Missing Teeth

1. EQUILIBRIUM

- The dental arch is in a state of **dynamic equilibrium**, where the teeth support and maintain each other's position. When a tooth is lost, this balance is disrupted and the remaining teeth may move into the space.

2. Treatment simplification

- Selecting a treatment that meets the patient's needs but is **reasonable, practical, and not unnecessarily complex**. The dentist should narrow the treatment choices to an appropriate plan.

3. Dry mouth

- A dry mouth creates a **poor environment for crowns** because the margins of retainers are at high risk for recurrent caries. It can also hinder the success of an RPD. Home fluoride and frequent recall can reduce, but not eliminate, the risk.

4. RESIN-BONDED TOOTH-SUPPORTED FPD

- A **conservative fixed prosthesis** used mainly for a single missing incisor or premolar in patients with **defect-free abutments**. It requires abutments on both the mesial and distal sides and uses a shallow preparation mostly restricted to enamel.

5. IMPLANT-SUPPORTED FPD

- An FPD supported by dental implants, especially useful when there are **insufficient or weak natural abutments**, no distal abutment, or when an RPD is undesirable. It can replace a single tooth or a 2–6 tooth span when adequate bone is available.

6. CASE PRESENTATION

- When the choice between FPD and RPD is uncertain, the dentist should present **two or more treatment options with their advantages and disadvantages**. The dentist evaluates the biologic and physical factors, while the patient's preferences are important for esthetics and finances.

7. The optimum crown-root ratio for FPD

- **2:3.**

8. The acceptable crown-root ratio for FPD

- **1:1 maximum** under normal circumstances.

9. Occlusal force exerted against RPD

- **26.0 lbs.**

10. Occlusal force exerted against FPD

- **54.5 lbs.**

11. Occlusal force exerted against natural teeth

- **150.0 lbs.**

12. Common problem when using the mandibular 2nd molar as an abutment

- The **mandibular second molar frequently tilts mesially into the space formerly occupied by the first molar**, making it difficult to prepare the abutments with a common path of insertion.

13. DENTIST

- The **restorative dentist/prosthodontist** should manage the treatment sequence and referrals and should be comfortable with the final treatment plan because the dentist is responsible for the restorative treatment.

14. NO PROSTHETIC TREATMENT

- May be appropriate when an edentulous space has existed for a long time with **little or no drifting or elongation**, and the patient has no functional, occlusal, or esthetic

problem. In such cases, replacement may be left to the patient's wishes.

15. DEVITALIZATION

- In severe cases of a supererupted opposing tooth, **devitalization may be necessary** so the tooth can be shortened enough to correct the occlusal plane before replacement of the missing tooth.

16. INTER-ABUTMENT AXIS

- An imaginary line/axis between the abutment teeth. When a pontic lies outside this axis, it acts as a **lever arm**, producing torque on the abutments.

17. STRUCTURAL INTEGRITY

- The dental arch normally maintains its structural integrity through the **support and interaction of the teeth**. Loss of a tooth disrupts this integrity and causes the remaining teeth to realign.

18. CANTILEVER FPD

- An FPD with an **abutment or abutments at only one end**, while the other end of the pontic remains unattached. It creates a lever arm and can be potentially destructive, so it must be used cautiously. Generally, it should replace only **one tooth** and have at least **two abutments**.

19. They migrate to the edentulous (vacated) space

- **Adjacent or opposing teeth** frequently move into the space left by a missing tooth. Adjacent teeth, particularly distal teeth, may drift or tilt into the space.

20. RATIO

- **Ante's Law**: The combined **root surface area of the abutment teeth should equal or exceed the root surface area of the teeth being replaced by pontics**.

21. ROOT CONFIGURATION

- Roots that are **broader faciolingually/labiolingually than mesiodistally** are preferred. Multirouted teeth with **widely separated roots** provide better periodontal support than roots that converge, fuse, or are conical.

22. RPD INDICATIONS

An RPD is generally indicated for:

- **More than 2 missing posterior teeth**
- **More than 4 missing anterior incisors**
- A space involving a **canine + 2 contiguous teeth**
- An edentulous space with **no distal abutment**
- Multiple/bilateral edentulous spaces where fixed treatment would be too complex or expensive.