Why Gold Fillings are Excellent Restorations

Advantages

1. **Gold castings will not break or fracture**
   The gold casting will never break or fracture when properly prepared. Silver amalgam, due to its brittle nature, has a greater tendency to fail under load. This is not to infer that dental amalgam is not a ‘permanent’ filling, but points out a greater propensity for fracture in the mouth. Fracture does not seem to be a significant problem with resin composites (white fillings).

2. **Gold Will Not Exhibit Marginal Wear of the Material Itself**
   The gold casting maintains marginal integrity even after many years of function. The composite filling, though tooth-coloured, gradually erodes away, which may leave the enamel margins unsupported and prone to chipping and wear.

3. **Gold Has a Coefficient of Expansion Similar to Tooth Structure**
   The favorable coefficient of expansion of the gold alloy, as compared to that of the tooth, is important. The tooth and restorative material shrink when exposed to cold and expand with exposure to heat. Since the temperature in the mouth varies from cold ice cream to hot coffee, it is important that the filling material expands and contracts to a similar extent as the tooth structure.

4. **Gold Supports and Protects Enamel Margins of the Tooth**
   The gold casting can be placed so accurately in the tooth that the enamel at the margin of the cavity is supported, so that, as the patient functions, the enamel is protected from breakage. It is as if the gold braces the enamel rods to prevent them from breaking down.

5. **Gold Can Provide Precise, Stable Anatomical Form**
   Returning a tooth to its normal, healthy form is elementary for any restoration. This produces a restoration that allows proper function with opposing teeth and allows food to pass over the dentition in a normal chewing and grinding motion. The gold casting is made in the laboratory from an accurate replica of the preparation and adjacent and opposing teeth. Since it fabricated outside the mouth in a far more open environment, it is possible to create a final restoration that is as close as possible to ideal.

6. **Gold Restorations Can be Finished to a Very Smooth Surface**
   There are obviously advantages to having a highly polished restoration. It is much easier to accomplish this in the laboratory, where we have much better access and visibility and are not dealing with oral tissues and fluids. The polish surface is less likely to accumulate plaque and presents a more pleasing feel to the tongue.
7. **Gold Does Not Flow or Change Shape**
   While it is true that gold is not likely to flow or change shape in the mouth, the improvements in high copper amalgams tend to make it less of a comparative factor than it was 30 years ago.

8. **Gold Does Not Absorb Oral Fluids**
   Saliva and other oral fluids will not penetrate the surface of a gold casting. On the other hand, resin composites are penetrated by oral fluids and occasionally absorb enough so that there is a putrid smell when they are removed.

9. **Gold Does Not Oxidize in the Mouth**
   Gold fillings are of such a noble metal that they do not oxidize or corrode as can amalgam fillings over time, although they would still be considered more esthetic for anterior restorations.

10. **Gold Does Not Produce Discoloration of the Tooth**
    Gold castings do not produce discolouration of the tooth, which may occur from ion penetration with silver amalgams. Occasionally, if the tooth is very thin, the gold may reflect through the enamel, but it does not usually create any esthetic liability.

11. **Gold Allows for Easier Formation of Proximal Contacts**
    Since the anatomy of the tooth is carved as a wax pattern in the dental laboratory, it is relatively easy to simulate the broad contact area of a natural tooth. It is also simpler to produce a well-rounded marginal ridge that produces the appropriate occlusal spillways for food movement during mastication.

12. **Gold is Esthetic**
    Before tooth-coloured materials were available, gold was often placed for esthetic reasons, particularly because it does not discolour a tooth and has a ‘clean’ look. Today, dentists are careful to display as little gold as possible by creating a cavity preparation that does not extend out to visible areas of the tooth.

13. **Gold Castings Can Be Cemented Successfully Without Adhesive Bonding**
    It is the opinion of some that time

14. **Cast Gold Restorations Allow Good Tissue Health**

15. **Gold Restorations Do Not Abrade the Opposing Dentition**

16. **There is No Mercury in Gold Casting Alloys**

17. **Wear of the Gold Restoration is Similar to Normal Wear of Tooth Structure**

18. **Gold Does Not Liberate Toxins**


20. **Gold Restorations Have Excellent Longevity**

**Disadvantages**

1. **Gold is Not Tooth-coloured**
2. **Gold Restorations are More Expensive Than Some Other Types of Fillings**
3. **Gold Castings Require Considerable Care, Skill and Technique From the Operator**