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| **Name:** |
| Mumal Tunio |
| **Group:** |
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| **Basic Science Question:** |
| What is a post and core restoration? |
| **Report:** |
| Within the realm of prosthodontics, many options exist and offer various advantages. One example is known as a post and core restoration. It is accurately named and is used on the abutments of restorations such as crowns and bridges following a root canal.  The main purpose of the post is to retain the core and prevent the crown from fracturing. In this case, retention refers to the intimate contact of the core with the floor of the pulp chamber. Without its presence, the only thing maintaining the core is the abutment itself. Because of this, if an abutment without a post is crowned, occlusal forces could result in earlier fracture of the tooth. In comparison, the core itself occupies the space created in the endodonic chamber and its main function is is to protect the chamber from invading bacteria as well as reinforcing the tooth if it is resin bound. It does this by more evenly distributing masticatory forces that would otherwise be concentrated. Amalgam or Paracore can also be used for cores as well.  This type of restoration can be utilized through one of two different processes. They can either be cast, which is an indirect process involving lab production of a single piece, or they can be pre-fabricated which involves the direct cementation of a pre-made post followed by packing core. An example of commonly used cast materials are a ceramic core that is enhanced with leucite pressed into a post made from a pure zirconium. |
| **References:** |
| Mamoun, J. (2017). Post and core build-ups in crown and bridge abutments: Bio-mechanical  advantages and disadvantages. The journal of advanced prosthodontics, 9(3), 232-237.  Quadaih, M.A., Yousief, S.A., Allabban, M., Nejri, A., Elmarakby, A. M.  (2020). Effect of Two Different Core Materials. Clinical, cosmetic and investigational dentistry vol. 12 87-100. 30 Mar. 2020. |