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| **Name:** |
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| **Group:** |
| 6-B3 |
| **Basic Science Question:** |
| What is the anatomy of the periodontium supporting a single tooth vs. an implant? |
| **Report:** |
| The natural periodontium of human teeth consists of a bony alveolar socket within which the root of each tooth rests. The bone and the cementum, however, do not have direct contact, and are instead tethered to each other by the periodontal ligament, which itself integrates into the cementum and bone via Sharpey's fibers. This ligament not only attaches the tooth to the alveolar socket, but also acts as a shock absorber. It allows some normal physiological level of tooth mobility.  In the case of a dental implant, the anatomy of the periodontium is significantly different. The periodontal ligament is no longer present, and instead of the root of the tooth being suspended by this shock absorbing connective tissue, the titanium implant has direct contact with the bone. In fact, titanium is the chosen material for implants because it is one of the few materials that will osseointegrate into the surrounding bone tissue, and thus become stabilized. Without this osseointegration, the implant would not be fully connected to its surrounding tissue. |
| **References:** |
| Dentino,A 2018, Implant Complications, Prevention & Treatment: Implant Maintenance, lecture notes, Introduction to Implants, Marquette University School of Dentistry, delivered 17 July 2019. |