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| **Name:** |
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| 74-A |
| **Basic Science Question:** |
| What are the different types of bone found in the oral cavity? |
| **Report:** |
| Bone located in the oral cavity can be classified in many different ways. The most commonly used classification system is the Misch Classification. This system classifies bones based on the variable of density. Bone located in the mandible and maxilla range from very dense to generally softer bone. The four categories of bone found in the mandible and maxilla, as classified by Misch, are D1, D2, D3, D4. The densest bone is classified as D1, which is found in the anterior mandible, while the least dense bone, D4, is found in the posterior maxilla. D1-D3 bone is mainly comprised of cortical bone, while D4 is composed of trabecular bone. In addition to this, bone density may also be determined via tactile sensation and radiographic evidence, the latter being more accurate. While drilling into the bone, the tactile analog of the bone may allow an individual to have a general idea of the bone classification. On the other hand, radiographic evidence using computed tomography allows us to see that D1 bone has a higher Hounsfield unit, indicating higher density. Density and strength have a direct relationship. Studies have found that the higher the density, the higher the strength of the bone. This relationship is exponential to a certain degree. |
| **References:** |
| Misch, C.E.. (2008). Bone density: a key determinant for treatment planning. Contemporary Implant Dentistry. 130-146.  Seriwatanachai D, Kiattavorncharoen S, Suriyan N, Boonsiriseth K, Wongsirichat N (2015) Reference and Techniques used in Alveolar Bone Classification. J Interdiscipl Med Dent Sci 3:172. doi: 10.4172/2376-032X.10001  Misch, C.E.. (2008). Bone density: a key determinant for treatment planning. Contemporary Implant Dentistry. 130-146. |