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| **Name:** |
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| **Group:** |
| 10B-5 |
| **Basic Science Question:** |
| What types of bone are found in the mouth and what is the overall process of residual ridge resorption? |
| **Report:** |
| Following the extraction of teeth, resorption of bone making up the alveolar ridge, (referred to as the residual ridge after tooth extraction) occurs. This is referred to as Residual Ridge Resorption (RRR). Both vertical and horizontal bone loss of the ridge will occur alongside bone growth into the empty socket. These changes will be most active 3-4 weeks after surgery and the most significant bone loss will occur within the first 6 months. However, slow bone resorption will continue to occur throughout life. As would be expected, a key determinant of the extent of this bone loss and success of treatment is the quality of the bone itself.  Bone quality in the oral cavity differs both in the mandible and maxilla, as well as across the different areas of those bones. In general, the mandible contains higher quality bone than the maxilla and the anterior regions of both bones consist of higher quality bone than the posterior regions. More specifically, the most robust bone, found in the anterior mandible, consists of mostly thick cortical bone, the posterior mandible contains thinner cortical bone and coarse trabecular bone, the anterior maxilla consists mostly of thin cortical and finer trabecular bone, and finally, the posterior maxilla consists mostly of fine trabecular bone, making it the least robust. |
| **References:** |
| * Li, B., & Wang, Y. (2014). Contour changes in human alveolar bone following tooth extraction of the maxillary central incisor. *Journal of Zhejiang University. Science. B*, *15*(12), 1064–1071. * Pal Singh, O., Kaur, R., Maddaan Nanda, S., & Sethi, E. (2016). Residual ridge resorption: a major oral disease entity in relation to bone density. *Indian Journal of Oral Sciences*. 7, (1), 3-6. * Lekholm, U., & Zarb, G.A. (1985) Tissue integrated prostheses: osseointegration in clinical dentistry. *Chicago: Quintessence Publishing Company*; 1985. p. 199–209. |