|  |
| --- |
| **Name:** |
| Holly DuCharme |
| **Group:** |
| 1B-1 |
| **Basic Science Question:** |
| What is an implant? |
| **Report:** |
| Implants are a form of treatment that replace missing teeth. There are 3 parts to an implant: the implant fixture, the abutment, and the dental prosthesis. The implant fixture is a small screw-like structure. Surgical placement of the implant fixture involves using a series of surgical drills to prepare the bone underlying the edentulous space where the implant will reside, which may require prior hard and/or soft tissue augmentation to allow for proper placement and survivability of the future implant. The implant fixture is then placed into the prepared surgical site mimicking the roots of the missing tooth. Implants lie subgingivally, so the abutment serves as the connection above the implant fixture to support and retain the overlying prosthesis. Finally, the dental prosthesis is the portion of the implant system that replicates the esthetic and functional elements of the missing dentition and surrounding tissues.  When a patient initially presents for an implant case, thorough analysis of the patients medical/dental history and a detailed clinical and radiographic examination must be performed to determine if the patient is a potential candidate for implant-based treatment. Indications for implant treatment include, a completely edentulous patient or partially edentulous patient who has edentulous spaces between or posterior to remaining teeth with adequate tissue, bone and space for an implant-supported prosthesis, a patient that is unsatisfied with an existing non-retentive prosthesis, or to preserve and stabilize a removable prosthesis. Relative and absolute contraindications exist in implant treatment. A relative contraindication means there is potential for risk, but the benefits of the treatment generally outweigh the risks. An example would be osteoporosis. An absolute contraindication means the treatment has potential to be life threatening, or the risks of the treatment outweigh the benefits. An example of this would be an infection of bone or soft tissue.  There are important anatomical landmarks that should be taken into consideration for implant selection, position, and placement. Some of which are the maxillary sinus, existing bone density, and the position of the mandibular canal. For injury prevention an important anatomical landmark to consider is the location of the inferior alveolar canal which houses the inferior alveolar nerve and artery. Injury to either of these during placement could cause pain, excessive bleeding, and altered sensation, so it is important to determine the location of the mandibular canal before placing the implant.  Implant-based dental prosthetics have become a popular treatment option for patients because of their reliability and stability. This form of restorative treatment is about as close as one can get to replicating the appearance and functionality of natural teeth and associated tissues. |
| **References:** |
| Gupta R, Gupta N, Weber KK. Dental Implants. [Updated 2020 Aug 11]. In:  StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2020 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK470448/>  Mohammad S. (2017). Dental implants. *National journal of maxillofacial surgery*, *8*(2), 87–  88. https://doi.org/10.4103/njms.NJMS\_79\_17 |