

IMPLANTS ARE A PROSTHESIS

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Dental implants are not pre-prosthetic treatment. This concept creates an image of a non-prosthetic procedure when in fact implants are in and of themselves prostheses. Consider, that our colleagues in orthopedics have for decades referred to artificial hip or knee replacements as prosthetic hip or knee implants. Let's take a closer look at prostheses that restore function in the human body.

In subsequent follow-up and review of medical histories, artificial heart valves, knees and hips are all referred to as prosthetic devices. Since the dental implant is the artificial replacement for the tooth's anchorage unit, it must truly be viewed as a prosthesis. When one considers even the simplest single tooth replacement, the implant takes the place of the tooth root in the alveolus. Here the implanted prosthetic root provides artificial functional support for the remainder of the prosthetic replacement, the coronal portion.

In more complex and extensive oral-facial rehabilitations, both hard and soft tissue replacement is required. Again, the osseointegrated anchorage unit is an integral part of the complete prosthetic reconstruction. The predictability of osseointegration makes this form of prosthetic treatment a biologically conservative one and the treatment of choice when caring for patients with complete or partial edentulism.

It is most interesting to note that prosthodontic training focuses heavily on acquiring a high level of precision and skill in both the diagnosis and execution of the treatment plan with

particular attention to the preservation of the living hard tissues. Now consider the level of skill and dexterity required to prepare a multi-surfaced inlay or onlay or a complex post and core. Then consider preparation of multiple teeth for the construction of a complete arch tooth supported prosthesis. All of these prosthodontic surgical procedures are executed by a specialist who inherently is thinking in a three-dimensional mind set.

The prosthodontist's ability to conceptualize the end result of treatment and to envision the final prosthesis in the space of the oral cavity is indeed a major clinical asset in planning and placing the prosthetic anchors in bone. The mind of the experienced prosthodontist is a virtual database; computing special orientation, leverage factors, loading forces, the biomechanics and physiology of the masticatory system and its relationship to occlusal harmony. The same database contains numerous files filled with esthetic variations applicable to many different clinical conditions. Split second decision-making, based on prosthodontic experience, makes this specialist uniquely qualified to determine the optimal position of the implant prosthesis in its surrounding skeletal architecture. The prosthodontist's acute and delicate tactile abilities are fine-tuned to calculate the density of bone at various levels of preparation of the osteotomy site, providing additional data important in determining the appropriate loading in time and dimension. Who

better than the prosthodontist can determine if the osseous support at the time of implant placement is suitable for immediate and functional loading?

Yes, comprehensive prosthodontic rehabilitation remains in some instances a multidisciplinary specialty effort. We all recognize the superior skill and dedicated professionalism of our colleagues in orthodontic, endodontic, periodontic and pediatric dentistry and oral and craniofacial surgery. Often their pre-prosthetic treatments are prerequisite to the ideal outcome of the restorative efforts of the prosthodontist. The final outcome, however, must be carefully and thoughtfully coordinated by the prosthodontist, enlisting all of his or her knowledge and communication skills to sequentially organize the various disciplines, for ultimately the patient looks to the prosthodontist for the final result.

So, to what degree should the prosthodontist be involved with implant supported prosthesis? The answer lies only in the degree of interest and involvement to which the prosthodontist aspires. The prosthetic osseointegrated union of alloplastic material to "ordered living bone" provides the foundation for further reconstructive treatment. Knowing and fully understanding and executing all parameters of the foundation allows the prosthodontist to best fulfill his/her professional obligation to the patient.