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**CRANIOFACIAL GROWTH AND IMPLANT ESTHETICS**

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Growth can be defined as increase in size or dimension. Growth endures, at the beginning of life, from early cellular development, through birth and generally through adolescence. The progressive growth of the skeletal structure notably slows approaching adulthood, while body mass may continue an increase or decrease in dimension. Other processes, such as hair and nails, continue to grow throughout life. Growth is also defined as continued development. This is a much slower process that continues throughout adulthood. From a visibly measurable perspective from year-to-year intervals, the increase in size or dimensional growth through infancy and childhood is obvious; through adulthood, continued development is subtle.

The visually obvious growth of an infant through adulthood is a factor of bones increasing in size with a corresponding development of organs, nervous system and skin. In adulthood, it is known that bone maintains not only to remodel, but also to locally grow at a cellular level, evident by the ability to close gaps of fractures or osseous defects.

For tooth replacement in children and adolescents, the clinical significance of growth of the skull and mandible has been identified. Due to its ankylotic nature, use of dental implants has not been recommended for growing patients. Growth during adulthood has not been a factor considered for restorative treatment planning with dental implants regarding long term outcome. Until most recently, the effects of craniofacial growth in the adult patient and dental implants has been absent from the dental literature, in part due to the fact that these changes take many years to manifest themselves. In the past, such clinical observations were absent from the literature due to short observation periods, or they were simply overlooked or dismissed as artifacts. Now, with decades of past treatment observation of single tooth and partially edentulous implant restorations, it is becoming apparent that for some people there are indeed occlusal, periodontal and esthetic ramifications of this subtle continued development defined as growth through adulthood.

It has been reported in certain adult patients for whom growth had been assumed to have stopped, ongoing subtle growth will have a profound impact on both functional and esthetic outcomes of implant restorations going beyond current definitions of success.

**Educational Objectives:**

The purpose of this presentation is to alert the dental profession to the long term effects of continued craniofacial growth of adults and potential implications for

- intra-arch stability of teeth relative to implant restorations
- interarch occlusal stability involving natural teeth opposing implant restorations
- anterior esthetic stability of implant restorations relative adjacent teeth and supporting periodontium