# Effect of Loading Protocol on Peri-implant Soft Tissue Health

## (Clinical study)

*A Research Submitted in partial fulfillment of the requirements for Doctor Degree in fixed prosthodontics*


Presented by

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# Dedication

**This work is dedicated to**

My Dear Father, the one who always supported me,

My Dear Mother, the one who is always there for me,

My Adorable wife, to whom I owe a lot,

My daughter and son, who enlightened my heart with joy

&

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Without your support I wouldn't have been the person I am now.

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# Introduction

Nowadays, esthetic outcomes of the dental restorations are important to the success of the final restoration as health. Indeed, it represents a different aspect of health. Patients demand restorations that are as esthetic as they are functional; many of the implants are placed in the anterior maxillary region and other esthetically important areas.

Implants are the first choice as a treatment modality to restore the missing teeth. Their surfaces have been improved to enhance the Osseo-integration process. Instead of surface being smooth or machined, they are roughened by sandblasting and acid etching, which increases the surface area to which bone can attach. (1)

We want to say that the problem is no longer about osseointegration but the esthetic challenges. (2)

Furthermore, recession of the soft tissue margin may occur after the crown insertion, with the risk of having the titanium part of the implant unit exposed orally. To reduce the risk of disturbing exposure of titanium and to create a favorable emergence profile of the crown, it was suggested to position the head of the implant fixture apical to the cemento-enamel junction of neighboring teeth, and to have the abutment shoulder placed 1-2 mm below the mucosal margin.

The esthetic challenges may be related to the effect of loading protocol on the implant causing bone loss and soft tissue changes. The presence of different loading protocols and crown material makes the immediate loading possible. Using resilient material for crown is important in decreasing load on implant in immediate loading. A resin nano ceramic has an elastic modulus that’s comparable to dentin which is much lower than what brittle glass ceramic materials or PFM veneering porcelains provide. This enables restoration to better absorb chewing forces and reduce stress.