Chapter 26
Occlusally Educating Both Patients and Clinicians With the T–Scan Technology

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ABSTRACT

The T-Scan is an effective patient and doctor education tool for illustrating existing occlusal pathology, as it presents complex occlusal force and timing information in a visual format that is easily understood. The T-Scan applies to all stages of the teaching/learning process because its recorded data forms the framework upon which a doctor/patient discussion can begin regarding the patient's occlusal disease manifestations, the potential benefit of treatments, and the risks of not undergoing corrective treatment. When used as part of an educational strategy, the T-Scan can lead the patient to accept procedures that would benefit their long-term dental health. This chapter outlines the four stages of creating optimum dental health, the steps required to perform effective teaching and learning, the differing styles of teaching and learning utilized in educational forums, and how to best employ the technique of Feature, Function and Benefit. A few case examples illustrate how T-Scan data can educate a patient about their own occlusal problems, while describing both normal and abnormal occlusal function to a dentist. Lastly, as a consequence from the 2018-2022 global Covid-19 Pandemic, a new frontier in Dental Continuing Education has evolved in web-based training, of which T-Scan doctor-to-doctor internet-facilitated learning is very well suited.

INTRODUCTION

One of a doctor's many roles is to educate patients with regards to their health (ADA, 2010). The three most prevalent diseases dentists regularly treat are caries, periodontal disease and occlusal disease (Christensen, 2001). Occlusal disease is under treated by many practitioners (Christensen, 1995), which is partially due to the difficulty of having a patient understand the benefits that occlusal therapies offer in the treatment of occlusal pathologies. Utilizing the T-Scan Computerized Occlusal Analysis System (T-Scan 8, Tekscan, Inc. S. Boston, MA, USA) in combination with a well-planned strategy for patient

education, can improve the number of patients who accept occlusal therapies that likely would benefit them.

The Four Stages of Health Creation

There are four stages the patient and the clinician must go through, to create health from a diseased state:

**Stage 1 -** Identifying the etiologic factors that cause the disease
Stage 2 - The patient accepting responsibility for their health
Stage 3 - Together, both the doctor and the patient eliminate the various disease factors
Stage 4 - Perform the necessary clinical procedures to repair the destruction resultant from the disease

Repairing the destruction without elimination of the causative factors (Figure 1) will routinely lead to a repeat of the diseased state (Barkley, 1970).

Figure 1. The Dental Disease/Health Model. Disease factors take a patient from healthy to sick. If only repairs are done, the patient will be not sick but may not necessarily be healthy. Existing disease factors will move a patient back into being sick. To break this cycle, the disease factors must be eliminated prior to performing the needed repairs.
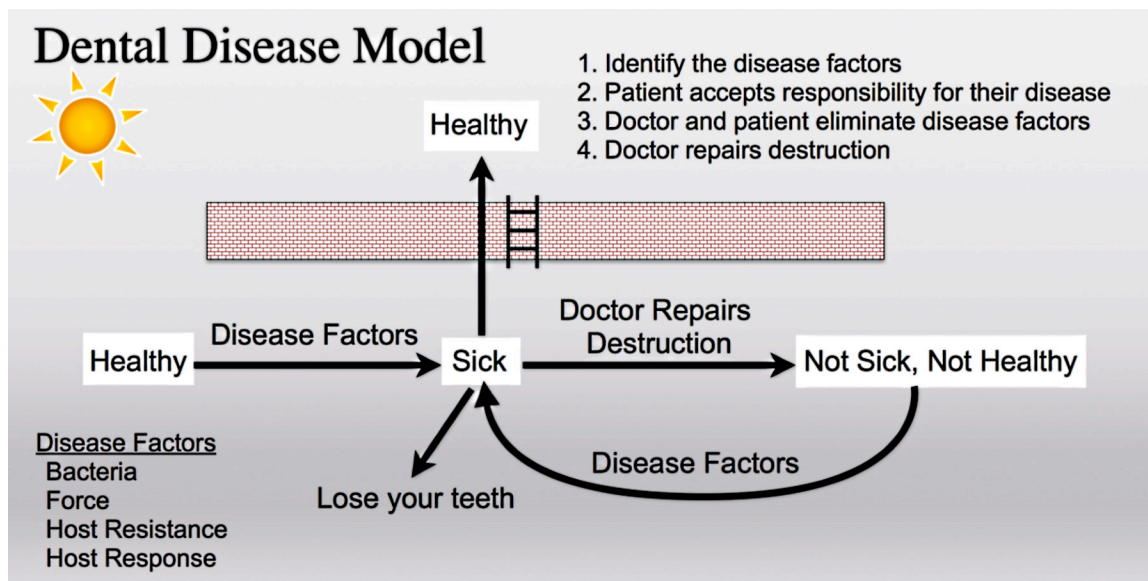
Occlusal disease results from ongoing and repetitive microtrauma between contacting teeth, where occlusal force overload slowly injures tooth structure and supporting tissues. Time passes and the microtrauma breaks down the involved teeth. Figure 2 shows a T-Scan Force View illustrating an uneven force distribution throughout the arrangement of teeth, causing excessive load to be present on a single

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