

# **THE PHYSIOLOGICALLY DRIVEN TREATMENT SYSTEM:**

## **FUNDAMENTAL SKILLS OF BIOMECHANICAL EVALUATION AND TREATMENT PLANNING**

### **The DATA Appliance – Part I: Appliance Seating Protocol (EDITED)**

#### **Introduction**

This is the first of three documents describing the DATA Appliance (“DATA” is a proprietary registered trademark owned by Dr. Karl E Hegyi for dental appliances used for diagnosing and treating biomechanical issues of the Masticatory System). The DATA (Diagnosis And Treatment Assisting) Appliance assists in both the diagnosis and treatment of Masticatory System biomechanical problems. It is a part of the Physiologically Driven Treatment System, which consists of the DATA Appliance, the Integrated Classification System, and development of a Stable Biomechanical Platform. The Integrated Classification System classifies a patient’s Masticatory System biomechanical status by considering their TM-Joint Orthopedic Stability, Functional Occlusion, and Parafunctional Activity status. A Stable Biomechanical Platform is achieved when interocclusal relationships are in harmony with masticatory muscle function, together with healthy or well-adapted TM-Joints, *at the final treatment vertical dimension of occlusion*. It requires that maximum intercuspation occurs with equal intensity contact of all teeth with both condyles physiologically seated. It also requires an anterior guidance that allows disclusion of the posterior teeth and one that is in harmony with the Envelope of Function. The DATA Appliance is intended to first assist in evaluating each component of the Integrated Classification System and then assists in providing additive and reductive reshaping to create a Stable Biomechanical Platform. This document details the clinical procedures required for properly seating and adjusting a DATA Appliance. Document II describes utilization of the DATA Appliance in assisting patient evaluation and Document III, utilization of the DATA Appliance in delivering definitive occlusal therapy.

There are five basic DATA Appliance designs for different clinical situations. Variations in design consider the patient’s Angle’s Classification, posterior tooth soft tissue relationships, tooth position stability, and duration of appliance utilization (see DATA Appliance design type application guide). Despite design type, each DATA Appliance has an anterior acrylic stop that is perpendicular to the path of mandibular closure. The remainder of the appliance keeps the stop in place without interfering with closure of the mandible (as the stop is reduced during reductive reshaping).

This document details the clinical procedures required for properly seating and adjusting a DATA Appliance. Document II describes utilization of the DATA Appliance in assisting patient evaluation and Document III, utilization of the DATA Appliance in delivering definitive occlusal therapy. The DATA Appliance may be used on most dentate patient considering occlusal or restorative therapy, as long as the patient’s TM-Joints can accept *firm* loading with *no sign* of tension or tenderness. Until the TM-Joints can accept firm loading with no sign of tension or tenderness, no type of anterior-contact-only appliance should be used.

#### **I. Confirm Fit and Comfort of DATA Appliance**

The first of three critical requirements of the DATA Appliance is that it be completely comfortable for the patient. This is most easily accomplished with the DATA I Appliance. Any irritation from the DATA Appliance will negatively impact upon its diagnostic value. After inserting the DATA Appliance, confirm proper adaptation to soft tissue and teeth. There should be an intimate adaptation to all soft tissue areas covered and adequate retention.

## **II. Maximize Compressive Stability of DATA Appliance**

The second requirement of the DATA Appliance is compressive stability of the anterior stop. Resistance to *any* movement of the DATA Appliance during *firm* closure on the anterior stop is critical in both the diagnostic and treatment phase of DATA Appliance utilization.

## **III. Refinement of Anterior Stop**

Refinement of the anterior stop angulation and dimension is the final critical adjustment made at the time of DATA Appliance insertion. A single point of contact from a lower central incisor on the anterior stop that does not guide mandibular closure is needed.

With adequate compressive stability, and the anterior stop refined, the DATA appliance should feel *rock solid* with absolutely no sense of deflection of the mandible to the right or left, anterior or posterior when the patient closes on it.

**Note:**

**This document is an edited version of an original document. The original document is part of a course manual and designed to be supplemented with lecture and clinical experience from that course. It is not possible to provide the knowledge or experience needed to properly use the DATA Appliance in a clinical situation with this or any other document alone. It is strongly recommended that you first attain appropriate training prior to using the DATA Appliance. This is to assure both safe and effective utilization.**

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