

# Raise the Bar of Your Practice Through Comprehensive Exam and Diagnosis



by Dr. Jim K Beck

I recently attended a dental team training course that was valuable for my new staff but it left me, a 27-year veteran of the dental business, a little disappointed. The course presented a business and medical model of dentistry that reflects the philosophy that 97 percent of dentists share (aka tooth carpentry). This concept is strictly limited to the oral cavity, and ignores the majority of the stomatognathic system. It ignores the fact that we have tremendous impact on our patients' TMJ, muscles, nerves and airway every single day.

In the limited model: dentists treat teeth and gums (period!). We do root canals, extractions, fillings, crowns, partials, dentures, bridges, implants, cosmetics, and all of the services that are confined to the dental box or oral cavity. Only three percent of dentists have stepped out of this dental box and made the shift to become "dental physicians." Beyond dentistry, doctors examine and diagnose their patients every day. The modern day MD uses advanced technology to examine the patient, make a diagnosis, treat and/or refer. The "three percent" dentist, uses advanced technology to examine, diagnose, and treat and/or refer. This dentist knows that teeth are only a part of treating his patient comprehensively. He is interested in how his treatment has direct implications on the overall dental physiology of the patient. This dentist is not just concerned with cavities, perio disease, intraoral pain of the patient, or cosmetics. His treatment is based on what is revealed through his diagnostic protocol that includes the TMJ, muscles, occlusion and airway. This approach is what I call dentistry to Optimum Dental Physiology (ODP).

ODP principles go beyond just teeth, and include an examination of the TMJ, muscles of the head, neck, and face, the alignment and shape of the mandibular and maxillary orthopedic arches, and posture.<sup>2</sup> An ODP "three percent" dentist realizes to provide this type of comprehensive, special care will at times involve other health care providers, such as MD's, ENT's, physical therapists, massage therapists, etc. The ultimate result of this comprehensive examination and treatment protocol will be exceptional treatment that creates optimal cosmetics, function, and stability i.e. ODP. Optimal Dental Physiology includes improvement or elimination of headaches, face pain, neck pain, ear pain, sinus problems, obstructive airway problems, sinus problems and many other issues.

#### The examination of occlusion must include these four areas:

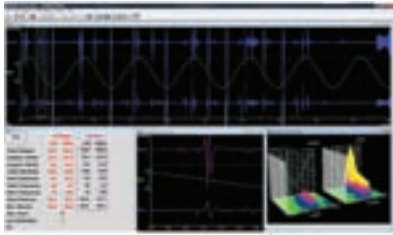
- 1: The teeth and plane of occlusion.
- 2: The temporomandibular joints.
- 3: The neuromuscular system.
- 4: An orthopedic examination of the head and neck.

1.) The teeth are examined traditionally, but in addition, upper and lower models are mounted on the Acculiner to assess the plane of occlusion and any distortions present. The teeth are evaluated for the presence of unsightly aesthetics, decay, wear facets, attrition, abrasion, erosion, abfractions, fractures, failing restorations,

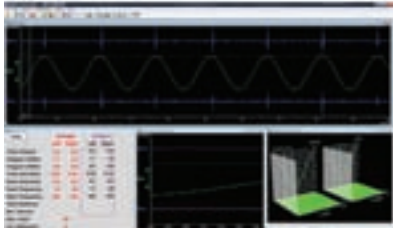
*Second opinions are common in health care; whether a doctor is sorting out a difficult case or a patient is not sure what to do next. In the context of our magazine, the first opinion will always belong to the reader. This feature will allow fellow dentists to share their opinions on various topics, providing you with a "Second Opinion." Perhaps some of these dentists' observations will change your mind; while others will solidify your position. In the end, our goal is to create discussion and debate to enrich our profession.*

— Thomas Giacobbi, DDS, FAGD  
Dentaltown Editorial Director

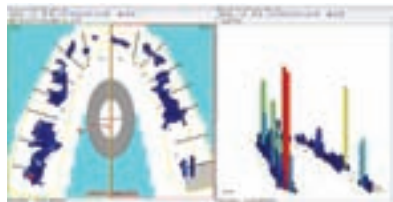
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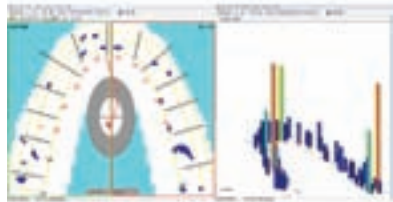
JVA showing anterior disk displacement.



JVA normal TMJ function.



T-Scan showing right/left bite imbalance.



T-Scan showing a balanced bite.

## Author's Bio

**Dr. Jim K Beck DDS, FICCMO, FIAO, DAACP** is a 1981 graduate of Creighton University School of Dentistry. Dr. Beck has accumulated more than 3,000 hours of post-graduate education in cosmetic, TMD/pain management, orthodontic, sleep dentistry, and full mouth dentistry. Having successfully treated more than 125 full mouth reconstruction patients, he is an expert in diagnosis and treatment modalities that achieve optimal function, physiologic and cosmetic results in full mouth/full arch rehabilitation. He is the executive director of the nine-day Full Mouth Reconstruction to Optimum Dental Physiology seminar. Please visit [www.thebestsmiles.com](http://www.thebestsmiles.com) or e-mail him at [jimbeckdds@comcast.net](mailto:jimbeckdds@comcast.net) or call 866-577-BECK.

and traumatic occlusion. All of these conditions mentioned are directly or indirectly associated with a faulty occlusion. This is clinically essential to proceed with any treatment.

2.) To quote Dr. Peter Dawson, "All occlusal analysis starts at the temporal mandibular joints"<sup>1</sup> In my opinion, you should never begin restorative, ortho, and/or sleep treatment without first diagnosing and correcting (if possible) a TMJ condition. In my office this includes an extensive history, joint vibration analysis, tomography, and if necessary MRI. If you feel your practice cannot support the investment necessary in the more costly imaging systems you should be using a thorough history for your subjective findings and Joint Vibration Analysis ([www.bioresearchinc.com](http://www.bioresearchinc.com)) for the objective portion of your diagnosis. Diagnosing the health of the TMJ is the responsibility of every dentist. However it is not the dentist's responsibility to treat. Just as a general practice MD doesn't treat all heart ailments, we don't need to learn how to treat advanced degenerative joint disease or avascular necrosis of the condyle, but we sure better find it when it exists!

3.) A neuromuscular exam must not be confused with the neuromuscular treatment philosophy. The neuromuscular exam combines the subjective findings of the patient's history and muscle palpation with the objective findings of the resting and functional health of the muscles using surface electromyography (EMG), freeway space and ROM using magnetic jaw tracking. These instruments allow me to assess the neuromuscular components involved with chewing, swallowing and breathing. These everyday functions can degrade to a point, which ultimately debilitates the patient's overall physiology such as clenching, bruxism, and patients whose chewing muscles are painful and fatigued. Obstructive sleep apnea and patients who have distorted occlusal planes have to go through "oral gymnastics" to accomplish chewing, swallowing, and breathing.

4.) Even if you have to refer them out, all dental patients should have the opportunity of a thorough orthopedic analysis. The examiner will take a lateral cephalometric radiograph to assess the orthopedic conditions of the maxilla and mandible, to help diagnose and treat orthodontic patients. This is particularly relevant for patients receiving dentures or extensive rehab, TMD or sleep apnea treatment. Comprehensive radiographs should include lateral cervical spine, frontal skull, Townes view, frontal and sagittal tomos of the condyles, sinus views and a sub mental vertex X-ray.

I recommend the use of additional diagnostics as needed. I will use T-SCAN II for initial occlusal timing and force diagnosis and to objectively guide my case finishing and equilibrations. This is extremely important after final restorations are seated. The teeth, muscles and joints all work together to create optimum dental physiology and a harmonious environment for our dentistry. The use of T-Scan, EMG, and JVA allow me to objectively see the impact my treatments have on creating balance in the stomatognathic system. What's most important, is they make it easier to know when I am done treating and the patient is ready for the next step by removing much of the subjective guesswork of a purely subjective analysis.

We can deliver beautiful, healthy and longer lasting dentistry if we work with the patients craniofacial physiology, instead of simply putting man made materials into a hostile environment that has already destroyed the natural teeth! This is hardly a new concept but the objective tools of today allow us to see the physiology much easier and with more accuracy than ever before. ■

### References

- 1 Peter E. Dawson DDS *Functional Occlusion: From TMJ to Smile Design* 2007 Mosby, inc. pg. 33
- 2 James E. Carlson DDS "Occlusal Diagnosis"