

— Understanding the — Masticatory System

By Dr. Peter Dawson

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Every one of the structures in the masticatory system is interrelated to each other. If we don't know how that relationship works, then we're not going to know what to do. In other words, you cannot be a good tooth dentist if you don't understand the temporomandibular joints; you can't be a good TMJ doctor if you don't understand occlusion; you can't understand occlusion if you don't understand how the anterior guidance works; you can't be any better than a mediocre dentist if you don't understand how all these parts fit together and relate to the neuromuscular system.

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If we look at it from the standpoint of typical, usual, and customary dentistry, this is not what most dentists look at. They see the teeth as being separate from the rest of the masticatory system and that just doesn't cut it.

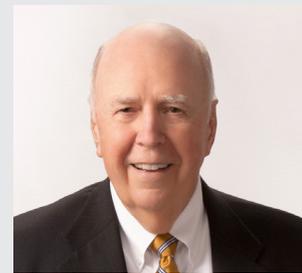
To be a complete dentist you must be a physician of the total masticatory system. But don't let that overwhelm you; when we start to take the parts of the masticatory system, and look at them individually and see what they do and why they relate to each other, the understanding of these factors makes dentistry simpler, not more complicated.

Dentistry is complicated when we don't know how the system works, causing you to guess at everything.

By understanding how all these parts interrelate, we start to make sense out of diagnosis and treatment planning, and all the things that go into being a complete dentist.

You must understand the TMJs, and you must understand the anterior guidance. I think of these two as the 'back-end' and the 'front-end' of the mandible with the teeth attached (Figure 1). You must also understand how the anterior guidance relates to the TMJs. They are connected: the lower anterior teeth are part of the mandible, which is part of the condyle. You can't move the condyles without moving the lower arch of teeth. The position of the condyles has a profound effect on how the teeth come together. We can't separate the teeth from the temporomandibular joints. We can't separate the front and the back from what's in the middle, or what's in between.

If we consider the system this way, we'll then understand how this combination affects the total neuromuscular system, including the elevator muscles and the temporal muscles.



Dr. Peter Dawson

is considered to be one of the most influential clinicians and teachers in the history of dentistry. He authored the best selling dental text, *Evaluation, Diagnosis and Treatment of Occlusal Problems*, which is published in 13 languages. His latest book is entitled *Functional Occlusion: From TMJ to Smile Design*. He is the founder of the "Concept of Complete Dentistry Seminar Series®" as well as The Dawson Academy. In addition to numerous awards and special recognitions, Dr. Dawson is the past president and life member of the American Equilibration Society, a past president of the American Academy of Restorative Dentistry and the American Academy of Esthetic Dentistry.

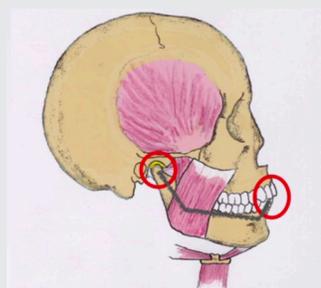


Figure 1. The red circles in the figure above illustrate the front (anterior guidance) and back (TMJs) of the masticatory system with the gray line illustrating what is in-between (the teeth).

Disharmony Cause & Effect

Disharmony within the occlusal muscle relationship can cause...

Wear

Disharmony of any of these parts with each other has a potential for occlusal wear problems. When you see wear on posterior teeth, that is not because the patient bruxes; it is because the patient bruxes with occlusal interferences to the front and back of the occlusion.

Sore teeth

When you have a case of sore teeth, you have an occlusal problem.

Loose teeth

Loose teeth are a very good indication that something is out of harmony with something else in the system. How the jaw works is related to what happens at the front and the back; when there are unstable dentitions, we know something is wrong.

Pain

The number one cause of pain in the system is what we call occlusal muscle pain. This muscle pain is the direct result of occlusal interferences or occlusal disharmony. We cannot know how to diagnose it and we cannot know how to treat it if we do not understand how the total picture of the masticatory system comes together.

The various orofacial pain problems are in most instances related to occlusal muscle pain. However, orofacial pain is not always an occlusal problem, and we have to understand the masticatory system to know the difference. That is a great responsibility of dentistry. We need to have an answer when patients are referred to us with head or neck pain and say, "Is this a masticatory system problem?" We have to be able to say if it is the entire problem, part of the problem, another problem in the masticatory system or something else. With that diagnosis, we can get the patient into the proper specialist's hands.

Broken and chipped teeth

What about fractured teeth or fractured restorations or those laminates that you put in and then they break? If you think the breakage is just because the patient has stress, you are missing the point. They break because they are in the way and there is disharmony in the system.



Figures 2-4. This posterior wear is caused by disharmony in the occlusion.



Figure 5. This fractured tooth is caused by disharmony in the occlusion.

All of these problems can be predictably treated (and even prevented).

You can learn more about occlusion and how the masticatory functions at The Dawson Academy. We promise that if you do dentistry the way we teach it, you will produce more dentistry with far less stress, greater predictability, tremendous satisfaction from your patients, and greater enjoyment overall.