

# Setting the scene for articulators

Making the most of her role as UK Occlusion Product Specialist at Prestige Dental, Jennifer Ball considers how the articulator is transforming practice and patient life.

Jennifer Ball began her professional life in dentistry as a dental nurse, a role she relished for 15 years. Following a rewarding stint at a practice in Leeds City Centre, Jennifer's desire to progress her career coincided with the principal's decision to take a step back, so the scene was set for her to pursue new horizons. Through networking, Jennifer discovered that Prestige Dental was looking for a new rep and the rest – as they say – is history.

## As Occlusion Product Specialist, what does a working day look like for you?

Day-to-day, I visit practices and help them to get the most from their articulators. Beyond that, a lot of what I do is 'behind the scenes', so to speak. When Prestige Dental is involved with organising courses on occlusion and articulator use in the UK and Scandinavia, I sort out the logistical aspects. So, for example, I make sure there are enough Denar articulators and other equipment on hand for the delegates to use, as well as liaising with all the key opinion leaders to see what I can do to make their lives easier. I also attend as many of the courses as I possibly can,

because I love to meet new people and catch up with old friends.

## What are your thoughts on the Denar articulator in action?

They are very simple to use when compared to many other makes that are available. That, combined with their accuracy and reliability, makes for very happy dental teams and patients, taking quite a lot of the stress out of more complex procedures.

## What kind of impact does using the articulator have for the practice and patients?

Its level of precision and repeatability saves everyone time, and the practice doesn't need to send the articulator, along with the models, to the lab when the technician also has a Denar 300. Practically speaking, it also saves money because re-makes aren't needed.

For patients, I think seeing an articulator in use shows them that the dentist is working at a high level. Some of what happens doesn't necessarily register with the patient, of course, unless the dentist tells them what is happening. For example, if a dentist

gave a patient a standard bite splint to wear overnight without considering the occlusion, they might be doing more harm than good; in some cases, it can make patients brux more in their sleep!

## How important is training in use of the articulator?

I've seen for myself that dentists who haven't had enough training in the use of an articulator or facebow – and can think they need three pairs of hands to use it effectively – get too scared to use it and, ultimately, it can become an expensive dust collector! However, after just one tutorial, or with the help of myself or one of my colleagues, dentists can quickly learn how to get the most from their equipment. I'm available to visit customers at whatever time is convenient for them, to run the dental team through using the equipment.

## What role does the British Society for Occlusal Studies (BSOS) play in what you do?

The BSOS offers fabulous support for dentists and patients in relation to occlusion, offering excellent courses to help dental teams make the most of their articulator.

Just as with Prestige's courses, I'll make sure they have Denar articulators, facebows and other occlusion products for the hands-on demonstration and hands-on purposes.

## How important is after-care when a dentist purchases an articulator?

It's a big investment and so it's really important to make sure it's working as well as it can. With the Denar Mark II, I would say dentists who use it a lot should get it calibrated once a year, and technicians probably twice a year. On the other hand, because of the way the 300 series is made, there's no need for calibration.

That said, there is always the possibility of a mishap, for example dropping the articulator, so after-care service is always important. Consider the time and money implications of having the articulator out of action for any period, and let's not forget the possibility of patients being upset if their treatment is delayed.

## What advice can you offer dentists considering investing in an articulator?

An articulator needs to be easy to figure out, represent the natural movements of the jaws, be easy to handle, and simplify the transfer of patient records. If we look at the Denar 300 series as an example, it represents the ideal for effective treatment planning, communicating with the laboratory and showing patients what the problem is, and how that problem can be solved. With the dentist, technician and patient working in concert like that, an articulator offers incredible value, in terms of saving time, money and patients' oral health.



### About the author

**Jennifer Ball is UK Occlusion Product Specialist at Prestige Dental.**



# Occlusion – changing lives

Aisling Tohill considers the role of occlusion in dentistry, how best practice can be achieved in this area and shares both dentist and patient perspectives.

*The aim of this article is to consider the role of occlusion in dental care, how best practice can be achieved in this area, and to share insight from both dentist and patient perspectives.*

## Learning objectives

On completing this Enhanced CPD session, the reader will:

1. Understand the role of occlusion in oral and overall health
2. Understand the signs and symptoms of a misaligned occlusion
3. Understand the difference an unbalanced versus balanced occlusion can make to a patient's life
4. Understand where to seek high-quality occlusal training to achieve best practice in relation to diagnosis and treatment planning
5. Understand the significance of using an articulator and how to go about choosing the best brand for the practice.

## Learning outcomes: A, B, C, D

The Oxford Dictionary of Dentistry defines occlusion as, 'The relation of the upper and lower teeth when they are in contact.'

It continues, 'Balanced occlusion is the harmonious relationship between the upper and lower teeth of a natural or artificial dentition within the normal function of the mandibular movement. It may be achieved entirely intra-orally or with the aid of an articulator.'

## SIGNS AND SYMPTOMS

Recognising the signs and symptoms of temporomandibular disorders (TMDs) is essential to reach an accurate diagnosis and provide the best possible treatment. When a person's teeth do not fit and slide together in harmony, it may be felt in any of the muscle groups involved, with indicators including but not limited to:

- Pain above the eyes and around the forehead
- Pain in front of the ear
- Pain around the temples
- Pain at the back of the neck

- Pain around the shoulders.

It is important that the dentist can identify the possibility of an occlusal disorder. It is therefore sensible to check with patients if they have been suffering from any of the ailments that can be associated with a misaligned bite. Patients may even complain of problems like headaches and facial pain unbidden, since, thanks to organisations such as the BSOS, public awareness of the potential role of occlusion in such disorders is increasing.

## THE ROLE OF THE ARTICULATOR

A good articulator will reproduce the movements of each patient's jaws, which is an essential component for understanding the dynamics of occlusion and applying the principles to achieve best practice. An articulator needs to be simple to use and make it easy to transfer the patient's records over. Even better, some articulators are so precise that communication between the practice and lab improves so much that remakes become a thing of the past.

As well as being key to communicating with the laboratory effectively, an articulator facilitates successful treatment planning and is a great tool for showing patients what the problem is – and how to solve it – making the consent process and treatment uptake much easier to achieve.

The BSOS considers Denar articulators to be ideal for use in practice, fulfilling all these criteria. The brand has long been recognised for its comprehensive systems and strong engineering base. Indeed, Denar brings occlusion products to market that accurately simulate the human anatomy, providing instruments for dentists to create total harmony of the teeth and temporomandibular joints. For example, the Mark 300 Series is interchangeable with any of the instruments in the 300 Series and is factory-set to within 20 microns of accuracy.

## IN THE HOT SEAT

Dental professionals don't always have the privilege of experiencing

occlusal treatment from both sides – as clinician and patient – yet it is an eye-opening experience. Twenty years ago, I started grinding my teeth as an undergraduate and for the last decade every bite I took caused pain to my front teeth and in my jaw joint. I was unable to chew anything properly; because I only could chew on my left side, this led to me swallowing my food almost whole. The consequence of that was stomach pain and acid reflux. To try to alleviate these symptoms I wore a splint at night but with limited success.

Three years ago, after attending the BSOS 'Introduction to Occlusion' course, I was diagnosed with internal derangements of both my temporomandibular joints, with more severe damage on my right-hand side and, possibly, a complete dislocation of the disc. At that time, my jaw was too severely damaged to be treated and so I was advised to wear a newly-fabricated splint for a year to stabilise my bite; the splint was made on the Applied Occlusal Principles course and I altered it as



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Above: Aisling Tohill in the dentist's chair

and when necessary.

When I no longer needed to alter the splint, I knew my bite was stable and I could be treated. I joined the BSOS 'Applied Occlusal Principles' course as a patient. Small amounts of the enamel were removed in a carefully planned procedure to gradually ease up the contacts of my top and bottom teeth so that my bite was much more even between the left and right side. It greatly reduced all the force on my front teeth.

I am now as near to cured as I can be with such a severely damaged jaw joint. It will never be fully healed; the jaw joint still feels a little tired every day, but my quality of life is greatly improved. I am not in any pain, I rarely need the ibuprofen or the physio I used to rely on, and I can eat nearly all foods.

**RIISING TO THE OCCLUSAL CHALLENGE**

Altering the occlusion is a demanding task and can have far-reaching healthcare consequences for the patient.

As stated concisely by Davies and colleagues in 2001, 'Successful occlusal management leads to: predictable fitting of restorations and prostheses, longevity and absence of iatrogenic problems, patient comfort and occlusal stability.'<sup>1</sup>

The BSOS is here to help dentists meet this challenge; for further information visit [www.bsos.org](http://www.bsos.org).

**Reference**

1. Davies SJ et al (2001) Good occlusal practice in simple restorative dentistry. *BDJ* 191(7): 365-381

This article is equivalent to one hour of Enhanced CPD. To provide feedback on this article, please contact [info@prestige-dental.co.uk](mailto:info@prestige-dental.co.uk).

**CPD Questions**

**1. The Oxford Dictionary of Dentistry defines occlusion as what?**

- a) A temporomandibular disorder requiring adjustment
- b) Misalignment of teeth and jaws, also known as a 'bad bite'
- c) The relation of the upper and lower teeth when they are in contact
- d) A relationship of the teeth capable of producing pathological changes in the supporting tissues

**2. When a person's teeth do not fit and slide together in harmony, it may be felt in any of the muscle groups involved, including what?**

- a) Pain in front of the ear
- b) Pain at the back of the neck
- c) Pain around the shoulders
- d) All of the above

**3. Denar's Mark 300 articulators are factory-set to within how many microns of accuracy?**

- a) 20
- b) 22
- c) 25
- d) 30

**4. The author's occlusal problem was diagnosed and treated on which BSOS courses?**

- a) 'Occlusion in Everyday Dentistry' and 'Applied Occlusal Principles'
- b) 'Introduction to Occlusion' and 'An Introduction to Sleep Disordered Breathing'
- c) 'Introduction to Occlusion' and 'Applied Occlusal Principles'
- d) 'Occlusion in everyday dentistry... and beyond' and 'How to Record a Facebow'

**5. According to Davies and colleagues (2001), successful occlusal management leads to what?**

- a) Predictable fitting of restorations and prostheses
- b) Longevity and absence of iatrogenic problems
- c) Patient comfort and occlusal stability
- d) All of the above

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**About the author**

Aisling Tohill practises dentistry in County Antrim. She is a member of the Faculty of General Dental Practitioners and has a special interest in facial pain caused by occlusal or bite problems. In 2016, she completed the Applied Occlusal Principles course run by BSOS and can assess whether facial and neck pain is caused by a patient's bite.



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# Be the best with the BSOS

As BSOS Chair, Alison O'Donnell is committed to raising awareness that a sound understanding of occlusion is fundamental to successful dentistry.



A dentist facing the challenges that go hand-in-hand with general practice, Alison has a particular interest in occlusal-related issues. That may be, in part, because occlusal treatments have

largely eliminated the terrible headaches she used to experience. Here, she speaks from the heart – as a patient and a dentist – about the role of occlusion in dental treatment.

## What might be the outcome if occlusion isn't appropriately considered during diagnosis and treatment?

If you don't consider the occlusion in your diagnosis or treatment plans, don't be surprised if your treatment fails, or even leaves the patient worse off. Incorrect occlusal alignment and movements may be related to many different problems. There may be tooth sensitivity, pain on biting, cracked, fractured or worn teeth or restorations, loosening teeth, or localised periodontal breakdown. Sometimes the stress effect may not manifest in the mouth directly but rather on the muscles or even the TMJ itself. Patients can develop pain in a variety of areas that – at first sight – has nothing to do with the mouth.

## How can the BSOS help dentists bridge any such gap in their practice?

We promote the importance of the role of occlusion in everyday dentistry, and help dentists gain in confidence in this important area. A tried and tested education pathway is available to guide dentists through a step-by-step approach and, for example, our popular 3-day course is still based on the work of Niles Guichet, the dentist behind the Denar articulator.

## Speaking about the Denar articulator, why is it a good choice for dentists?

A good articulator represents the natural movements of the jaws, and therefore how the teeth relate to one another. It enables you to understand how the dynamics of occlusion apply in each case. This means you need a precision instrument that is easy to set to your patient, that is robust enough to pass between the lab and yourself, and that reproduces how the teeth and jaws work and

move. Denar is an excellent choice, offering precision equipment that stands the test of time.

## What difference does using a Denar make to everyday practice?

Using the articulator in surgery is an excellent tool to explain the patient's situation and what can be done about it, which helps with consent and case acceptance. It is also great for presenting wax-ups, trial equilibrations and more. It is also an important tool for the technician, as it provides as close a representation of the patient as possible.

## What plans does the BSOS have for 2019?

We have lots of exciting dates in the BSOS calendar. We are hosting our annual 3-day occlusal intensive course in January. For a select group, this will lead on to the Applied Occlusal Principles hands-on course. The courses have an open platform for discussion and support, providing dentists with the confidence to get started in practice the very next day. We are also very happy to be presenting a 1-day introduction to occlusion course around the country. Members and guests can look forward to study days with Jason Smithson and Basil Mizrahi. That's not all, so for full details, please visit [www.bsos.org](http://www.bsos.org).

It's an exciting time to be a dentist and occlusion is key to success, so why not join the BSOS to make sure you don't get left behind?

### About the author

**Alison O'Donnell is a practising dentist based in Scotland and Chair of the BSOS.**



The British Society for Occlusal Studies is pleased to announce the following courses for 2019:

#### OCCLUSION IN EVERYDAY DENTISTRY... AND BEYOND

Dr Dan Selner and Dr Ken Peters  
11-13 January | Birmingham

#### HANDS ON EQUILIBRATION TRAINING

3 weekends in March, May and July  
Reading

For more information or to register visit [bsos.org.uk](http://bsos.org.uk) or contact Hannah at [officebsos@gmail.com](mailto:officebsos@gmail.com)

