Treatment planning
Traditionally, dentists would recommend one of the following solutions:

- **Pain modification:** resting the joint, using non-steroidal anti-inflammatory drugs (NSAIDs), or applying moist heat to the painful areas.
- **Relaxation techniques:** Relaxation training helps in managing stress. A night guard may be prescribed to prevent night grinding.
- **Corrective dental intervention:** Orthodontic treatment might be suggested to facilitate proper adjustment and correct wrong bites.

Discussion
Aqua Splint is a bite splint that enjoys a self-adjusting competitive advantage over other similar products, which is due to the conventional Aqua pads that hold the mouth in its closed position and relieves the jaw muscles from stress. Another factor that is considered an advantage is its immediate availability and customisation, which can be done in less than five minutes. This combination of ease-of-use and customisation marks the first level of innovation reached by Aqua Splint. It employs a silicon filling to conform exactly to the shape of the teeth. The product is left in the mouth for 90 seconds; after which, it is taken out to trim the edges away. It uses two water pads which the upper jaw lays on to relieve the stress on the jaw muscles. The water pads actually balance the jaw, thus offering immediate pain relief.
Prolonged use offers therapeutic support for medical issues such as cervical syndrome, tinnitus, migraine, stress and trauma, as well as in pre-surgical situations. It can also be used for prosthetic/orthodontic rehabilitation. Studies have shown that the accuracy of the Aqua Splint’s fit is around 98 percent and that it exhibited an even higher success percentage in comparison with its competitors. Tests ran in clinics revealed excellent results and constant positive feedback from patients. As opposed to similar products that are required to be worn throughout the day, Aqua Splint requires no more than ten hours of wearing (preferably two hours by day, eight hours by night). That serves as an advantage as major oral activities such as eating and talking are not restricted.

Advantages
The main physical law that was followed in designing the Aqua Splint was Pascal’s law, which states that an enclosed fluid will apply equalised fluid pressure regardless of where pressure is applied to the fluid or, in other words, “to enable the joint to balance itself”.

• Aqua Splint’s clear edge over its primary competitor is the customisation time: the soft relining silicon adapts to the shape of the teeth in as little as three minutes. Unlike others that come in different shapes and sizes, this flexibility makes it a universal, more cost-effective solution.
• Another thing is anchorage: Aqua Splint rests on the lower jaw (others are attached to the upper jaw), as it is one solid bone unlike the upper jaw (osteopathic principle).
• Phonetics is another consideration, as putting it in the lower jaw makes for better speaking (pronunciation).
• From an aesthetic standpoint, it is less visible.
• Aside from these advantages, the Aqua Splint can also be used while a patient is undergoing orthodontic treatment.

Flexibility at its finest
Aqua Splint is the only self-adjusting and adaptable TMD bite splint. It has been in the market since 2010, initially being released in the German market. Instructional courses by its inventor, Dr. Sabbagh, are also offered. These courses raise awareness about developments in the field of TMJ. Aqua Splint was patented both in the US and Europe in 2002. Prior to that, Dr. Sabbagh was the sole owner of the intellectual property of the SUS²: The Sabbagh Universal Spring.

Aqua Splint is distributed in the South East Asia Market through Dental Imagination Pty Ltd (www.dentalimagination.com). Contact dentimag@optusnet.com.au for further details. DA

About the Author

Dr. Aladin Sabbagh graduated from the University of Damascus in 1987 and received his doctorate degree to become a certified oral surgeon. Dr. Sabbagh continued his post-graduate education in orthodontics at the University of Kiel (Germany), and became a certified orthodontics specialist in 1993. After which, he opened his own private orthodontic clinic in Erlangen, Germany.

Dr. Sabbagh is a world-renowned lecturer and professor. He has received many honourary doctorate titles and chairs from universities and medical institutions in numerous countries. Furthermore, he is a member of the Editorial Board of the VVA Health publishing (Germany). He is also a member of numerous national and international orthodontic associations, and he is the chairman of the German Association of Orthodontics in Frankonia/Bavaria.

Since 1991, Dr. Sabbagh has been feeding many international and national publications with his findings and ideas. He has been conducting seminars and lectures on TMD and orthodontics.