

Introducing Cerezen device, an effective, non-invasive treatment for TMD pain and associated symptoms.

Cerezen has proven effective in treating symptoms associated with TMD including jaw pain. CE marked and US FDA cleared, it has been available in Europe since 2015. Cerezen is an easy to implement, non-invasive treatment modality that requires minimal setup and no specialist equipment.

If you want to

- ✔ Improve Your Patient Outcomes
- ✔ Reduce Repeat Patient Visits
- ✔ Avoid Needless Surgical Procedures
- ✔ Reduce Treatment Costs
- ✔ Reduce Waiting Times
- ✔ Reduce patient chair time

then Cerezen may be the perfect solution for you

What is Cerezen?

The Cerezen device consists of two 3D printed, custom-made, hollow auditory canal inserts, which allow full passage of sound through the ear. Individually manufactured to fit snugly in your patient's ears, the Cerezen device can be worn day or night. The devices are discreet and comfortable because they are individually prescribed, designed and manufactured for each patient.



Here is how it works

A number of key activities occur when you use the Cerezen device to treat symptoms with TMD:

Biofeedback

- The device acts to provide biofeedback to the masticatory muscular system
- When wearing the customised Cerezen device, the ear canal shape changes to that presented in an open jaw position
- This provides a subtle feedback to break the cycle of clenching and grinding and encourages your patient to relax their jaw
- Parafunctional activity is thus reduced

Tension reduction

- TMD sufferers often present with their lateral pterygoid muscles in a tense state
- By causing this muscle to behave in a more relaxed state, it reduces pressure and strain on the jaw joint, and therefore reduces many of the presenting TMD symptoms such as jaw pain, clenching and grinding

Physical Support

- It is believed the device provides physical support for the temporomandibular joint*
- This physical support can be evidenced in many of those patients that had presented with popping or grating of the jaw with an immediate reduction in their symptoms by wearing the Cerezen device

** MRI and jaw tracking studies currently underway to substantiate*

The Evidence

To date Cerezen has been evaluated in a number of studies including a three month, prospective, open-label, three-arm, randomised clinical trial. More recently we have interim six month results from a 12 month case series evaluation being conducted at the Birmingham Dental Hospital in the UK. Cerezen is a completely reversible treatment with few contra-indications, and has been shown to have a high compliance and satisfaction rate compared to intra-oral appliances.

Contact Us

To discuss how Cerezen can work for you and your patients, please get in touch with one of our European Business Development Managers via phone or e-mail, using contact details below.



Joos Van Riet

Tel: +31 (0) 6543 115 40

e-mail: joos.vanriet@cerezen.eu



Sean Gannon

Tel: +353 (0) 87 907 6077

e-mail: sean.gannon@cerezen.eu

Cerezen success rates using Diagnostic Criteria* for the most common pain related Temporomandibular Disorders

	Myalgia (including local myalgia, myofascial pain, myofascial pain with referral)	Arthralgia	Headache attributed to TMD	Anterior disc displacement (with reduction)	Anterior disc displacement (without reduction)	Generalised anxiety and depression
Symptoms	Presenting with pain of muscle origin in jaw, temple, ear and pain with modified jaw movement, function and parafunction.	Presenting with pain of joint origin with pain in jaw, temple, ear and pain with modified jaw movement, function and parafunction.	Headache in temple area and headache modified with jaw movement, function and parafunction.	TMJ noise present with jaw movement or function including clicking or popping.	Jaw locked so mouth will not open all the way, limited jaw opening interferes with ability to eat.	Feelings of generalised anxiety and depression related to everyday live and TMD pain
Expected Outcomes	Improvement in symptoms including reduction in jaw pain, myalgia and myofascial pain	Improvement in joint pain with improvement in jaw movement, function or parafunction	Reduction in headaches associated with TMD	Reduction in clicking and popping and ability to eat hard foods	Improved jaw opening, reduction in clicking and popping and ability to eat hard foods	Improvement in general wellbeing as a consequence of reduced TMD symptoms
Cerezen evidence from studies (measured at 3 and 6 month intervals)	Of those presenting with myalgia, symptom reduction evident at 3 months. At 6 months, symptoms further reduced across key measurements.	Of those presenting with arthralgia, symptom reduction evident at 3 months. At 6 months, symptoms further reduced across key measurements.	Of those presenting with headaches, symptom reduction at 3 months, further improvement at 6 months..	Limited cases have presented but of those who were treated they have seen results in reduction in jaw clicking and from 3 months.	Limited cases have presented with ADDWOR but of those who were treated, dramatic results were observed at 3 months, which further improved at 6 months.	Of those presenting with TMD, majority scored high in initial HADS measurements which reduced at 3 months, and further at 6 months.
6 month improvement measures in most recent study**	***OBC, OHIP, VAS measures all improved	OBC, OHIP, VAS measures all improved	Significant headache reduction	Jaw clicking not apparent in majority patients at 6mths	Jaw opening improvement	HAD (for anxiety and depression) scores reduction over all patient groups

* Adapted from "Diagnostic Criteria for Temporomandibular Disorders (DC/TMD) for clinical and research applications: Recommendations of the international RDC/TMD Consortium Network and Orofacial Pain Special Interest Group", as published in Journal of Oral and Facial Pain and Headache, 2014.

** 12 month case series evaluation underway on 16 patients at Birmingham Dental Hospital, with interim results noted here at 3 and 6 months.

*** OBC -Oral Behaviour Checklist; OHIP-Oral Health Impact Profile; VAS-Visual Analogue Score; HADS-Health Anxiety Depression Scores

Three and six month statistical data on Birmingham Dental Hospital case series across key measurements

Outcome	3 Month				6 Month				Outcome +/-/=
	Baseline Mean ± SD	3 months Mean ± SD	Change Mean (95% CI)	P-value	Baseline Mean ± SD	6 months Mean ± SD	Change Mean (95% CI)	P-value	
OBC	32 ± 10	24 ± 8	-8 (-13,-3)	0.006	34 ± 9	23 ± 9	-11 (-17,-5)	<0.001	+
OHIP-22	51 ± 18	35 ± 15	-16 (-23,-9)	<0.001	53 ± 18	32 ± 17	-21 (-27,-14)	<0.001	+
VAS	5.2 ± 2.5	2.1 ± 1.9	-3.0 (-4.3,-1.7)	<0.001	5.1 ± 2.5	2.1 ± 2.2	-3.0 (-4.7,-1.3)	0.002	+
HADS anxiety	10.2 ± 6.5	7.0 ± 4.5	-3.2 (-5.2,-1.2)	0.004	10.6 ± 6.4	7.6 ± 4.3	-3.0 (-5.3,-0.7)	0.01	+
HADS depression	5.6 ± 4.1	3.5 ± 2.4	-2.1 (-3.8,-0.4)	0.02	5.9 ± 4.0	3.7 ± 2.9	-2.2 (-4.1,-0.3)	0.03	+

Individual cases where data has been generated beyond 6 months have indicated sustained results, and in some cases, further improvement. Other conditions associated with TMD and for which Cerezen has had reported success include Tinnitus.