



OVENTUSTM

BETTER SLEEP, BETTER HEALTH
and a BETTER LIFE



MEDIA KIT

Factsheet

About Oventus

- Oventus is a Brisbane-based medical device company established as a result of the ingenuity of Queensland dentist Dr Chris Hart.
- In 2011 Dr Hart approached experienced medical device entrepreneur and company executive, Neil Anderson, from the Waterfall Commercialisation Group to help turn his prototype into a product, and bring the product to market.
- Neil Anderson approached the peak Australian scientific body, the Commonwealth Science and Industrial Research Organisation (CSIRO) with an idea to design a new style of bespoke mouthguard that would change the lives of snorers and sleep disorder sufferers.
- The result is the **O₂Vent™** with its unique separate airway incorporated into its patented design.
- Oventus aims to become a world leader in sleep-disordered breathing by commercializing a revolutionary suite of oral appliances that provide increased airflow to people who snore and suffer from associated sleep disorders, including obstructive sleep apnea (OSA).
- Oventus uses the latest in innovative design and manufacturing taking advantage of the benefits of 3D metal titanium printing.
- The **O₂Vent™** is entered in the Australian Register of Therapeutic Goods (ARTG 230890) and has a 510k clearance (K160234) in the USA. It is currently on the market in Australia.
- The company is managed by founder and clinical director Dr Chris Hart, Chief Executive Officer Neil Anderson and VP of Global Sales, Marketing and Commercialization Elise Hogan.
- In February 2016, Oventus launched its new manufacturing facility in Brisbane. The site aids the development of a range of devices for snoring and sleep disordered breathing and also runs a patient clinic.
- On 8 December 2016, Oventus officially opened its 3D titanium printing facility at the CSIRO's Clayton (Melbourne) site.
- Oventus is launching the technology in the United States in January 2017.

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Media contact: Elise Hogan – +61 (0) 418 412 706 elise@oventus.com.au

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About sleep apnea

- Obstructive sleep apnea is a condition where the air passage in the throat becomes obstructed during sleep and causes people to stop breathing.
- Sleep apnea can be related to high blood pressure, stroke, irregular heartbeats and diabetes.
- Sleep apnea can also cause:
 - ✓ Chronic fatigue and tiredness
 - ✓ Poor concentration
 - ✓ Irritability and mood changes, neuro-cognitive under performance
 - ✓ Impotence and reduced sex drive
- The main cause of sleep apnea is obesity. Other contributing factors include:
 - ✓ Drinking alcohol, especially in the evening
 - ✓ Illnesses like reduce thyroid production
 - ✓ Taking sedatives
 - ✓ Nasal congestion and obstruction
 - ✓ Facial bone shape and the size of muscles
- According to the U.S. National Institutes of Health¹ and a paper by the University of Tennessee Health Science Centre (UTHSC)², an estimated 50-70 million American adults suffer from sleep disorders and 12-18 million adults have sleep apnea.
- Another American study (Increased prevalence of sleep-disordered breathing in adults) reports that 34% of American males and 17% of females aged between 30-70 years suffer from OSA.³

¹ <http://www.nhlbi.nih.gov/news/spotlight/fact-sheet/sleep-disorders-insufficient-sleep-improving-health-through-research>

² Paper: Incidence of Sleep Disorders Reported by Patients at UTHSC College of Dentistry: A Two-Year Follow-Up and Proposed Educational Program Chris S. Ivanoff, DDS; Frank Pancratz, BS Journal of Dental Education Volume 79, Number 5 November 20, 2014.

³ Peppard PE, Young T, Barnet JH, Pal'a M, Hagen EW, Hla KM. Increased prevalence of sleep-disordered breathing in adults. American journal of epidemiology 2013;177:1006-14.

⁴ Hart C, Lavery D, Czyniewski S, Beer F. Effects of a Novel Mandibular Advancement Device on AHI and Snoring in Patients with Obstructive Sleep Apnea: A Pilot Study. Journal of Dental Sleep Medicine 2016; 3(3): 97.

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About O₂Vent™

- The **O₂Vent™** is the ONLY sleep therapy providing relief for snorers and sleep disorder sufferers, which allows air to flow through to the back of the throat and avoids multiple sites of obstruction including the nose and soft palate and prevents tongue obstructions.
- Oventus's latest clinical study⁴ showed the **O₂Vent™ Mono** device was successful in treating obstructive sleep apnea. Snoring was eliminated in 82 per cent of patients and significantly reduced in 100 per cent of patients studied. The positive results included those people with nasal obstructions and consequently were mainly mouth breathers, including when they are asleep.
- Breathing Assist Solutions are currently running a clinical trial that commenced in July 2016, using the new generation **O₂Vent™ T** device. The results will be released on completion of the trial, later in 2017.
- The device incorporates a patented breathing vent which extends from the mouth like a whistle and creates a separate airway that allows air to flow directly to the back of the mouth.
- Using CAD design and 3D printing technologies, the mouthguard is created from medical-grade titanium making it thin and light to wear, unlike any of its oral device competitors.
- The **O₂Vent™**'s unique design with a separate airway does not require significant forward jaw movement and therefore has the advantage of not having the associated jaw discomfort like many of its competitors.
- The device has been refined since its initial launch in 2015 and a new **titratable** version became available in July 2016. This new version, the **O₂Vent™ T** allows patients to change their own jaw position, with supervision from their clinician. The improved design is smaller and allows lateral movement of the jaw for increased comfort.
- Its unique design allows for future connectivity with a Continuous Positive Airway Pressure (CPAP) machine if a patient's condition worsens as a replacement to the existing CPAP mask treatment. A clinical trial for this will be completed in the first half of 2017.
- The combination technology of the stand-alone device together with the CPAP connection for more advanced treatment puts the **O₂Vent™** in a class of its own.

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- More than 3800 patients have already registered with Oventus and demand is growing.
- The **O₂Vent™** is a custom made medical device, designed specifically for each patient and fitted and delivered under the supervision of a dentist. Treatment costs can be discussed with the patient's Oventus Accredited clinician. Total treatment costs on average US\$2,950 including device, and related dental consults and procedures. The Oventus medical device is an elective device. Oventus and the supplying dentist are not responsible for submitting any claims to insurance carriers. Public and private insurance plans may cover some of the cost of the device, however it will be the patient's responsibility to submit and follow up on all claims.

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Dr Chris Hart BSc. BSc.(Hons) M.Phil.(Cantab)
Clinical Director

The **O₂Vent™** is the brainchild of leading Queensland dentist Dr Chris Hart.

Dr Hart, himself a sleep disorder sufferer, was anxious to find an oral breathing therapy that was better than the current market alternatives.

Using his expertise as a professional dentist, he thought he could devise an oral appliance himself that would better increase airflow to the lungs and bypasses multiple sites of obstruction including the nose, tongue and soft palate.

He approached the CSIRO with the idea to develop a bespoke mouthguard that could help snorers and sufferers of sleep disorders.

The result is the **O₂Vent™** – a ground-breaking oral appliance that is poised to revolutionise the sleep apnea market.

Prior to establishing Oventus, Dr Hart owned and managed a national dental practice, training institute and management consultancy which he recently sold to private equity investors.

Dr Hart also acts as an adviser to various bodies within the dental industry as well as the health care sector more broadly on the commercial aspects of health care delivery.

As clinical director at Oventus, he is overseeing the launch of the **O₂Vent™** in collaboration with the CSIRO and working with a dental laboratory to develop a remotely-managed CAD imaging and 3D printing manufacturing platform.

Dr Hart graduated from the University of Queensland in 1998 with a Bachelor of Dental Science with Honours and a Bachelor of Science in Biochemistry.

He has studied at Cambridge University where he graduated with a Master of Philosophy in Biomedical Science in 1999.

Dr Hart is the media spokesperson for Oventus and is able to make comment on all aspects of the sleep disorders market and the potential impact the **O₂Vent™** technology will have on the world market.



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Investor Relations

Oventus listed on the Australian Securities Exchange on July 19 after raising \$12 million at 50 cents a share in a fully subscribed IPO.

The shares closed on their first day of trading at 70 cents, an increase of 40% on the IPO issue price of 50 cents.

The funds raised will enable Oventus to continue the commercialisation and distribution of the company's O₂VENT™ range of devices in Australia, develop additional devices, as well as begin expansion into other jurisdictions commencing with the US in January 2017.

The current global sleep apnea market for therapeutic devices has been estimated at US\$3.5 billion and is predicted to grow at 7.4% a year with the US making up more than 50% of the market.

The company's **O₂Vent™** range incorporates an airway to bypass multiple sites of obstruction including the nose, soft palate and tongue. The device and its airway advances the treatment of sleep conditions and provides patients with a new option to current devices.

Oventus has received clearance from the US Food and Drug Administration (FDA) for the **O₂Vent™ Mono** and **O₂Vent™ T** device.

Oventus' devices have been validated through a clinical trial and received strong positive feedback from users. The company continues to work on its pipeline of devices which will enable it to reach a wider number of patients suffering sleep disordered breathing issues.

The company's intellectual property is closely protected with its platform patent issued in Australia and with multiple patent applications in key jurisdictions.

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