

**Essence of Scientific Truth About Sleep**  
**Experts Speak ~ Part II**  
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## Introduction

### **Ebia celebrates its tenth anniversary and continues to encourage and inform about new findings in the field of sleep research**

Every night, all over the world, people settle down to sleep. In most cases, they are fortunate to find their way into Morpheus' arms easily enough. But a rising number of people are affected by a lack of sleep, suffering from sleeping disorders due to a host of reasons.

For the past ten years, EBIA – the European Bedding Industries' Association – has been focusing on the root cause of such disorders, given that a good bedding system is an absolute prerequisite for better sleep. To this end, it cooperates with the European Commission and other European associations in the field of consumer safety, renewal and recycling and product quality.

EBIA's primary goal is to make consumers understand that they need to start by buying a qualitative mattress, which has to be renewed within ten years, while emphasizing the importance of a good night's sleep for one's personal health.

That is why the Association encourages research that can improve insights into sleep and sleeping disorders, while engaging in a variety of related study projects. Above all, EBIA's aim is to provide the consumer with correct, relevant and useful information.

On the event of the tenth anniversary of EBIA, industry professionals will be meeting during the association's annual general assembly, to be held in Brussels, the capital of Europe. Each year, the association presents its EBIA award to a expert, who has made a significant contribution to the field of sleep research. At the same time, this is an excellent opportunity to review recent developments as regards research into sleep disorders. This press kit comprises abstracts of new findings and research, carried out by some of the world's most renowned sleep experts.

We hope that the research community can keep up this incredible momentum, bringing us ever closer to the solution for a good night's rest that everyone deserves.

Frank Verschuere  
*President*



## Dr. Damien Léger: regularity contributes to a better sleep



In France Dr. Damien Léger (48) is an authority when it comes to sleep science and sleep disorders. Léger trained as a neurophysiologist and is currently teaching at the Faculty of Medicine of the Decartes University in Paris. He also leads the Sleep and Vigilance Centre of Hôtel-Dieu in Paris. Léger and his team are specialized in problems of insomnia or hypersomnia. The centre among others screens the relation between sleep and environment. The influences of noise, light, temperature, and bedding on sleep are inventoried carefully by Dr. Léger and his team. The team also studies the relation between sleep and work. It is obvious that well rested people perform better, but what to do with people who suffer insomnia. And how is the sleep quality of people who regularly work night shifts? Damien Léger knows all about it.

Léger wrote several books, such as 'Bien dormir enfin' and 'Sleep disorders, impact on public health'.

### Improving sleep quality through regularity

The Hôtel-Dieu in Paris is not only one of the oldest and most famous hospitals of France; it is a real institute when it comes to sleep research. Fifteen doctors and fifteen technicians work on a daily basis at the sleep and vigilance centre. "I don't know exactly how many people, but I estimate a couple of thousands a year spend one or more nights in our lab", tells Damien Léger. "People do have stressful jobs nowadays and most of them like to do some activities after work. This evolution affects the amount of time we stay in bed and the quality of sleep we have. We have not enough time to fit everything in a day, so we take the hours away from the night."

At the Hôtel-Dieu, Dr. Léger and his colleagues not only examine the sleep patterns of individuals, they also try to help people to improve their sleep quality and the amount of time they sleep.

"Sometimes little changes in the sleep environment can already make a difference. Lighting and temperature are important. It is proven that orange and red lights help people relax, while blue light is more indicated to wake up. The ideal room temperature is between 18 and 20 ° Celsius. An average night should last between 7 and 8 hours", says Dr. Léger.

"By advising people, we try to improve their sleep. 10 % of the French population uses sleeping tablets. By teaching people how to have a better quality sleep, we are achieving encouraging results. 80 % of the people who ask us for help, experience an improvement of 20 % in sleeping time. Over all we notice that bad sleeping habits can often be solved by 'regularity'. A regular biorhythm is the most important basis for a good night sleep.

Consumption of coffee, alcohol and tobacco do not improve a person's sleep quality. People should also take care of what they eat and at what time. Dinner should be finished at least three hours before bedtime for example.



## Dr Duncan Bain: research into patient support systems



Dr Duncan Bain leads a research unit within the Aspire Centre for Disability Sciences, at the University College London, which evaluates patient support systems including mattresses, overlays, cushions, and other bedding.

Among his past projects has been a systematic review of risk factors for nosocomial complications of hospital bed occupancy. He has been closely involved in the development of British, European, and International standards for mattress and cushion evaluation, is a regular presenter at international conferences, and has published extensively on the subject in the scientific literature.

### **A review of the bio-hazards presented by dust mites in older mattresses**

House dust mites are positively linked to numerous allergic health problems. Mites are especially prevalent in mattresses.

Older mattresses can be shown to have higher dust mite populations than new mattresses, especially in damp environments.

The antigens contained in the mite faeces may continue to build up even if the mite population is stable.

Control of mites is probably best achieved by an integral approach combining enclosure of the mattress in an occlusive cover, cleaning, and certainly periodical mattress replacement.

Dr Bain feels that extended guarantees and prolonged replacement cycles for mattresses (up to 20 years in some cases) are a cause for concern and the standard industry recommendation of 7 years combined with improved consumer education with regard to hygiene and inimical environment (to dust mites) maintenance is prudent.



## Evert Hamans: helping people who suffer from apnea



Evert Hamans graduated at the Antwerp University in Belgium, where he specialized as an ear, nose and throat surgeon. He is currently working at the sleep centre of the UZ Antwerpen, where he forms part of multidisciplinary team, involving a neurologist, a psychiatrist, and a lung specialist.

Evert Hamans is also an active member of the ISSS, the International Sleep Surgical Society, and of the Belgian Association of Sleep Research.

### A titanium anchor to treat apnea

At present, the UZA (Antwerp University Hospital) is testing a revolutionary technique to help people who suffer from apnea, caused by a tongue base obstruction. Over 4 % of all men and over 2 % of women suffer from the breathing disorder apnea (caused by repeated partial or complete collapse of the airway) during their sleep. People with apnea have difficulties to breathe and to get enough oxygen during their sleep. Frequent arousals occur during sleep resulting in daytime symptoms such as hypersomnolence and fatigue, concentration impairment and an increased incidence of traffic accidents. Long lasting apnea causes heart and blood vessel diseases, as severe apnea weakens the vessel tissue making it vulnerable.

A decade ago, 'CPAP' was introduced as the solution for apnea. More recently, it has been established that many apnea patients would rather go on living with their disease than sleep with a mask covering their face. Although the existing CPAP technique is effective, it is rejected by most patients as people simply do not like to sleep with a mask on their heads, connected to an oxygen compressor by their side on their night table.

The team is currently testing a new tool for people who suffer from certain types of apnea. Known as the 'The Advance' system, a titanium implant connects an anchor to the tongue base\*. It is hoped that this will be a good alternative for people who cannot bear to wear the oxygen masks.

The first results are very promising. The tested people remain comfortable with the anchor under their tongue and feel better rested. The number of apneas drops significantly. The 'Advance System', which has been prototyped by an American company, has been positively evaluated by the Food and Drug Administration. A new survey on an additional population comprising 30 test subjects, is currently ongoing. If the outcome of this survey is good, the product will officially be launched on the market by the beginning of next year.

\* The Advance™ System consists of a tissue anchor with eight self engaging struts and pre-attached tether line, a titration spool with three holes to accommodate fixation to the inferior rim of the mandible, a trocar and cannula to facilitate access into the tongue base, a delivery system which allows for implantation of the tissue anchor through the trocar and a titration needle which allows for adjustment of the forward tension of the tissue anchor either during or after the implantation procedure. In addition, to facilitate removal of the system if necessary, a recapture system has been developed. The estimation is that a surgical treatment will cost round about 2000 euro.





## Professor Jürgen Zulley: the German ‘Pope of Sleep’



Prof. Dr. Jürgen Zulley is an authority when it comes to sleep research and improvement in Germany. As head of a sleep centre in Regensburg, an institute that teaches individuals how to improve the quality of their sleep, he makes regular appearances on German talk shows, radio programmes and the lecture circuit – there’s a good reason why he is called the ‘Pope of Sleep’ in his home country. The German sleep specialist has written 11 books on the subject and the latest one, ‘Mein buch vom guten Schlaf’, is already a bestseller.

Trained as an electromechanical engineer and a psychologist, Zulley has the right combination of skills for sleep research: the technical knowledge to stick electrodes on people’s bodies and the psychological background to reach the right conclusions. He started his career at the Max Planck-Institute where he worked as a scientific collaborator from 1975, and in 1993 he started to work for the University of Regensburg, where he’s leading the Medical Sleep Centre of the Psychiatric University Hospital in Regensburg.

### **Sleep hygiene can make all the difference**

Professor Zulley’s mission is to make people more aware about their sleep and for him it’s not just about behaviour. ‘One of the elements of our sleep culture is a good bed’, he says.

According to Zulley, people with real severe sleep problems can be diagnosed and helped in his sleep clinic, but most of the visitors to a sleep seminar can be helped with some sound practical advice.

All participants in Zulley’s seminars receive a questionnaire, which they are asked to send back after three months. ‘The results are quite spectacular,’ says Zulley. ‘91% of the people who came to a seminar state that they sleep better.’ Another remarkable result relates to the use of sleep medication: ‘Of all the people taking sleeping tablets, 80% stopped or reduced this habit after coming to my seminars.’

In Zulley’s opinion, most sleeping problems are due to stress or to bad sleep ‘hygiene’. This means that they eat late, drink late and watch too much television before going to bed. The German doctor’s main conclusion is fairly simple: ‘With a better knowledge of sleep, people’s quality of sleep will improve. The feeling of being helpless is a major stress factor. Compare it with a car: when you have problems with it and you don’t know anything about it, you will feel very helpless...’

