

NEWSLETTER

October 2009





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Homepage: www.esrs.eu



LETTER FROM THE PRESIDENT

Dear ESRS Members, dear Colleagues and Friends

We are proud and happy to announce that the ESRS Board has completed the selection procedure and appointed **Prof. Derk-Jan Dijk** to the position of new **Chief Editor** of the **Journal of Sleep Research**. We are confident that he will not only maintain the tradition of excellence established by his two predecessors but also bring new drive and creativity to our Journal to the top of the sleep field. A biosketch of Prof. Dijk is presented in this Newsletter. Prof. Peretz Lavie, whom we thank for the successful lead of JSR over the last two years, has kindly agreed to assist him during the first few months of his activity (which will officially start in January 2010). Good luck Derk-Jan!

The preparation of the **2010 ESRS Meeting in Lisbon** (14-18 September, 2010) is proceeding very well. The Board together with Congrex, the official PCO of the ESRS, the Portuguese Sleep Society (chaired by Dr. Marta Gonçalves) and the local committee (chaired by Professor Teresa Paiva) are working hard to make this event the most successful ever.

Please note that the deadline for submission of proposals for symposia is 31 October 2009. Joint Symposia have already been scheduled with the Portuguese and Brazilian Sleep Association/Societies, the Chinese Sleep Society, the European Biological Rhythms Society and the European Neurological Society. Also, different European networks (e.g. Insomnia, Narcolepsy, Restless legs syndrome, Sleep apnea) have each been given a 1.5 hour time slot to present their organisations and scientific activities. In November the Board and two representatives of the Scientific Committee will meet with Dr. Gonçalves and Prof. Paiva to finalise the selection of the symposia. In December the preliminary programme and call for abstracts will be available.

The choice of venue and date for the **2012 ESRS meeting** was finalised this summer. The meeting will take place in Versailles-Paris from September 4 to September 8, 2012. On the occasion of the 40th birthday of our Society special events and the publication of a book on the ESRS history are programmed.

As anticipated in the June Newsletter the ESRS is actively evaluating the possibility of organising scientific and teaching events in collaboration with European professional societies in addition to our biannual meeting and other traditional activities.

At present time we are finalising discussions about a large-scale **Teaching/Scientific event** in **Spring 2011** together with the **European Respiratory Society**.

In addition, preliminary discussions are currently taking place on the creation of an **ESRS Sleep School** in Summer 2011 or Spring 2012 for a limited number of young colleagues.

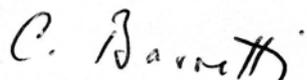
The ESRS Board has agreed to extend the contract to our secretary **Mrs Brigitte Knobl** until the end of December 2010. On this occasion I want to express the gratitude of the Board and the Society for the excellent work that she has done for the Society and its Journal.

In July 2009 **Science and Technology**, a journal with a very large distribution including all academic centres and Universities of Europe, published a 3 page presentation about sleep medicine, research and the ESRS which was prepared by the Board. This paper is attached in the Appendix and can be read/downloaded from the ESRS homepage.

The **earthquake of L'Aquila** (Italy) in April 2009 has caused tremendous human losses and material damages including the destruction of the newly built sleep laboratory of Prof. Michele Ferrara. I am proud to be able to say that the ESRS and other European National Sleep Societies and even single members of our Society have offered support to our unfortunate Italian colleagues, wishing them a rapid and successful return to a normal and scientifically productive life.

Prof. Ismet Karacan and **Prof. Franco Ferrillo**, two scientists of international reputation and long standing members of the ESRS passed away last summer. We will remember their scientific contributions as well as their warm and kind personalities. We express our sincere condolences to their families and to the Sleep Communities of Turkey and Italy.

I wish you warm and eventful autumn days.



Claudio Bassetti
ESRS President



NEW EDITOR-IN-CHIEF OF THE JOURNAL OF SLEEP RESEARCH

Derk-Jan Dijk is Professor of Sleep and Physiology and Director of the Surrey Sleep Research Centre in the Faculty of Health and Medical Sciences at the University of Surrey, Guildford, UK.

Dr Dijk has been active in sleep research for more than 25 years. He studied Biology at the University of Groningen, where he received his doctorate for his studies on spectral analysis of the sleep EEG and the two-process model of sleep regulation. He spent several years in the Institute of Pharmacology at the University of Zürich and gained further international research experience at Harvard Medical School.

Dr Dijk returned to Europe in 1999 to take up a faculty position at the University of Surrey, where he founded the Surrey Sleep Research Centre. His current research interests include the contribution of circadian rhythmicity, light, and sleep to cognition; contribution of 'clock' genes to inter-individual differences in sleep structure; identification of novel-biomarkers for susceptibility to the negative effects of sleep loss; understanding age and sex related differences in sleep physiology and sleep disorders; as well as the pharmacology of sleep and wake promotion.

Dr Dijk is associated with several professional organizations, including the European Sleep Research Society, the Sleep Research Society, the British Sleep Society, and the Society for Research on Biological Rhythms. He has served as Chair of the scientific committee of the ESRS and as a member of the scientific committee of the World Federation of Sleep Research Societies. He also acts as a consultant in the area of hypnotics to several pharmaceutical companies.

Dr Dijk has published more than 160 research and review papers in the area of sleep and circadian rhythms. He reviews manuscripts for all leading sleep and circadian rhythm journals, as well as for more general science journals. He has served as an Associate and Deputy Editor to SLEEP.

Throughout his research career, Dr Dijk has pursued integrative, multidisciplinary and translational approaches and he is an enthusiastic proponent of the benefits of a two-way interaction between basic sleep research and sleep medicine.



UPDATE OF THE 2010 ESRS CONGRESS IN LISBON

The ESRS Board and the local organising committee are working hard to prepare the next outstanding ESRS biannual congress, which will take place in Lisbon, Portugal, 14-18 September 2010. The ESRS has decided to appoint Congrex Switzerland as the official organiser of its event and preparations are going very well.

All members of the ESRS Board are actively working on the scientific programme of the ESRS 2010 meeting. The aim is to keep the high scientific level with various traditional sessions but also to introduce new ideas concerning contents in order to further increase the attractiveness of the meeting. The first day of the congress (Tuesday, 14 September 2010) will focus on teaching courses, the other four days will include keynote lectures, symposia, oral and poster sessions as well as different video sessions, case discussions and debates.

The ESRS Board is pleased to announce that the cooperation with other sleep societies will be continued and joint symposia with the Portuguese Sleep Association, the Chinese Sleep Society, the Brazilian Sleep Society, the European Neurology Society (ENS) and the European Biological Rhythm Society (EBRS) will take place.

The meeting will not only provide a congenial atmosphere for everyone to learn but will also offer a comfortable and relaxing atmosphere to relax and to meet old and new friends. A welcome reception at the congress center and the ESRS banquet in a very stylish location will round off this exceptional congress.

The Preliminary Programme & Call for Abstracts will be sent out and put online in December 2009. Registration as well as reservation for accommodation and flights will also open at the same time. And keep already in mind the abstract deadline on 4 March 2010!

You are cordially invited to regularly visit the website www.congrex.ch/esrs2010 for a continuous update on the event.

We look forward to welcoming you all to Lisbon



SYMPOSIA PROPOSAL LAST REMINDER

20th Congress of the European Sleep Research Society September 14 - 18th, 2010

Call for Symposia

DEADLINE FOR RECEIPT OF PROPOSALS IS OCTOBER 31ST 2009

The success of our next ESRS Congress in Lisbon will be strongly influenced by the symposia topics. With this **call for symposia** all members of ESRS are invited to contribute to the programme by proposing a symposium for the 20th ESRS congress.

The following criteria and procedures will apply:

Symposia should be clearly different from an oral presentation session, in that they should have an integrative nature. This should apply to the topic of the symposium, but preferably also to the integration of clinical, basic human and animal work. We especially encourage proposals for such integrative symposia. Note that only symposia which meet the formal requirements shall be considered.

Symposia proposers must be ESRS members and willing to chair the symposium. The co-chair will be nominated by the board. The same person cannot chair two symposia. At least 50% of the speakers in the symposium must be ESRS members. Each speaker can only participate in one symposium. If the final selection of symposia includes two or more contributions by the same speaker, the board will contact the respective chairpersons to solve this problem.

The duration of each symposium is 2 hours. There should be no more than 4 speakers, so that there is time for a short introduction and a comprehensive, final discussion. Note that speakers proposed for your symposium should have agreed to participate.

No financial support is provided by the ESRS to symposium participants, and their congress registration fee is not waived.

Please send your proposals by email to the ESRS secretary, **Philippe Peigneux** at secretary@esrs.es

Your proposals should arrive per email at his office **before October 31st, 2009**. No other way of delivery, other than electronically, will be accepted. Each submission will be acknowledged by return email. If you have not received such confirmation within 24 hours of your proposal, please fax immediately Philippe Peigneux at +32 2 650 2209.



20th Congress of the European Sleep Research Society
September 14 - 18th, 2010

Symposium Proposal

DEADLINE FOR RECEIPT OF PROPOSALS IS OCTOBER 31ST 2009

Note: this form can be downloaded in MS-Word format on the ESRS website (www.esrs.eu/)

Title:

Summary of intention and reasons why the symposium should be considered:

Chairperson: Name:

Affiliation:

Speaker 1: Title of contribution:

Name: Consent: Yes

Affiliation:

Speaker 2: Title of contribution:

Name: Consent: Yes

Affiliation:

Speaker 3: Title of contribution:

Name: Consent: Yes

Affiliation:

Speaker 4: Title of contribution:

Name: Consent: Yes

Affiliation:

Proposer:

Name and Full address:

e-mail:

Date:

Signature of the proposer:

Send per email to: Philippe Peigneux, ESRS secretary at secretary@esrs.eu

Your proposals should arrive **before October 31st, 2010**. No other way of delivery, other than electronically, will be accepted!

Each submission will be acknowledged by return email. If you have not received such confirmation within 24 hours of your proposal, please fax immediately Philippe Peigneux at +32 2 650 2209.



ESRS-EU MARIE CURIE PROJECT 2007-2010: TRAINING IN SLEEP RESEARCH AND SLEEP MEDICINE

2010 Programme

Dear Members,

The Programme Committee of the ESRS-EU Marie Curie Project “Training in Sleep Research and Sleep Medicine” is pleased to inform you that the final announcement and the application form for the 2010 programme will be posted on the ESRS website and will be sent by e-mail to all members within December 2009.

The 2010 programme will be “clinically” oriented and aimed towards young researchers/clinicians who are interested in clinical sleep research and sleep medicine. The training course will be held in Bertinoro, at the Residential Centre of the University of Bologna on March 5-8, while the practical training periods will be prevalently carried out in late spring or early summer.

We also inform you that the 170 trainees who participated in the programme will be invited to a three-day final symposium, which will be held in Kloster Seeon, Bavaria, on July 3-6. During this meeting, the trainees will have the opportunity to attend different workshops and to show and discuss the results of their own research activity with experienced researchers. A diploma of participation in the “Sleep Research and Sleep Medicine Education Programme” will be given to trainees who participate in each of the three events.

Since this project represents a very relevant step forward for the visibility and the importance of Sleep Research and Sleep Medicine in Europe, we ask all members to support the project and to spread information about it as best they can.



SUPPORT OF SLEEP LABORATORY IN L'AQUILA AFTER EARTHQUAKE

Thank You Note from Prof. Michele Ferrara

Dear President and dear Board Members of the European Sleep Research Society,

I wish to testify my deep gratitude to all the friends of the ESRS, of the National Sleep Societies and to anyone else who answered to your call in support of our Sleep Laboratory in L'Aquila.

I am really grateful to all of you for such an impressive and prompt response, a clear sign of solidarity and friendship that I will never forget.

In these coming months, I am sure we will rebuild a better and more productive Sleep lab in L'Aquila, and it will be possible also thanks to your contributions. A plate on the laboratory door will attest that it has been rebuilt in part thanks to the donations collected by the ESRS.

I hope to see you soon to personally thank all of you.

My warmest regards,

Michele Ferrara

Donations for the Reconstruction of the Sleep Laboratory in L'Aquila

The ESRS Board decided to support the reconstruction of the Laboratory of L'Aquila with a donation of 5,000 €.

The Board thanks the following ESRS Members, National Sleep Societies, and other contributors for their donations:

Prof. Wojciech Jernajczyk: 50 €

Prof. Dr. Thomas Penzel: 25 €

Dr. Ivan Pigarev: 100 USD

Dr. Patricia Tassi: 50 €

Austrian Sleep Research Association: 1,000 €

Belgian Association for Sleep Research and Sleep Medicine: 2,000 €

Czech Sleep Research and Sleep Medicine Society: 368,60 €

Swiss Society of Sleep Research, Sleep Medicine and Chronobiology: 1,000 €

Edegem Autonome Fonds: 500 €

Sleep Medical Center, Haifa, Israel: 500 USD

The Sleep Laboratory in L'Aquila before ...



... and after the earthquake





ESRS TEACHING AND SCIENTIFIC EVENTS

20th Congress of the European Sleep Research Society

Date: September 14 - 18, 2010

Venue: Lisbon, Portugal

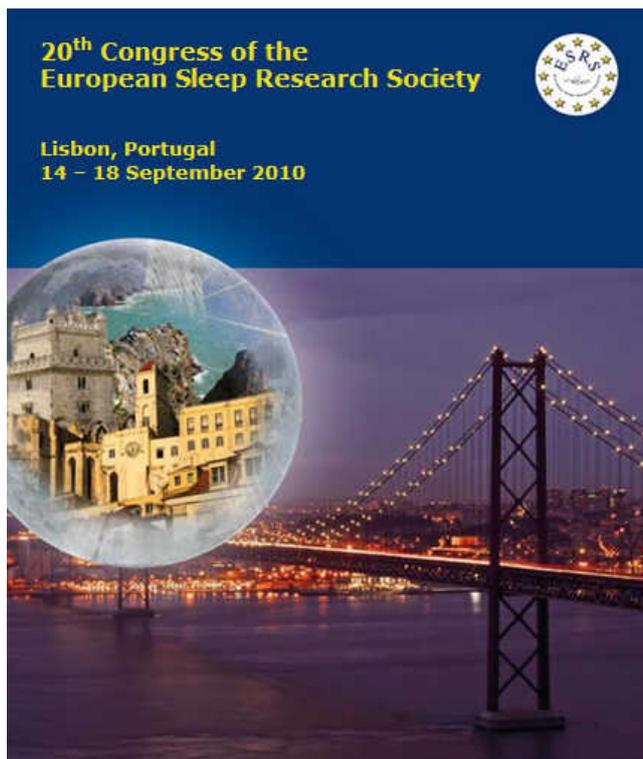
Web site: www.esrs2010.com/

Deadlines

Symposia submission:
October 31, 2009

Abstract submission:
March 4, 2010

Early registration:
April 28, 2010



The ESRS Board sincerely apologizes for the unfortunate scheduling conflict with the Jewish holiday of Yom Kippur falling on the 17th and 18th September, 2010. Regrettably, limited venue booking options prevented from rescheduling the meeting. The programme committee will be asked to schedule presentations of concerned colleagues beyond the critical dates as far as possible.

Please do not hesitate to contact us with any concerns or questions.

21st Congress of the European Sleep Research Society

Date: September 4 - 8, 2012

Venue: Paris-Versailles, France



FUTURE MEETINGS

Mini-Symposium on Environmental Factors and Sleep

Date: October 16, 2009
Venue: Brussels, Belgium
Programme: [Download](#)
Scientific Organizers: EASI-Sleep-Project Partners

Registration is free, but an email with affiliation details should be sent to rcluydts@vub.ac.be.

6th Congress of Asian Sleep Research Society (ASRS)

34th Annual Meeting of Japanese Society of Sleep Research (JSSR)

16th Annual Meeting of Japanese Society for Chronobiology (JSC)

Date: October 24-27, 2009
Venue: Osaka, Japan
Web site: www.asrs2009.org/

The conferences will be held as joint congress organized by the Asian Sleep Research Society, the Japanese Society of Sleep Research, and the Japanese Society for Chronobiology.

3rd International World Congress on Sleep Medicine World Association of Sleep Medicine (WASM)

Date: November 7 - 11, 2009
Venue: São Paulo, Brazil
Web site: www.wasm2009.com.br/



JOB OPPORTUNITIES

Job opportunities can be accessed through the ESRS website at:

http://www.esrs.eu/cms/front_content.php?idcat=124



APPLICANTS FOR MEMBERSHIP

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NEW MEMBERS

The Society welcomes the following new members whose application was announced in the Newsletter June 2009.

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SCIENTIFIC COMMITTEE

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Glasgow, Scotland, United Kingdom

Dr. Paul Franken
Lausanne, Switzerland

Dr. Lino Nobili
Milan, Italy

Prof. Thomas Penzel
Berlin, Germany

Dr. Christelle Peyron
Lyon, France

Dr. Joan Santamaria
Barcelona, Spain

Sleep research, sleep medicine...

*...and the European Sleep
Research Society...*

Modern sleep research started in the 1930s and 1940s with the use of the electroencephalogram (EEG) – for the first time in humans – by H Berger in Germany to measure wakefulness and sleep, and by the observation by the Nobel laureate W R Hess in Switzerland that sleep can be induced in animals by the stimulation of a specific brain area, proving sleep as an active process of the brain.

Modern sleep medicine followed the discovery of the EEG and the recognition of different sleep stages, including the so-called REM sleep (characterised by Rapid Eye Movements, dreaming activity and physiological muscle paralysis/ atonia) first described in 1953 in the US. Centres for sleep medicine were founded in France, the Czech Republic, Italy and Germany in the late 1950s and 1960s. Such sleep disorders as narcolepsy, sleep apnea, and restless legs syndrome were discovered first in Europe.

The European Sleep Research Society (ESRS) was founded in 1972 ‘to promote interest in, and to facilitate the dissemination information about sleep research and related topics’. The ESRS now counts almost 1,000 full members and over 5,000 associated members who come from such different areas as neuroscience, physiology, pulmonary medicine, neurology, psychiatry, and psychology. This diversity of approaches and perspectives offers a unique opportunity for fruitful interactions and for a translational approach between basic and clinical disciplines. In that sense, the ESRS, as the entire field of sleep, ideally exemplifies the needs and opportunities of multidisciplinary approach in science and medicine.



The ESRS Board Members and the Presidents of National Sleep Societies of over 20 European countries during their meeting in Valencia, Spain, 1st May 2009

The Journal of Sleep Research is the official scientific organ of the ESRS, which organise biannually a scientific meeting.

The biology of sleep

Following the recognition of sleep as an active process of the brain (to be differentiated from anaesthesia and coma) and the existence of different sleep stages, research embarked in the elucidation of the mechanisms underlying sleep generation and regulation. Specific brain areas in the brainstem and in the so-called diencephalon were found to be essential for a normal sleep-wake cycle. Furthermore, the appearance of sleep and wakefulness was shown to reflect the interaction between two distinct regulative mechanisms, one dependent from the duration of wakefulness (homeostatic regulation) and the other one from the variation over the 24 hours of the activity of an ‘inner clock’ (circadian regulation).

More recently, it was also found that a genetic component (eg. the clock

gene PER3) partially determines an individual’s response to sleep loss and individual resistance to the accumulation of sleep pressure throughout the day. Functional investigations have yielded further evidence that cognitive performance and underlying cerebral activity differ mostly between morning and evening chronotypes under conditions of elevated sleep pressure. Additionally, homeostatic markers of sleep pressure have been shown to modulate activity in core cerebral structures for circadian regulation, demonstrating both in animal and human the interactive nature of circadian and sleep homeostasis processes.

The biological function of sleep remains a matter of debate. Besides a restorative function, it is now suggested that sleep plays an important role in brain plasticity mechanisms and memory consolidation. Imaging studies have congruently revealed continued expression and modulation of learning-related cerebral activity during post-training sleep

stages, eventually leading to performance improvement overnight and long-term reorganisation of the cerebral underpinnings of stored memories. Others have evidenced a prominent role of slow wave sleep oscillations as well as phasic events (eg. sleep spindles) in brain plasticity.

Recent combinations of functional neuroimaging and EEG have contributed to delineate better sleep-wake processes and the way they are generated and regulated in the human brain.

Sleep research in Europe

At present, about 130 centres are active in the field of sleep research in 24 different European countries. Approximately one-third of these centres are established in France, Germany, and Italy.

In more than 50 centres, research activity is aimed at the widening of basic aspects of sleep science. In about 50% of these labs, studies are directly carried out on humans, while animal models are used in the others. Basic sleep researchers in Europe are traditionally active in the study of the neurophysiologic, molecular and genetic determinants of regulatory processes underlying sleep occurrence, the relationship between sleep and cardio-respiratory, endocrine, metabolic, and thermoregulatory functions, the relationship between sleep and circadian rhythms, and the effects of sleep loss on vigilance and cognitive functions.

About 80 centres are active in the field of clinical sleep research, mainly in neurology, psychiatry, pulmonary medicine and paediatrics. Research activity deals with the whole spectrum of topics related to sleep pathology and sleep-related disorders from childhood to old age, in particular: insomnia, narcolepsy, sleep-disordered breathing, and movement disorders in sleep. Furthermore, the association between sleep and either psychiatric or neurological disorders, like Parkinson, stroke and epilepsy, is fruitfully approached.

Specific taskforces have been established by the ESRS that are aimed at improving the impact of research activity at a European level on the majority of the topics listed above.

Sleep medicine and sleep education in Europe

Over the past decades, sleep medicine has developed from a medico-scientific niche into a full-grown discipline, grounded in science, and worthy of respect and attention of the entire medical enterprise. The rapid expansion of its professional content has brought about a significant change in clinical practice, which now concentrates more on fundamentals of sleep pathology and is oriented towards multidisciplinary patient care. The year 2005 has been pivotal in this respect, as sleep medicine became an independent specialty in the USA. In the same year, sleep medicine was granted the status of a formally accredited medical subspecialty by the Chamber of Physicians in Germany.

For many years the ESRS has fostered the development of clinical sleep medicine. In 2004, a Committee was founded that interacted with European National Sleep Societies (ENSS) to create a framework from which new impetus could be given to guidelines in the field. In 2006, the ESRS issued European guidelines on accreditation of sleep medicine centres, and in 2009, European guidelines on certification of sleep professionals were published. Both landmark documents appeared in the *Journal of Sleep Research*. Through the ESRS Sleep Medicine and Educational Committees, efforts are being made to establish a curriculum for professionals in this specialty field.

The ESRS organises an annual sleep training course, which is sponsored by the EU. In 2007, the ESRS has been financed by the European Union within the frame of the FP6 'Marie Curie' programme for a four-year project entitled 'Training in

Sleep Research and Sleep Medicine'. This programme, which involves 160 young trainees, consists of annual teaching courses and practical training periods in different sleep research/medicine centres around Europe.

Teaching and training courses organised by ENSS are also endorsed by the ESRS. This endeavour aims at formalising the field and to help other countries in Europe in the achievement of official recognition for sleep medicine as a specialty field.

Sleep disorders: frequent, relevant, treatable...often neglected

Sleep disorders are very common (>10% of the population) and their frequency generally increases with age. Sleep disorders can have profound effects on daytime functioning, quality of life but also on the risk of cardiovascular disorders and mental health. Furthermore, sleep disorders may represent the first symptom of an underlying medical disorder such as depression or Parkinson's. The presence of sleep disorders may affect also the course of other medical conditions such as headache, epilepsy, and stroke. Finally, sleep disturbances and sleep loss are a frequent cause of driving accidents.

Patients with sleep disorders can present with complaints of poor sleep (insomnias), excessive daytime sleepiness (hypersomnias), and undesired events during sleep (parasomnias, such as sleepwalking and violent behaviours in sleep). Several causes – sometimes in combination – including psychiatric, medical and neurological disorders but also medications, illicit drugs, alcohol can lead to similar sleep problems. Sometimes a specific cause for a sleep disorder cannot be found: in such cases, genetic but also psychosocial factors may play an important role.

Sleep disorders should be managed first by General Practitioners. The

absence of a curriculum in sleep and sleep disorders in many (if not most) European countries prevents, however, an adequate education of medical professionals. This lack of awareness and teaching contrasts not only with frequency and relevance, but also with good diagnostic and treatment possibilities of sleep disorders.

In trained hands, most sleep disorders can in fact be accurately diagnosed and well managed without the need for expensive investigations in specialised sleep centres. In selected cases, such investigations are, however, needed for proper diagnosis.

A variety of treatment options are available for patients with sleep disorders. The correct and skilled use of hypnotics, dopaminergic agents, antidepressants, melatonin, behavioural treatment, changes in sleep habits, devices delivering a positive pressure in the upper airways during sleep will eventually improve their condition.

Insomnia: affects 15% of the population, predicts depression and causes dramatic health costs

Insomnia is one of the most frequent subjective complaints, affecting chronically 10-15% of the population and causing 15% of GP consultations in Germany. Impaired sleep initiation and maintenance persisting for at least four weeks define insomnia and are a hallmark of numerous psychiatric disorders, frequently occur in many medical conditions and may constitute a disorder called primary insomnia. Insomnia has a prominent negative effect on quality of life and induces dramatic health cost. In addition, patients with longstanding sleep problems are particularly prone to depression and recent research suggests that reduced sleep quality and quantity might increase physical health risks. Particularly obesity and diabetes seem to be linked to persisted sleep disturbances. The increasing demands on individuals and more and more flexible schedules of private activities and work, including

shift work, are prominent challenges for the sleep regulation brain networks resulting in a '24-hour society' in vigilance and performance problems potentially leading to lapses of attention, which sometimes may have dramatic consequences (eg. the Exxon Valdez catastrophe).

Obstructive Sleep Apnea (OSA): a cause of daytime sleepiness and a risk factor for arterial hypertension, stroke and cardiac disorders

OSA is defined by symptoms such as excessive daytime sleepiness and daytime functioning impairment, with more than five obstructive events per hour occurring during sleep. The prevalence of the disease is very high ranging from 5 to 15%, increasing linearly up to 60 years old. Regarding OSA morbidity, there is now substantial evidence that there is a causal relationship between OSA and Excessive Daytime Sleepiness, with cognitive impairment, including increased risk of traffic accidents, and cardiovascular morbidity and mortality. The cardiovascular consequences seem to appear early in the disease, eg. occurrence of atherosclerosis without significant classical cardiovascular risks during OSA. A more recent field of research is the metabolic impact of OSA. In the general population, OSA is associated with glucose intolerance. OSA severity is also associated with the degree of insulin resistance. Prevalence of the Metabolic Syndrome is higher in patients with OSA than in obese subjects without OSA. Treatment with continuous positive airway pressure (CPAP) seems to improve glucose metabolism both in diabetic and non-diabetic OSA but mainly in non-obese subjects.

The cellular and molecular mechanisms of the cardiovascular consequences as well as the relative role of obesity and OSA in the pathogenesis of metabolic alterations are still largely unknown. Both are intensively studied in clinical and experimental models. Although most of

the general population cohorts come from the US, many pathophysiological studies and most interventional studies have been conducted in Europe.

Restless legs syndrome (RLS): one of the most common neurological disorders

RLS is characterised by sensory discomfort localised in the extremities, which leads to an urge to move them, and which appears at rest and in the evening hours. RLS can be a cause of chronic insomnia and often reduces severely the sleep and life quality of affected patients. RLS affects 5-15% of the general population but is even more frequent in pregnant women, and patients with iron deficiency and renal failure. The diagnosis is usually made on clinical grounds. Treatment with dopaminergic drugs is effective in a few days in most patients.

Restless legs together with narcolepsy are a sleep disorder for which a genetic predisposition has been recognised. This offers new avenues for better understanding of the cause and future treatment of these conditions.



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