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Combating dementia and Alzheimer's through prevention and new medications

It is thought that around 390,000 people in Austria will be affected by dementia by 2023. To counter this development, neurologists are turning to preventive medicine, which has the potential to cut the incidence of dementia by up to 30%. Revolutionary progress is also being made in the field of Alzheimer's medication, which in future will not just treat the symptoms of the disease, but its causes too. This and other neurological complaints – the third most common type of disorders worldwide – will be at the heart of discussions at the Congress of the European Academy of Neurology (EAN) from 25-28 June at the Austria Center Vienna.

"In Austria alone, around 130,000 people have been diagnosed with dementia. In light of demographic change, this figure is set to double or even triple over the next five to ten years. Prevention is essential to counter this trend, as it has the potential to cut the number of cases by up to 30%," confirmed Prof. Thomas Berger, Chair of the Scientific Committee of the EAN Congress, President of the Austrian Society of Neurology (ÖGN) and Head of the Department of Neurology at the Medical University of Vienna. "On top of this, we are witnessing pioneering breakthroughs in treatment methods. And while we are not quite there yet, the future of treating early-stage Alzheimer's will be in therapies designed to combat its causes," Berger added.

Preventing up to 30% of all dementia cases

Dementia is an abnormal decline in brain function that goes beyond biological aging. Symptoms include a reduction in cognitive, emotional and social capabilities. Short-term memory, thinking skills, and speech and motor function can all be impacted. It primarily affects older adults aged 55 or over. However, not all forms of dementia are the same, as it can have a range of causes. "In the case of vascular dementia, which after Alzheimer's is the second-most common form of dementia, the condition is caused by a circulatory issue in the brain, which is usually triggered by several small strokes. It is precisely these situations and those where dementia is caused by ingestion of toxic substances, such as excessive alcohol consumption, that risk minimisation and brain training can significantly reduce the risk of a person developing dementia," Berger explained. If risk factors such as high blood pressure, excessive cholesterol, smoking, diabetes or significant overweight can be lessened through a healthy lifestyle and people engage in cognitive training, up to a third of dementia cases could be avoided.

Revolutionary biomarker treatment approach for early-stage Alzheimer's

There is also good news for people suffering from mild cognitive impairment, which is a precursor to Alzheimer's. In diagnostics, the beta amyloid peptide and the tau protein in the brain are key biomarkers. If there is a build-up of these proteins in the brain, new techniques



such as cerebrospinal fluid analysis and certain positron emission tomography (PET) scans can be used to successfully diagnose mild cognitive impairment or Alzheimer's. This diagnostic principle is also being used in the development of new causal treatments which are attempting to capture the beta amyloid peptide and tau proteins and bind them in the body to prevent deposits from forming in the brain. "And even though here, too, treatments are still in their infancy, the development of these new therapeutic approaches is revolutionary because until now drugs were only able to treat the symptoms and only slow down cognitive deterioration as a result," Berger said.

Approval granted for biomarker drug in USA

The first drug to target a reduction in the Alzheimer's biomarkers was approved in the USA almost precisely a year ago, following the publication of a major long-term study. This approval was met with controversy in some quarters in the medical community, as although it showed that the drug reduced beta amyloid peptide deposits, it has not yet demonstrated clinical effects in the patients it was administered to. In other words, no impact on the symptoms was observed during the two-year-long approval process. As a result, the drug was not granted approval by the European Medicines Agency (EMA). "All the same, this treatment approach is truly revolutionary. It is inspiring a host of other international research and drug development programmes and will be used in future in the treatment of mild cognitive impairment and early-stage Alzheimer's," Berger predicted. "As neurologists it is now our job to pay more attention to Alzheimer's research and developments related to the disease, and build up and expand early diagnostics capacity for Alzheimer's in Austria, so that we are in a position to use these new drugs in future," Berger concluded.

About the EAN

The Vienna-headquartered European Academy of Neurology (EAN) is an umbrella organisation with more than 40,000 individual members. Each year, its annual congress attracts around 7,000 participants. This year's event will take place as a hybrid meeting at the Austria Center Vienna.

About IAKW-AG

Internationales Amtssitz- und Konferenzzentrum Wien, Aktiengesellschaft (IAKW-AG) is responsible for maintaining the Vienna International Centre (VIC) and operating the Austria Center Vienna. The Austria Center Vienna is Austria's largest conference centre, with 19 halls, 180 meeting rooms, and some 26,000 m² of exhibition space, and is one of the top players on the international conference circuit.

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