

# EAN Fact Sheet

Country profile of Austria

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The EAN is pleased to present this fact sheet to each and every national neurological society, offering key insights into the latest epidemiological, economic, and demographic trends. This data aims to support informed decision-making and enhance understanding of neurological conditions on both national and European level with information provided by three EAN projects: the [“Burden of Neurological Disease in Europe”](#) study, the EAN [“COst of Illness in Neurology in EUrope \(COIN-EU\)”](#) project, the EAN NNS 2021-2022 survey.

# Burden of Disease in Europe – Collaboration with IHME

Neurological disorders are the second most common cause of disability and premature death in the European Region and their prevalence and burden will likely increase with the progressive ageing of the European population. Greater attention to neurological diseases must be paid by health authorities for prevention and care. For this reason, the European Academy of Neurology is conducting research on gaining and analysing reliable data on the number of patients with neurological diseases.

These data are obtained from the currently most developed data base, the [Global Burden of Disease \(GBD\)](#) study of the Institute for Health Metrics and Evaluation (IHME), University of Washington, Seattle. The burden of neurological disorders in Europe was calculated for the year 2021 as prevalence, mortality, disability-adjusted life-years (DALYs), years of life lost (YLLs), and years lived with disability (YLDs) for the countries in the EU and the WHO European region for a total of 26 neurological disorders.

The study in Europe is run by the EAN and led by Prof. Dr. Günther Deuschl, Dr. Maurizio Leone and Maria Konti, M.Sc., in close collaboration with the leading scientists of the IHME Institute.

In the table below, you will find the national total counts for DALYs, YLDs, YLLs, prevalence, and deaths, the age-standardised rates by neurological disorder category for the years 1990 and 2021, and the percentage change for both of your country and the WHO Europe.

Diseases with counts less than one have been excluded and the number of decimal points has been adjusted individually for each disease.

	Counts (thousands)		Age-standardized rate (per 100 000 people)		Percentage change, 1990-2021	
	2021	1990	2021	Austria	WHO Europe	
<b>All Neurological Disorders</b>						
DALYs	372,522	3,577	2,461	-31.2%	-29.0%	
Deaths	13,301	127	59	-53.5%	-43.2%	
Prevalence	4,449,458	44,341	44,473	0.3%	0.3%	
YLDs	191,480	1,478	1,506	1.8%	2.9%	
YLLs	180,988	2,098	955	-54.5%	-44.4%	
<b>Alzheimer's disease and other dementias</b>						
DALYs	98,132	449	426	-5.1%	-2.5%	
Deaths	6,074	25.44	24.43	-4.0%	-2.8%	
Prevalence	143,898	700	654	-6.6%	-2.1%	
YLDs	30,042	146	135	-7.1%	-2.6%	
YLLs	68,090	303	291	-4.1%	-2.5%	
<b>Chromosomal abnormalities</b>						
DALYs	572	8.25	8.56	3.8%	-12.3%	
Prevalence	6,242	92	96	3.4%	-12.8%	
YLDs	572	8.25	8.56	3.7%	-12.4%	
<b>Covid-19 (neurological)</b>						
DALYs	1,571	-	15	-	-	
Prevalence	15,747	-	151	-	-	
YLDs	1,571	-	15	-	-	
<b>Cystic echinococcosis</b>						
DALYs	1	0.02	0.01	-50.6%	-18.3%	
Prevalence	4	0.06	0.04	-44.0%	-9.0%	
YLDs	1	0.02	0.01	-50.5%	-18.4%	
<b>Diabetic neuropathy</b>						
DALYs	25,782	75	162	114.7%	98.1%	
Prevalence	207,250	605	1,292	113.7%	97.9%	
YLDs	25,782	75	162	114.7%	98.1%	

<b>Down syndrome</b>						
DALYs	421	5.70	5.91	3.7%	-19.6%	
Prevalence	4,553	63	65	3.5%	-20.7%	
YLDs	421	5.70	5.91	3.8%	-19.8%	
<b>Encephalitis</b>						
DALYs	1,075	13	10	-22.3%	-30.1%	
Deaths	30	0.23	0.21	-9.2%	-15.9%	
Prevalence	2,006	22	18	-19.5%	-13.6%	
YLDs	202	2.28	1.91	-16.4%	-12.0%	
YLLs	872	11	8	-23.5%	-31.0%	
<b>Epilepsy</b>						
DALYs	11,559	122	117	-4.4%	-12.6%	
Deaths	158	0.83	1.05	27.1%	3.9%	
Prevalence	31,492	322	333	3.4%	3.3%	
YLDs	7,336	85	78	-8.3%	-11.3%	
YLLs	4,223	38	39	4.2%	-14.3%	
<b>Guillain-Barre Syndrome</b>						
DALYs	141	0.68	1.07	56.7%	12.4%	
Prevalence	475	2.31	3.62	57.0%	12.4%	
YLDs	141	0.68	1.07	57.0%	12.4%	
<b>Idiopathic intellectual disability</b>						
DALYs	953	17	12	-28.8%	-19.7%	
Prevalence	20,295	343	254	-25.9%	-21.2%	
YLDs	953	17	12	-28.8%	-19.7%	
<b>Klinefelter syndrome</b>						
DALYs	3	0.02	0.03	9.6%	5.7%	
Prevalence	248	3.26	3.62	10.9%	5.5%	
YLDs	3	0.02	0.03	9.8%	5.5%	

	Counts (thousands)		Age-standardized rate (per 100 000 people)		Percentage change, 1990-2021	
	2021	1990	2021	Austria	WHO Europe	
<b>Meningitis</b>						
DALYs	913	56	11	-79.9%	-80.5%	
Deaths	25	0.84	0.20	-76.2%	-75.4%	
Prevalence	1,735	51	17	-67.4%	-66.7%	
YLDs	140	4	1	-66.0%	-64.6%	
YLLs	773	51	10	-81.1%	-81.3%	
<b>Migraine</b>						
DALYs	57,720	620	616	-0.6%	0.0%	
Prevalence	1,522,683	16,562	16,466	-0.6%	0.3%	
YLDs	57,720	620	616	-0.6%	0.0%	
<b>Motor neuron disease</b>						
DALYs	4,689	27.62	31.85	15.3%	37.5%	
Deaths	194	0.82	1.14	38.1%	54.1%	
Prevalence	1,151	6.76	8.73	29.2%	19.8%	
YLDs	244	1.44	1.86	29.2%	19.5%	
YLLs	4,445	26.18	29.99	14.6%	38.5%	
<b>Multiple sclerosis</b>						
DALYs	5,743	36	43	20.8%	-5.0%	
Deaths	116	0.64	0.74	15.7%	-12.5%	
Prevalence	10,323	58	83	43.4%	26.4%	
YLDs	2,593	15	21	42.8%	25.5%	
YLLs	3,150	21	22	5.3%	-22.2%	
<b>Nervous system cancer</b>						
DALYs	15,894	152	128	-15.9%	-3.3%	
Deaths	573	4.02	3.76	-6.5%	10.8%	
Prevalence	2,573	24	29	21.7%	35.9%	
YLDs	313	2.53	2.88	13.8%	25.3%	
YLLs	15,581	150	125	-16.4%	-3.7%	

<b>Neurocysticercosis</b>						
DALYs	1,750	16.78	11.66	-30.5%	-42.5%	
Prevalence	8,890	74.60	58.22	-22.0%	-32.8%	
YLDs	1,749	16.73	11.65	-30.3%	-42.5%	
YLLs	1	0.05	0.01	-81.8%	-70.7%	
<b>Neurosyphilis</b>						
DALYs	5	0.05	0.04	-20.0%	-43.6%	
Prevalence	60	0.62	0.53	-13.4%	-11.7%	
YLDs	5	0.05	0.04	-20.1%	-43.4%	
<b>Other neurological disorders</b>						
DALYs	7,060	59	64	9.6%	25.8%	
Deaths	197	1.09	1.23	12.8%	45.0%	
YLDs	2,267	13	23	73.6%	62.9%	
YLLs	4,740	45	41	-9.3%	14.2%	
<b>Parkinson's disease</b>						
DALYs	18,126	81	86	6.0%	5.6%	
Deaths	1,073	4.59	4.71	2.5%	4.0%	
Prevalence	29,569	107	146	36.5%	21.9%	
YLDs	4,128	15	21	36.4%	21.4%	
YLLs	13,998	66	65	-1.0%	2.0%	
<b>Stroke</b>						
DALYs	11,201	135	98	-27.7%	-26.9%	
Prevalence	40,827	477	351	-26.4%	-21.9%	
YLDs	11,201	135	98	-27.7%	-26.9%	

	Counts (thousands)		Age-standardized rate (per 100 000 people)		Percentage change, 1990-2021	
	2021	1990	2021	Austria	WHO Europe	
<b>Stroke</b>						
DALYs	94,387	1,549	486	-68.6%	-52.6%	
Deaths	4,861	88	21	-75.7%	-55.6%	
Prevalence	195,927	1,152	1,140	-1.1%	-19.2%	
YLDs	29,279	161.84	163.17	0.8%	-18.9%	
YLLs	65,107	1,387	323	-76.7%	-55.3%	
<b>Tension-type headache</b>						
DALYs	7,444	71.50	71.22	-0.4%	-1.6%	
Prevalence	3,103,358	31,783	31,760	-0.1%	-0.8%	
YLDs	7,444	71.50	71.22	-0.4%	-1.6%	
<b>Traumatic Brain Injury</b>						
DALYs	7,372	82	56	-32.0%	-28.2%	
Prevalence	56,097	620	421	-32.1%	-28.0%	
YLDs	7,372	82	56	-32.0%	-28.2%	

Table 1: National total counts for DALYs, YLDs, YLLs, prevalence, and deaths, age-standardised rates by neurological disorder category for 1990 and 2021, and percentage change of 1990-2021. Diseases with counts less than one have been excluded and the number of decimal points has been adjusted individually for each disease.

## Neurological conditions

In figure 1 below, the top 20 neurological disorders are ranked based on the national age-standardised rate of DALYs per 100 000 population in 2021 for all age groups.

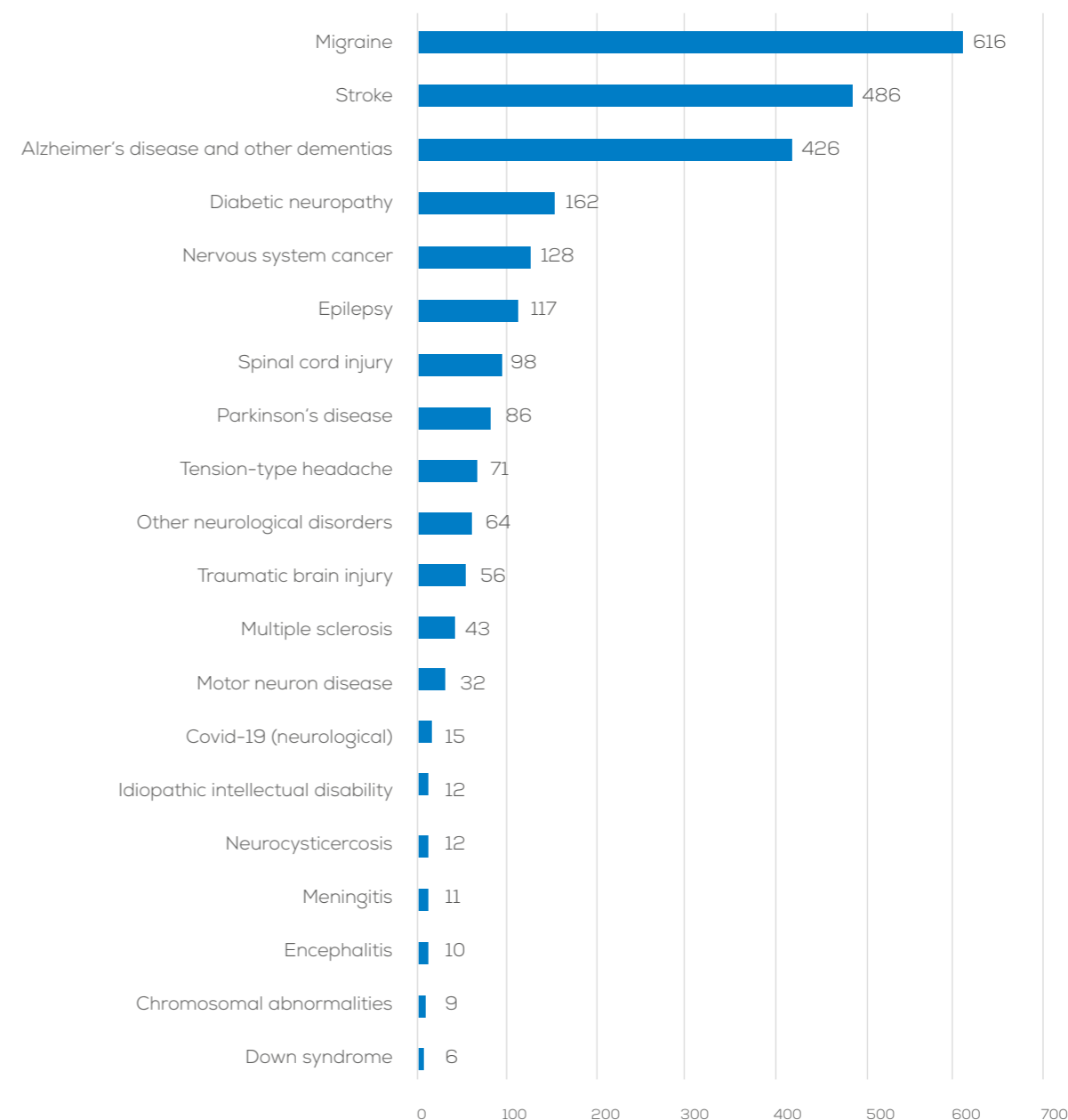


Figure 1: National age-standardised DALYs per 100 000 population by neurological disorder in 2021.

## DALYs per 100 000 population

In order to show how the diseases are evolving both in **Austria** and the European Region, we present the temporal pattern of DALYs per 100 000 population over the last three decades in the figure below:

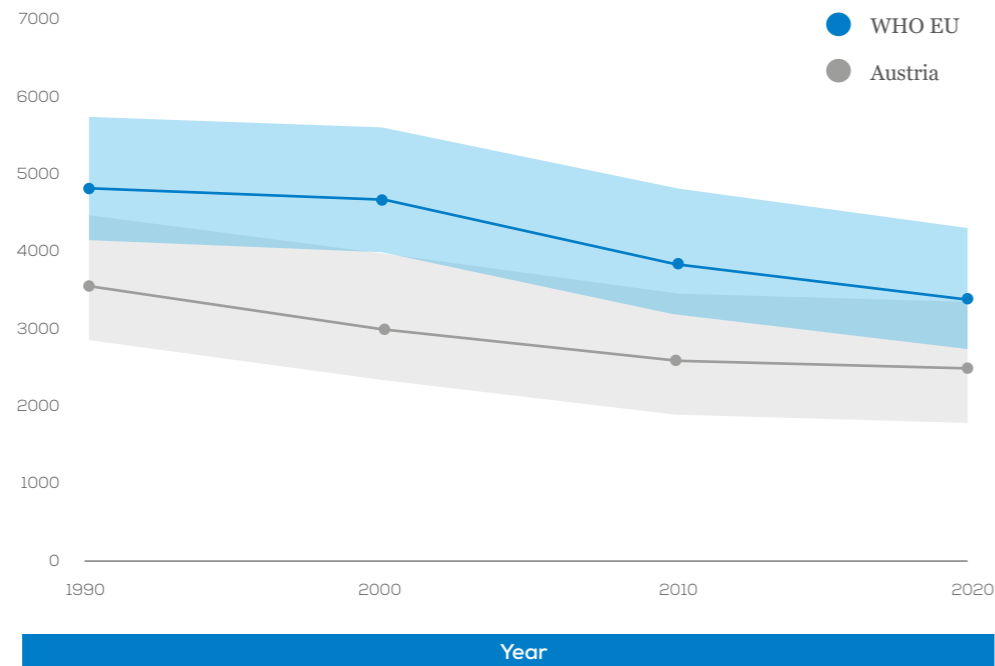


Figure 2: Age-Standardized DALYs per 100 000 population over the last 3 decades.

In figure 3 we show the distribution of DALYs rate per 100 000 population by age group divided in female and male:

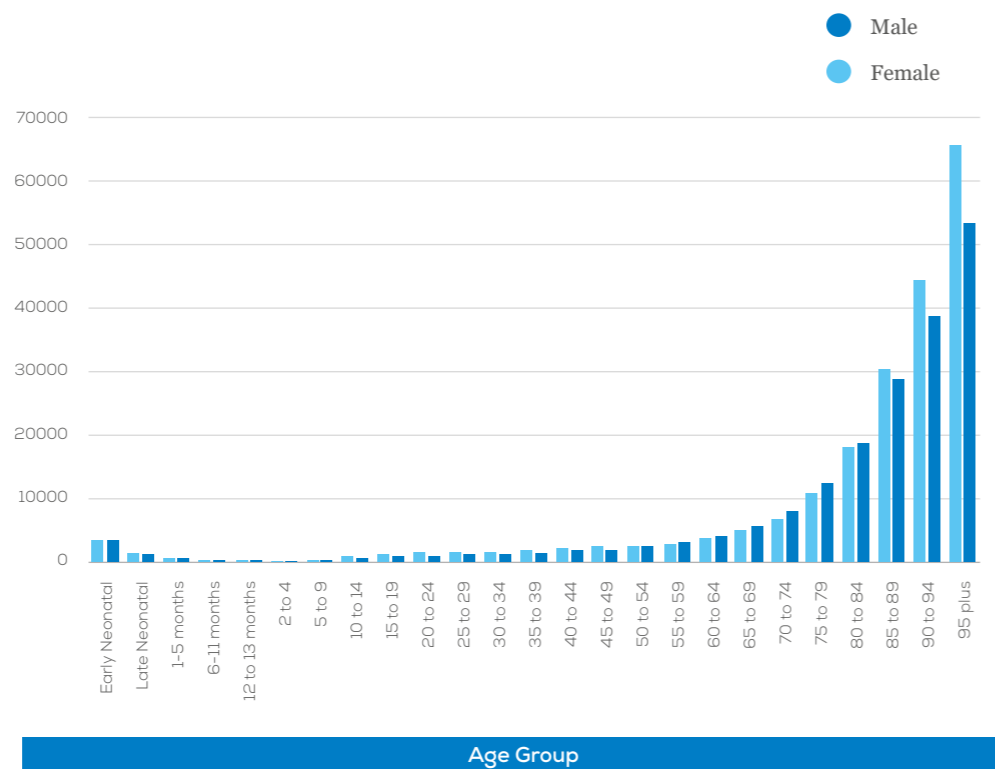


Figure 3: National DALYs per 100 000 population by age group and sex in 2021.

Extensive data and analyses are provided in the published paper and it will be communicated to the National Neurological societies.

# COIN-EU (Cost of Illness in Neurology in Europe)

The Cost of Illness in Neurology in Europe (COIN-EU) project, which was launched in 2021, is run by EAN and led by Prof. Richard Dodel, Prof. Uwe Siebert and Prof. Günther Deuschl. This project is overseen at the EAN by Prof. Paul Boon, Prof. Claudio Bassetti and Prof. Thomas Berger.

The aim of the study is to assess disease- and country-specific annual costs for 12 categories of neurological diseases in Europe with a focus on the prevalent adult patient population. Costs have been calculated in three main categories: a) direct health care costs (i.e., all goods and services related to the prevention, diagnosis and treatment of a disorder; e.g. physician visits, hospitalizations and pharmaceuticals), b) informal care costs (i.e. other goods and services related to the disorder; e.g. social services, special accommodation and informal care), and c) indirect costs (i.e., lost productivity due to work absence or early retirement).

As the literature review revealed many gaps in research for many diseases and many countries, the group has developed a method to provide estimations of the above cost categories for the cases where no data are available. Data are imputed for those countries which belong to the same GNI category with countries that do present data. In case none of the countries which belong to the same GNI category present data, then an imputation is not possible.

In the table below, costs for **Austria** have been calculated for the diseases with available data, in three main categories where the numbers represent millions € PPP 2019.

million € PPP  
2019

Informal Care

Neurological Disorder	Total Costs	Direct Costs	Informal Care Costs	Indirect Costs
Headache disorders	11,811.7	4,455.5	1,615.7	5,740.5
Sleep disorders	10,112.7	4,385.3	-	5,727.4
Alzheimer's disease and other dementias	3,536.3	1,466.7	2,069.5	0.1
Stroke	1,846.8	1,242.4	500.3	104.1
Traumatic brain injury	962.4	343.4	207.6	411.4
Polyneuropathies	404.4	180.9	-	223.5
Parkinson's disease	399.4	269.8	101.0	28.6
Multiple sclerosis	392.4	247.6	52.5	92.3
Idiopathic epilepsy	196.8	99.3	-	97.5
Motor neuron disease	15.4	8.5	4.5	2.4
Brain and central nervous system cancer	13.7	8.3	5.4	-
Meningitis	3.6	3.6	-	-
<b>Total Costs:</b>	<b>29,695.5</b>	<b>12,711.1</b>	<b>4,556.5</b>	<b>12,427.8</b>

Table 2: Total, direct, informal care and indirect costs per neurological disorder. Number of diseases depends on the availability of original studies and imputation of data.

# NNS Survey 2021

In December 2021, the EAN conducted a survey among the national neurological societies. By combining the data from the Burden of Disease in Europe study across all European Region countries, we can provide demographic data regarding the workforce of neurologists in Europe for the 37 countries who took part in the survey.

The figure below represents the number of neurologists, fully specialised and in training per 100 000 population.

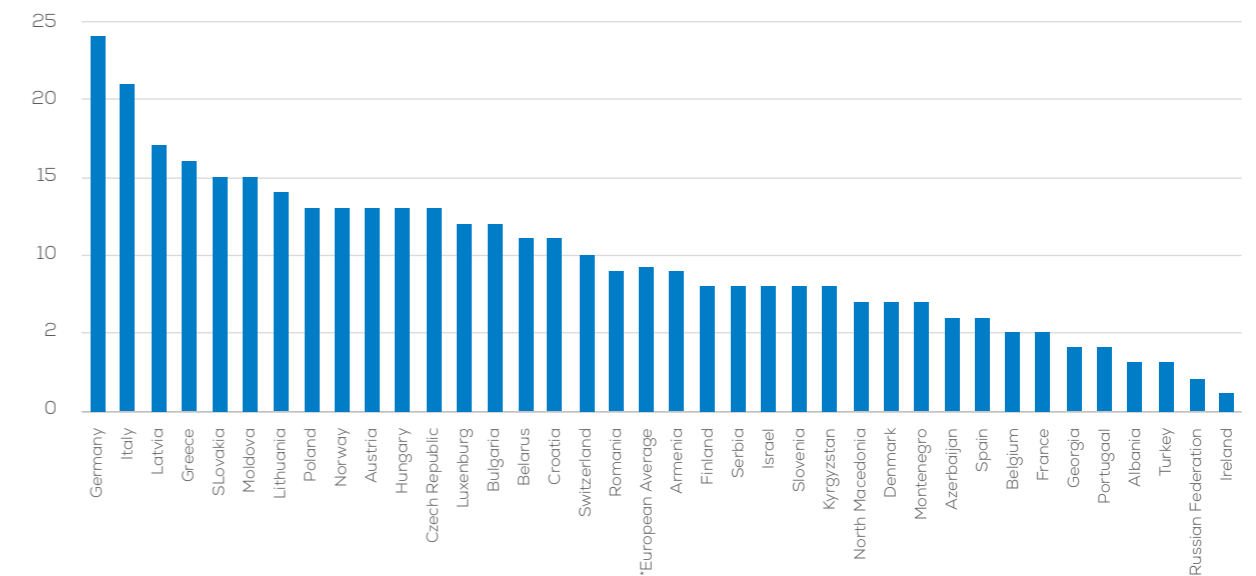


Figure 4: Number of neurologists (fully specialised and in training) per 100 000 population.

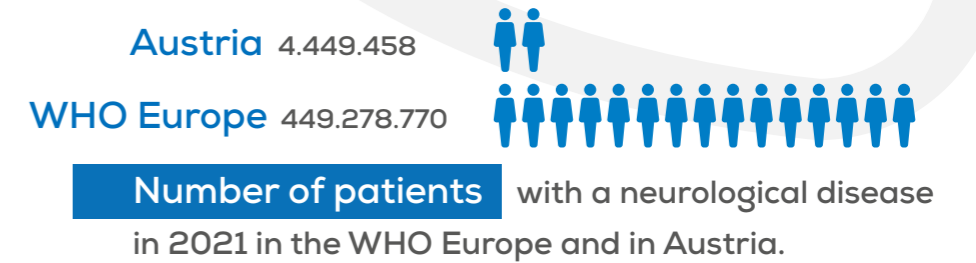
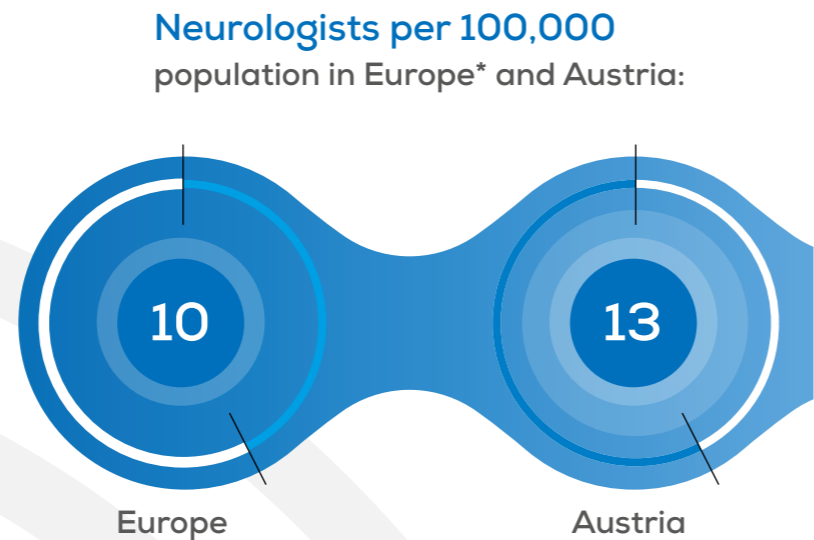
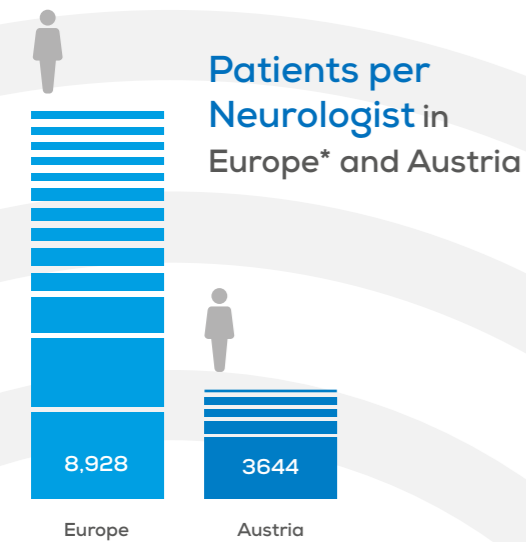
In the last figure the number of patients per neurologist is displayed:



Figure 5: Number of patients per neurologist (fully specialised and in training).

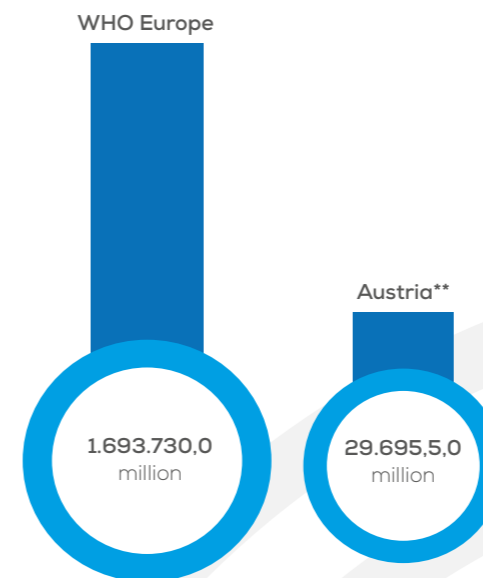
# Neurological Diseases in Europe and Austria:

Key Data and Trends from 2021



### Percentage change of age-standardised DALYs, Deaths and prevalence from 1990 to 2021:

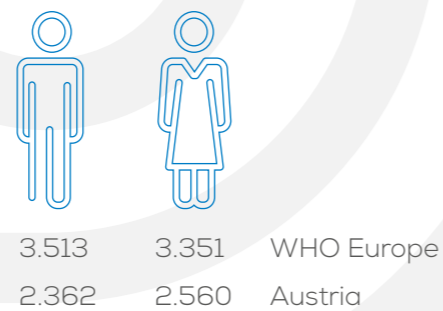
	WHO Europe	vs	Austria
DALYs	-28.98%		-31.20%
Deaths	-43.19%		-53.51%
Prevalence	0.34%		0.30%



### Most prevalent neurological diseases in Austria in

# 2021

- 1 Tension-type headache
- 2 Migraine
- 3 Diabetic neuropaty
- 4 Stroke
- 5 Alzheimer's disease and other dementias



### Age-standardised DALYs rate per 100,000 population in 2021 by sex

### Leading neurological diseases in Austria by total deaths in 2021:

1. Alzheimer's disease and other dementias
2. Stroke
3. Parkinson's disease
4. Nervous system cancer
5. Motor neuron disease

\*Based on data from 37 countries of the WHO European region  
 \*\*Cost estimates are derived from country-specific data available for specific diseases.

