



Parkinson & omgeving

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 Radboud Universitair Medisch Centrum

twitter @BasBloem



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Improving the lives of people with Park

President
 Executive Director
 Please visit Parkinson

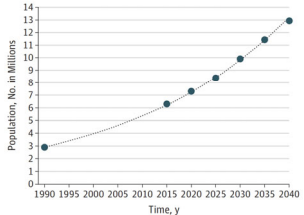
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VIEWPOINT The Parkinson Pandemic—A Call to Action

E. Ray Dorsey, MD
 Center for Health and Technology,
 Department of Neurology, University of Rochester Medical Center, Rochester, New York.

Bastiaan R. Bloem, MD, PhD
 Radboud University Medical Center, Donders Institute for Brain, Cognition and Behavior, Department of Neurology, Nijmegen, the Netherlands.

Figure. Estimated and Projected Number of Individuals With Parkinson Disease, 1990-2040

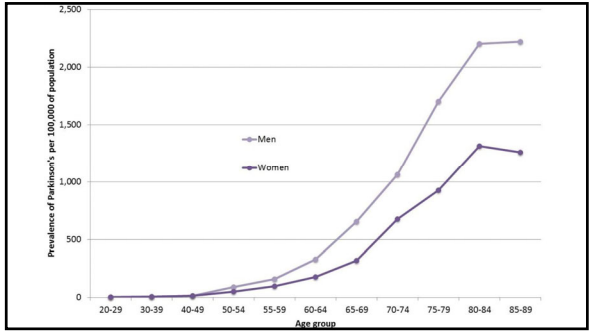


Year	Population (Millions)
1990	3.0
1995	3.5
2000	4.0
2005	4.5
2010	5.5
2015	6.5
2020	7.5
2025	8.5
2030	9.5
2035	11.5
2040	13.5

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Komt het door veroudering?

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The image shows the book cover and title page of 'An Essay on the Shaking Palsy' by James Parkinson. The cover is green with gold lettering. The title page is white with black text, including the author's name and a testimonial from a medical professional.

ESSAY ON THE SHAKING PALSY.

By JAMES PARKINSON, Member of the Royal College of Surgeons.

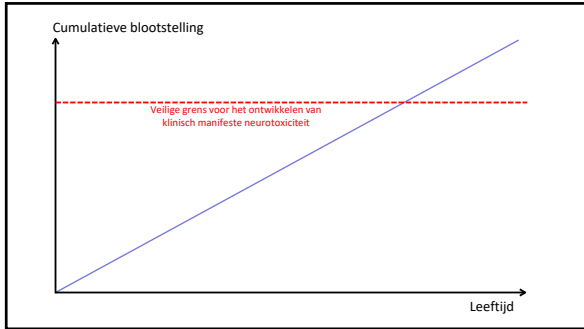
LONDON: Printed by J. JOHNSON, Strand, in the Strand, 1800.

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	All-age numbers (thousands)		Age-standardised rate (per 100 000)	
	2015	Change from 1990 to 2015	2015	Change from 1990 to 2015
Stroke				
DALYs	118 627 (114 862 to 122 627)	21.7% (17.8 to 25.7)	1777 (1721 to 1835)	-32.3% (-34.4 to -30.0)
Deaths	6326 (6175 to 6493)	36.4% (32.4 to 40.8)	101 (99 to 104)	-30.0% (-32.0 to -27.7)
Prevalence	42 431 (42 068 to 42 767)	59.2% (58.4 to 59.9)	627 (621 to 631)	-9.8% (-10.3 to -9.4)
Alzheimer's disease and other dementias				
DALYs	23 779 (20 118 to 27 886)	98.4% (95.0 to 101.9)	396 (334 to 464)	-5.7% (-7.2 to -4.2)
Deaths	1908 (1587 to 2229)	114.9% (113.1 to 119.6)	32 (27 to 38)	-3.4% (-4.8 to -1.4)
Prevalence	45 956 (40 179 to 52 656)	111.7% (109.1 to 114.2)	761 (663 to 876)	2.4% (1.7 to 3.2)
Parkinson's disease				
DALYs	2059 (1832 to 2321)	111.2% (102.4 to 118.1)	33 (29 to 37)	10.8% (6.5 to 14.3)
Deaths	117 (114 to 121)	149.8% (135.0 to 161.4)	2 (2 to 2)	22.6% (15.7 to 28.4)
Prevalence	6193 (5726 to 6777)	117.8% (113.2 to 122.8)	98 (90 to 107)	15.7% (13.3 to 18.3)

disability-adjusted life-years (DALYs) Global Burden of Disease, *Lancet* 2017

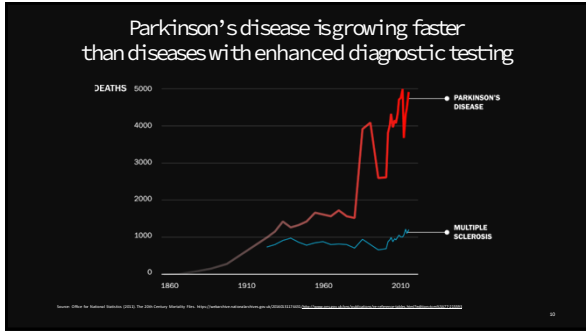
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Door betere diagnostiek?

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Of door genetische factoren?

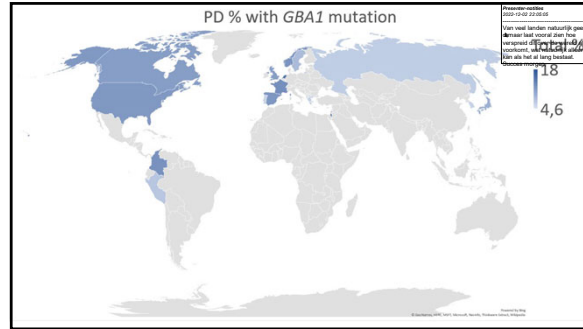
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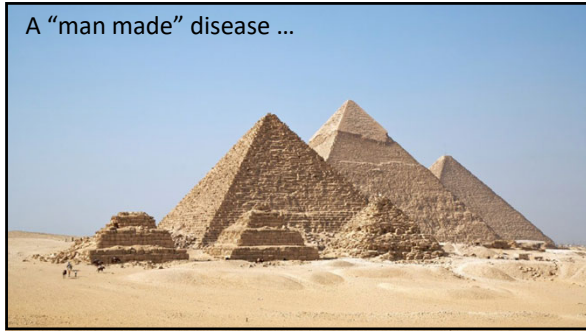
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Genetic factors are rare and interact with environment

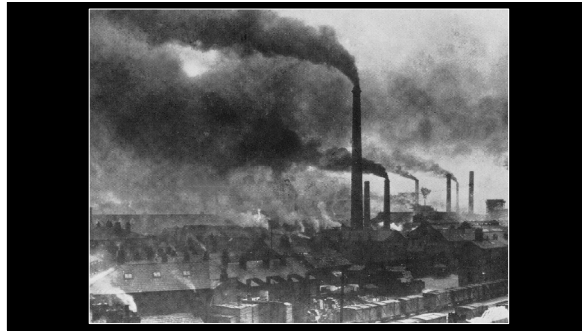
	GENES LINKED TO PARKINSON'S	FREQUENCY IN PARKINSON'S	ENVIRONMENTAL INTERACTIONS
AUTOSOMAL DOMINANT	SNCA	<<1%	Paraquat Rotenone
	LRRK2	~3%	Paraquat
	VPS35	<1%	Rotenone
AUTOSOMAL RECESSIVE	Parkin	~1%	Paraquat Rotenone
	PINK1	<1%	Manganese
	DJ1	<<1%	Rotenone
	ATP13A2, PLA2G6, PARK9, FBXO7	<<1%	Manganese
GENETIC RISK FACTOR	GBA	5-14%	MPTP

Sources: Blom C, Westenberger A. Genetics of Parkinson's disease. Cold Spring Harbor Perspectives Med. 2012;2(1):a008888. ; Hernandez DG, Reed J, Singleton AB. Genetics in Parkinson disease: Mendelian versus non-Mendelian inheritance. Neurochem Res. 2002;27(12):1370-74. doi:10.1007/s12031-002-0008-9

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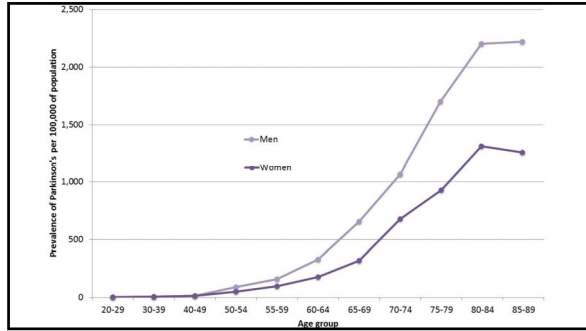
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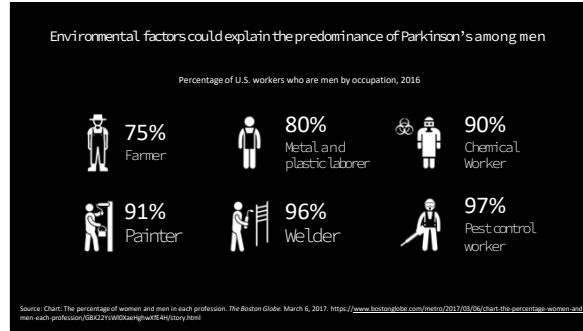
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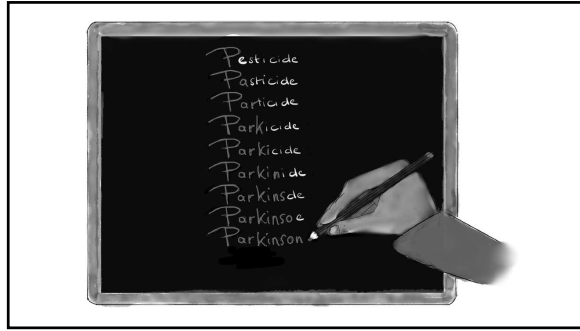
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THE LANCET **Neurology**


Correspondence

MPTP-induced parkinsonism: an historical case series

In 1982, seven young adults developed severe and irreversible parkinsonism shortly after they injected themselves with a synthetic heroin.¹ Sample analysis revealed that this synthetic heroin consisted of 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP),² a potent neurotoxin targeting neurons within the substantia nigra.³

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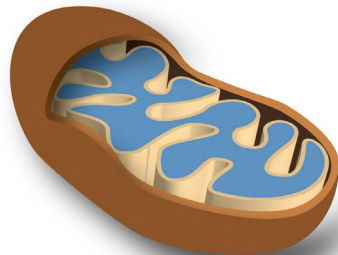
CN1=CC=C(C=C1)-c2ccccc2
 MPP⁺

CN1=CC=C(C=C1)-c2cc(NC)cc2
 Paraquat

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Inhibitie van mitochondriën

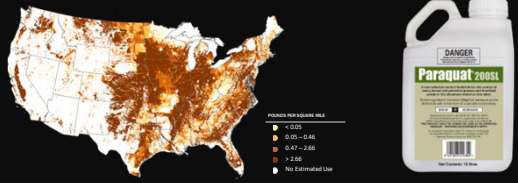
(Net als:
- genetische bijdrage Parkinson)
- veel andere pesticiden)



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**Over 20 studies have linked pesticides to Parkinson's;
paraquat doubles the risk of Parkinson's disease**

Estimated use of paraquat on U.S. Agricultural land, 2016

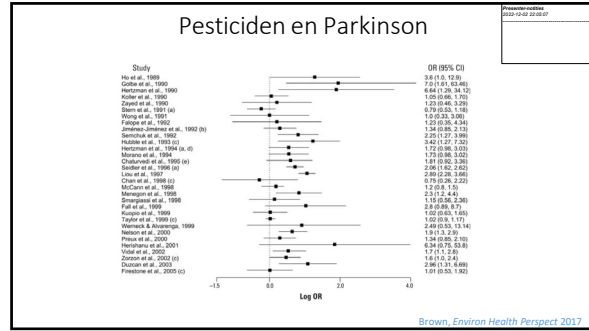


Legend:

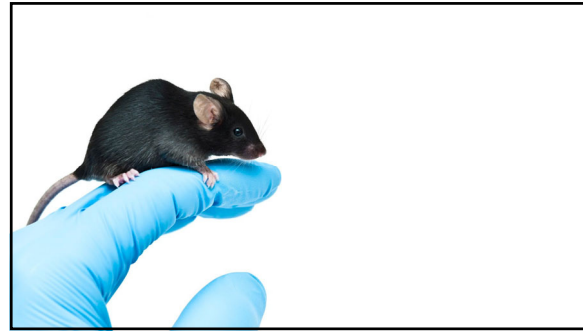
- No data
- 0.01 - 0.46
- 0.47 - 2.66
- 2.67 - 10.00
- No Estimated Use

Sources: U.S. Geological Survey; Sallie Costello, Mylin Cockburn, Jeff Brumstein, Yuhai Zhang, Beate Ritz, Parkinson's Disease and Residential Exposure to Mirex and Paraquat From Agricultural Applications in the Central Valley of California, *American Journal of Epidemiology*, Volume 165, Issue 6, 21 April 2007, Pages 513-526, <https://doi.org/10.1093/aje/kwz006>

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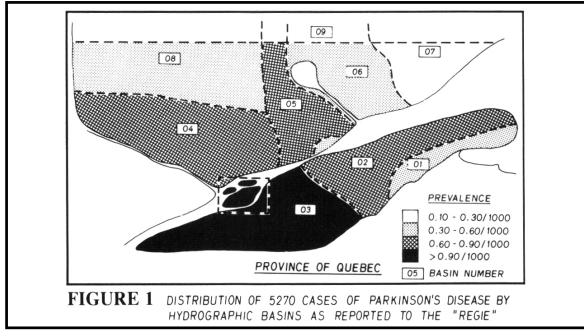
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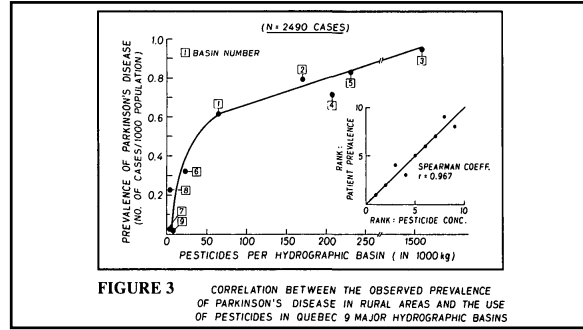
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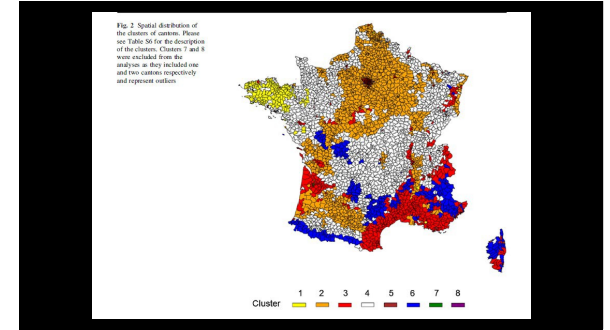
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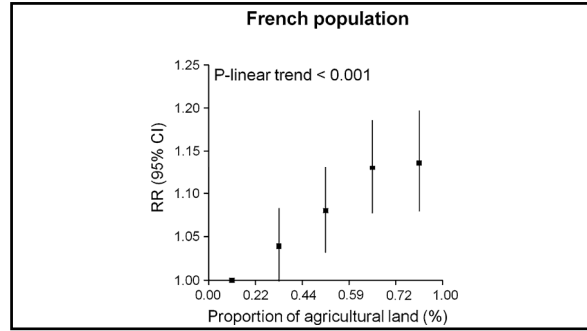
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Omstreden landbouwgif gevonden in wijn van Nederlandse supermarkten


22-09-2021 07:00 | **Duizendtal en verontzorging** | Auteur: **Wim Dronkers, Jozef Lemmens**



Onderzoek door Eerwindaag

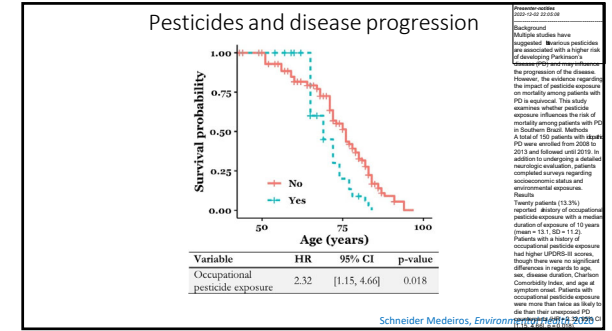
Daar zijn meer dan 500 verschillende soorten pesticiden gebruikt, blijkt uit onderzoek van Eerwindaag naar groente en fruit in de elf grootste supermarkten van Nederland: Albert Heijn, Jumbo en Lidl.

Elf mandarijnen, aardbeien (uitgevoerd uit Lidl), balsemsaus (uitgevoerd Albert Heijn) en papaverolieën zijn rijk aan pesticiden. Eerwindaag liet deze producten op een bepaald aantal pesticiden testen door een onafhankelijk laboratorium.



In Reactie naar berichten van Albert Heijn, Jumbo en Lidl is het landbouwgif niet gebruikt. Dat blijkt uit onderzoek van Eerwindaag. Ook zijn er andere van pesticiden verboden op twee van de vijf onderzochte producten.

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Rijksinstituut voor Volksgezondheid
en Milieu
Ministerie van Volksgezondheid,
Welzijn en Sport


**Gewasbeschermingsmiddelen en
neurodegeneratieve ziekten: mogelijkheden
om de toelatingsvereisten te verbeteren**

RIVM-briefrapport 2021-0153
H. Heusinkveld et al.

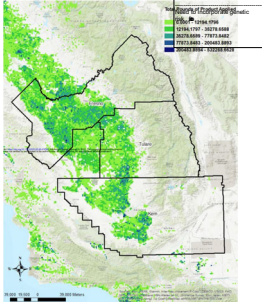
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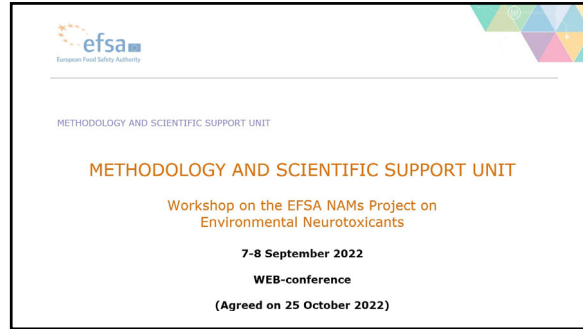
Kimberly Paul, UCLA



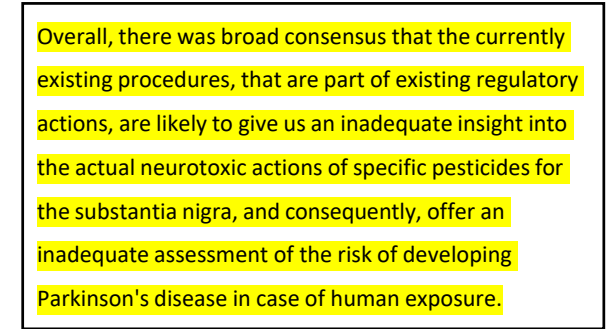
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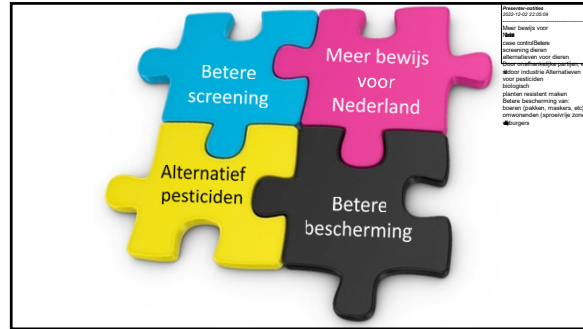


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Wat zeg ik nadrukkelijk NIET?

1. Pesticiden zijn de enige oorzaak van Parkinson
2. De pesticiden die momenteel gebruikt worden zijn niet veilig
3. Pesticiden in de voedselketen verhogen het risico op Parkinson
4. Glyfosaat is een aangetoonde oorzaak van Parkinson
- 5....

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