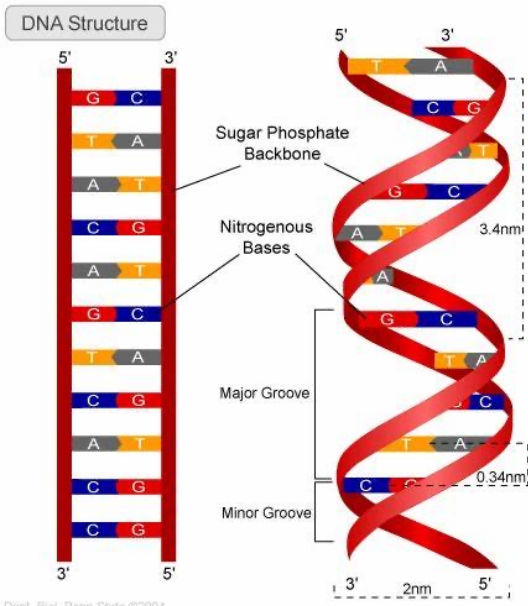


DNA revisited

ORAM 9 mei 2023

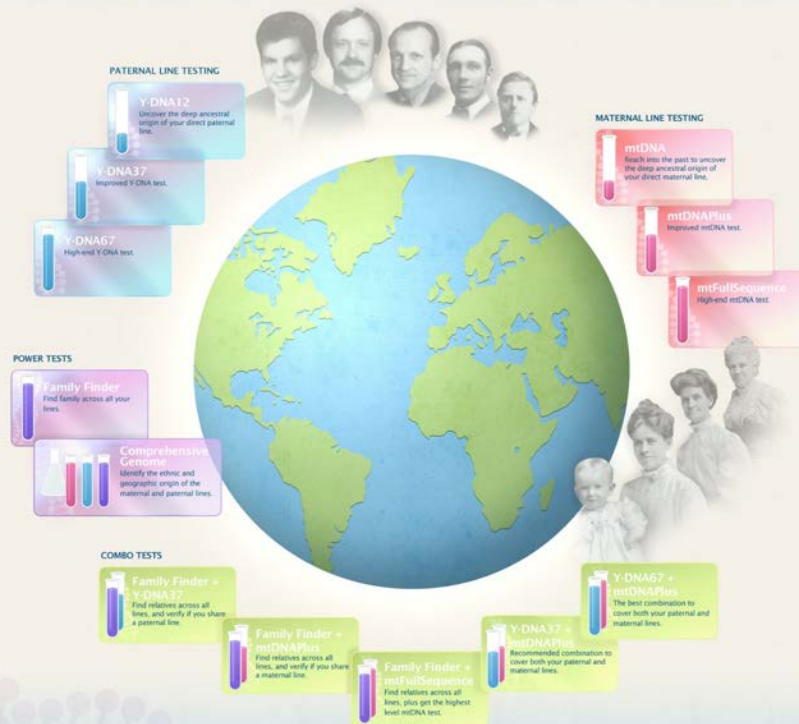
Prof dr J J (Hans) Meij



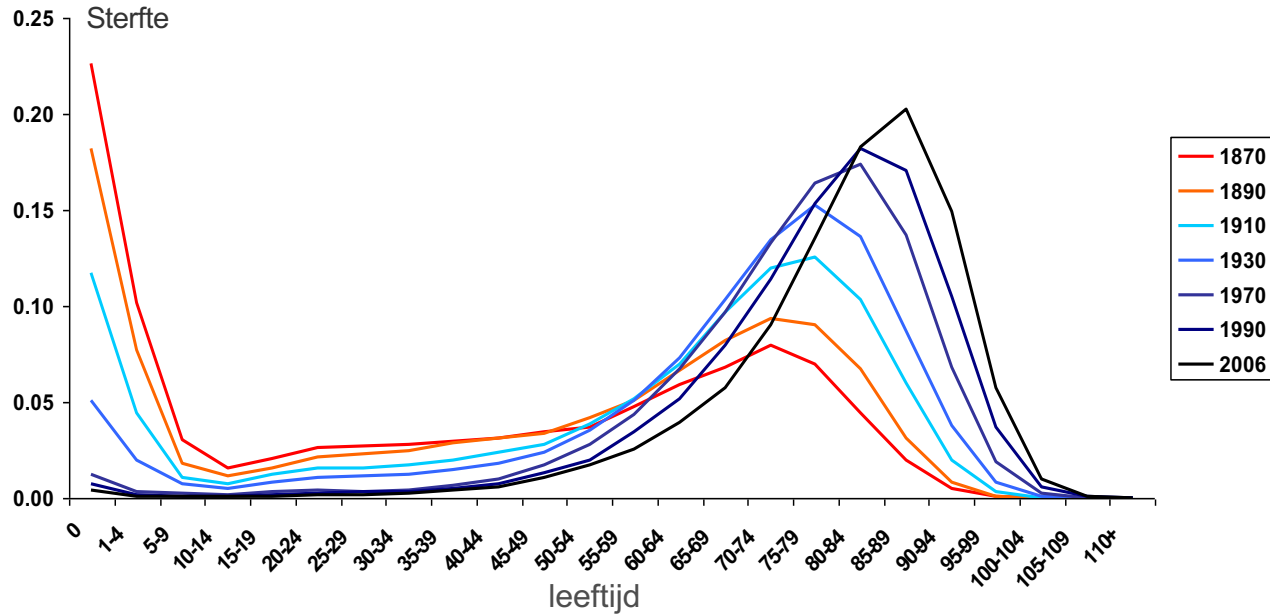


DNA TESTS ^{NEW}

Let science take your family history to the next level

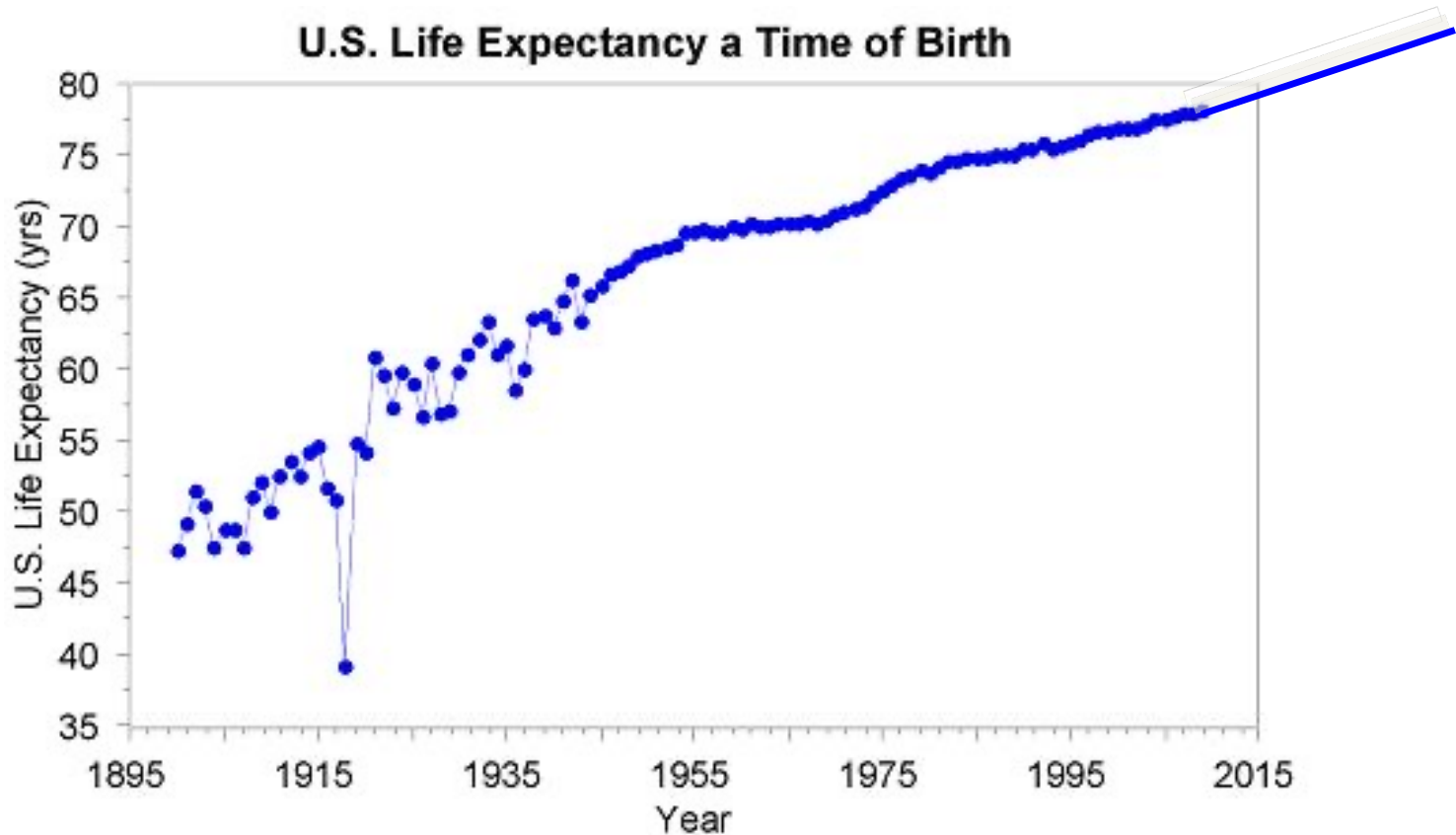


Sterfte ontwikkeling in 150 jaar



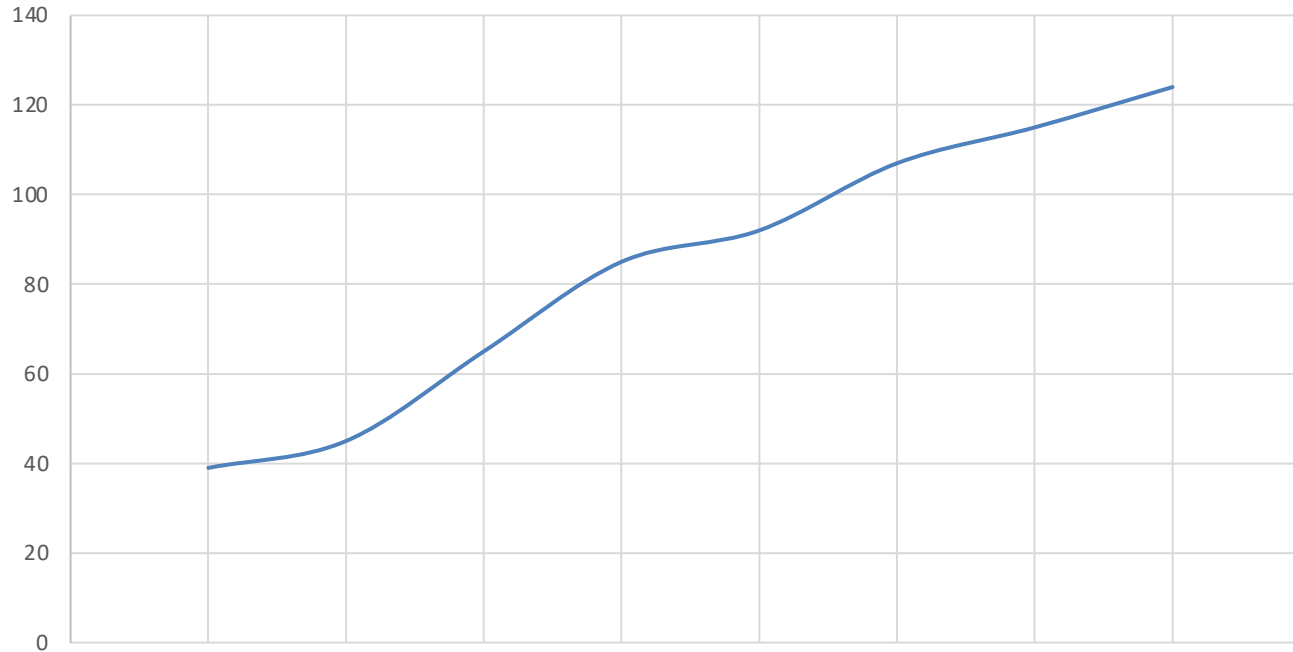


Stijgende Levensverwachting...





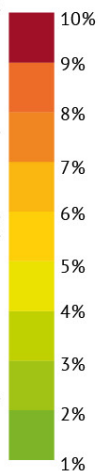
stijging zorgkosten 2000 - 2020



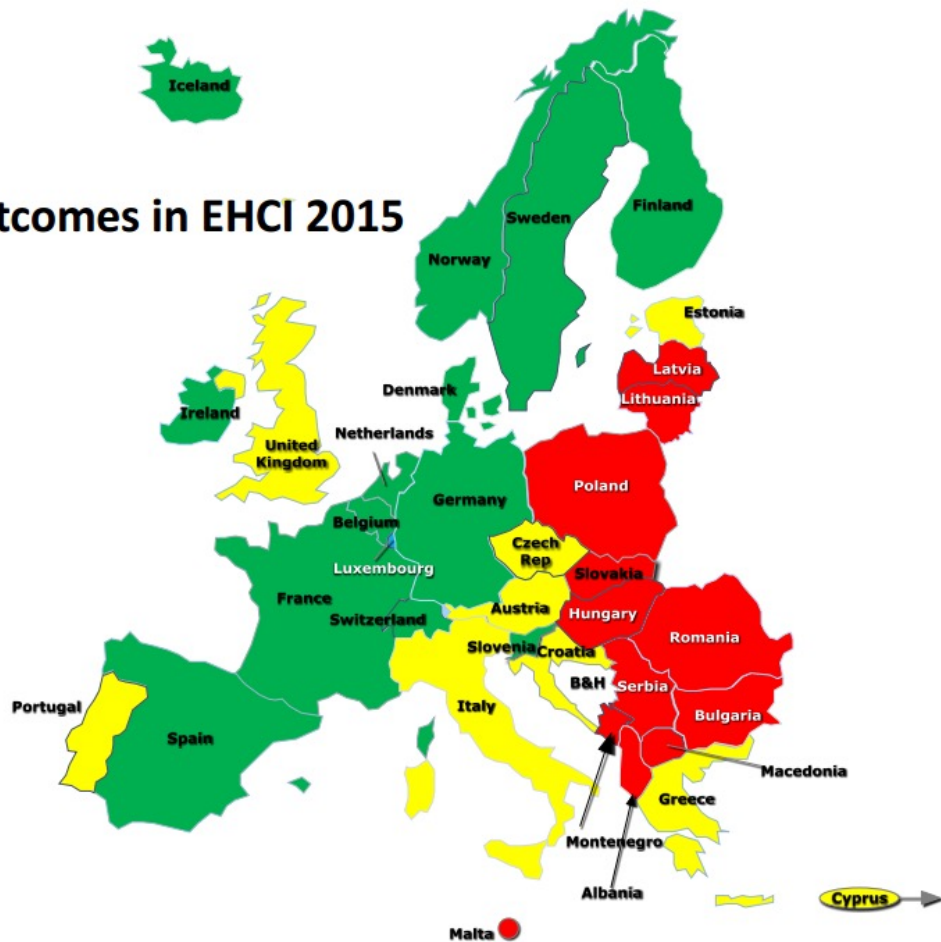
Bron: CBS 2022 (in MLD €)



Percentage BNP dat wordt uitgegeven aan gezondheidszorg



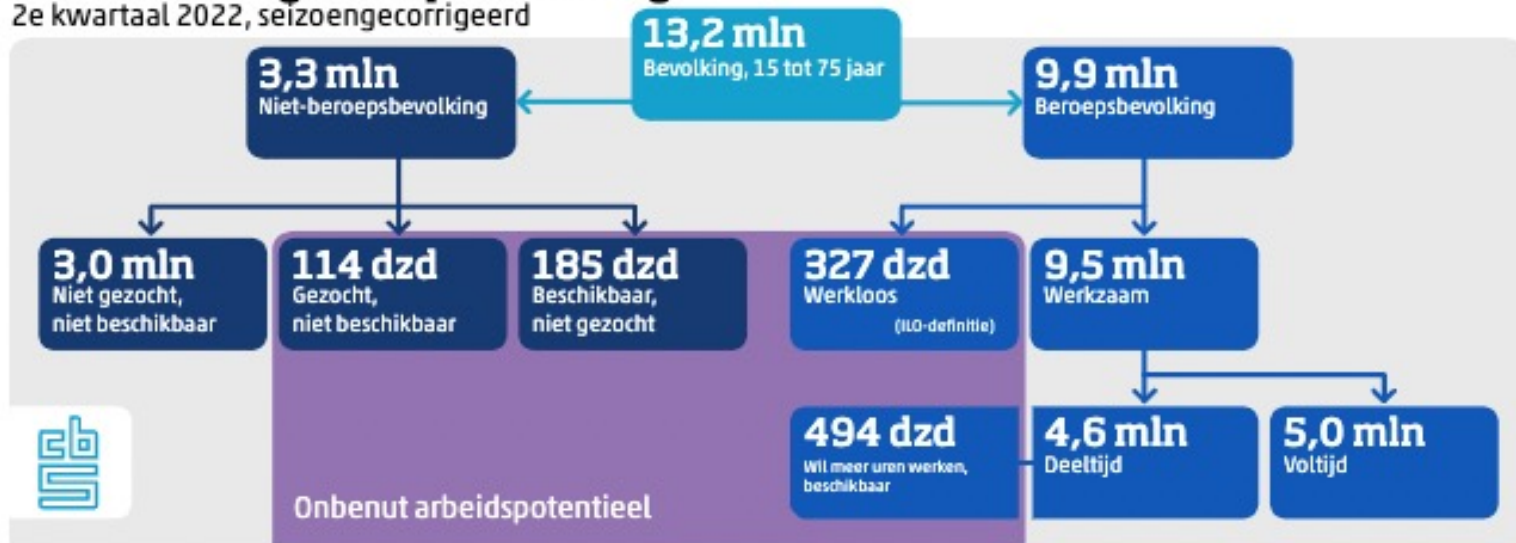
Outcomes in EHCI 2015





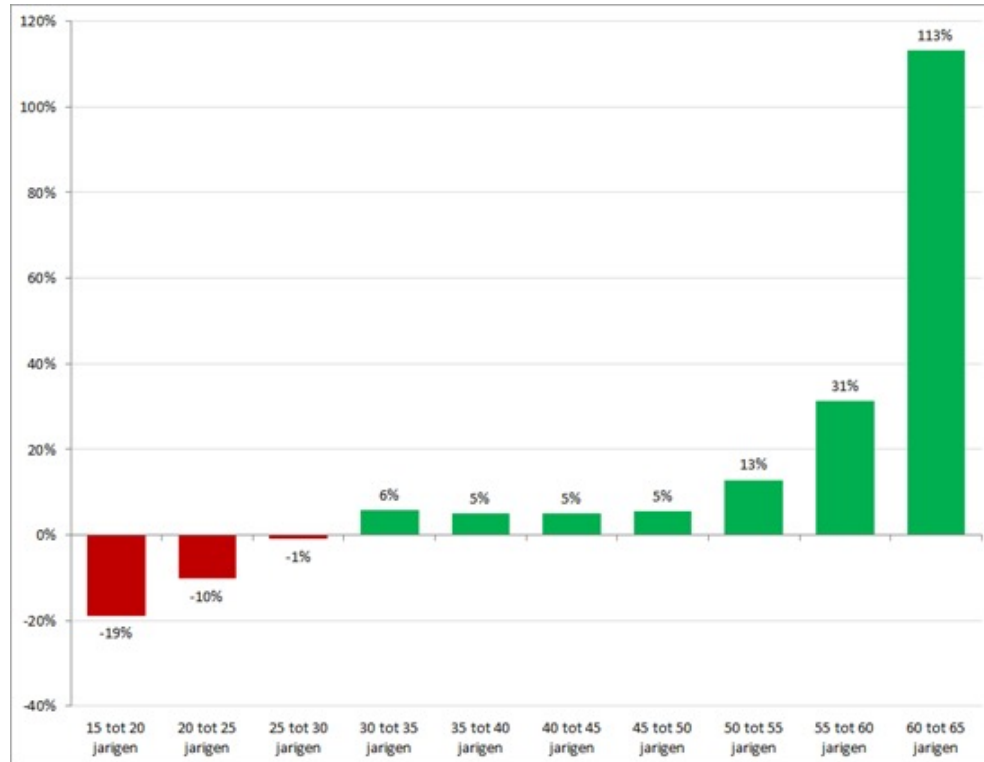
Samenstelling beroepsbevolking

2e kwartaal 2022, seizoengecorrigeerd





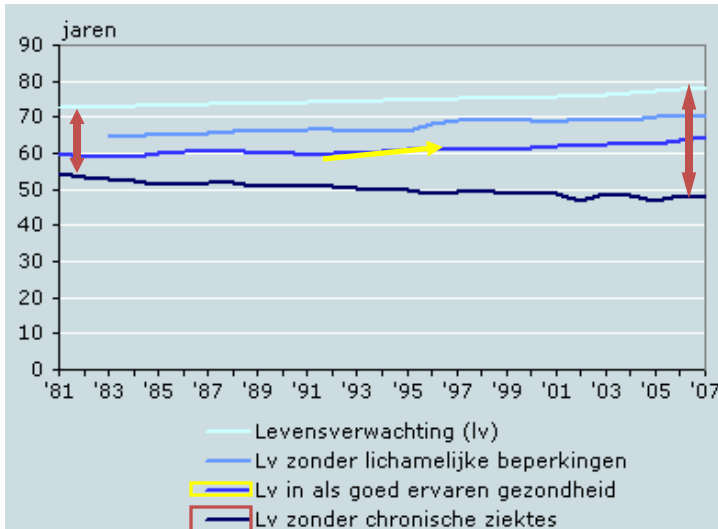
Toename arbeidsparticipatie in tien jaar





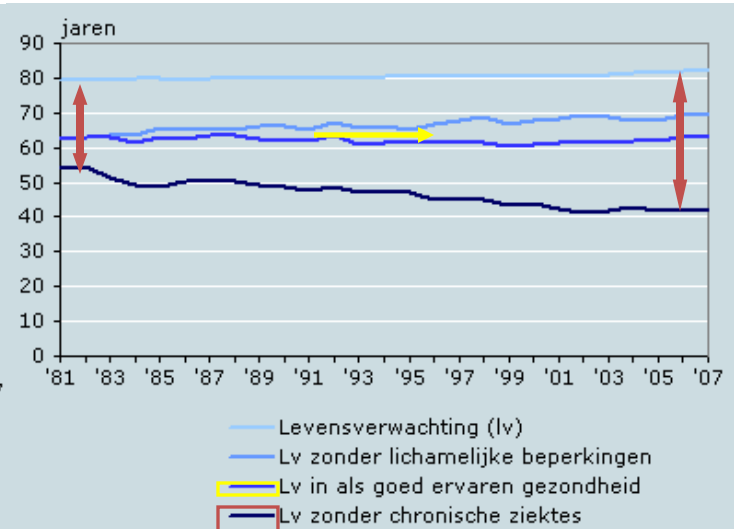
Levensverwachting (als patient)

mannen



Bron: CBS

vrouwen



Bron: CBS



Bouw

Onderhoud

Gebruik



Ziekte



Schade aan cellen



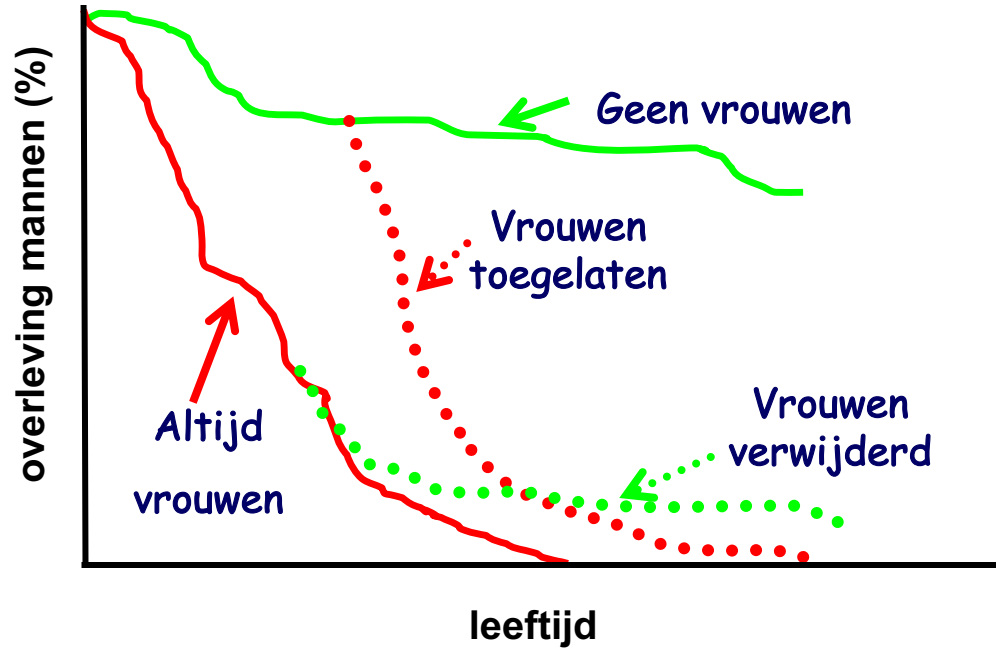
Schade aan moleculen



'Leven'

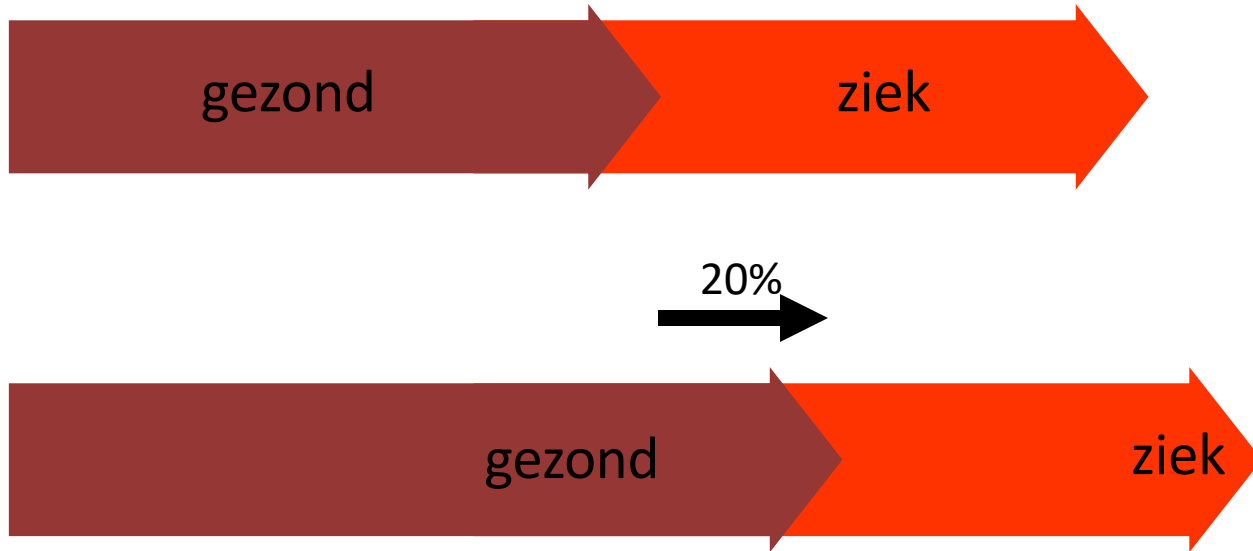


Leven kost energie...

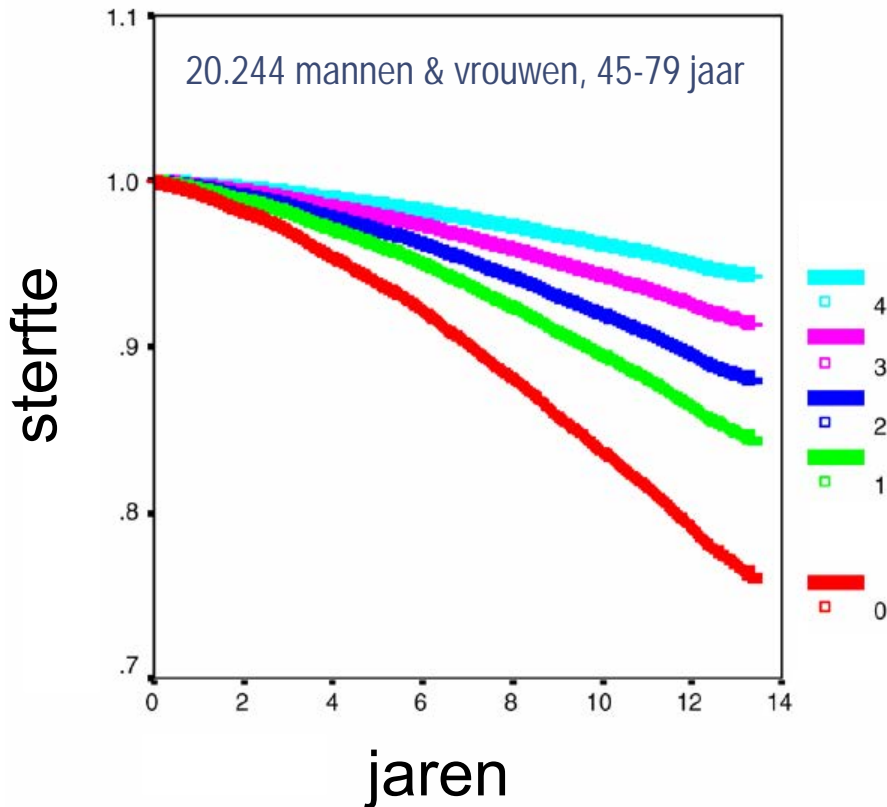




Preventie levert gezondheid!



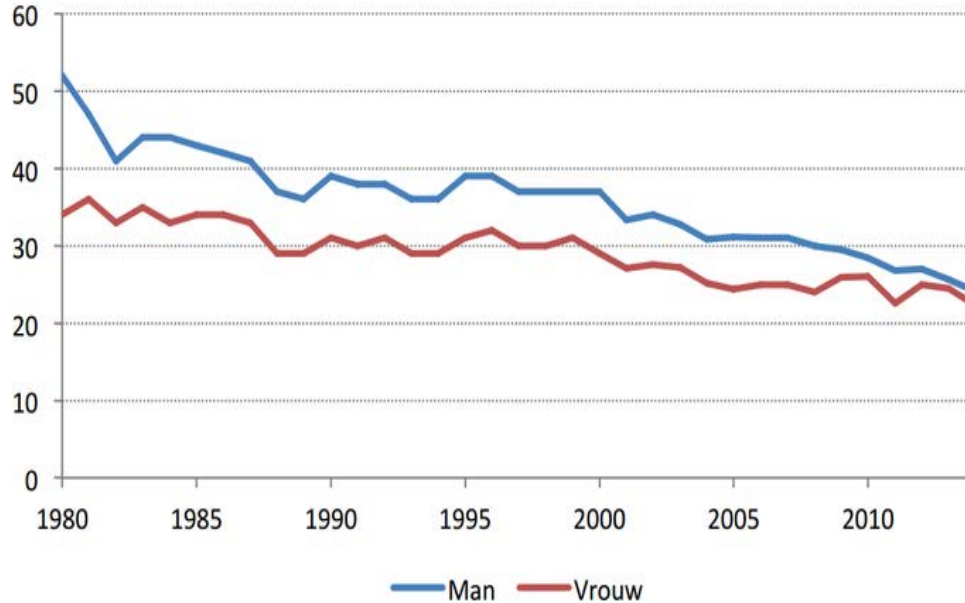
Invloed van leefstijl



- niet roken
- fruit & groente
- matig alcohol
- fysieke activiteit



Percentage rokers in Nederland

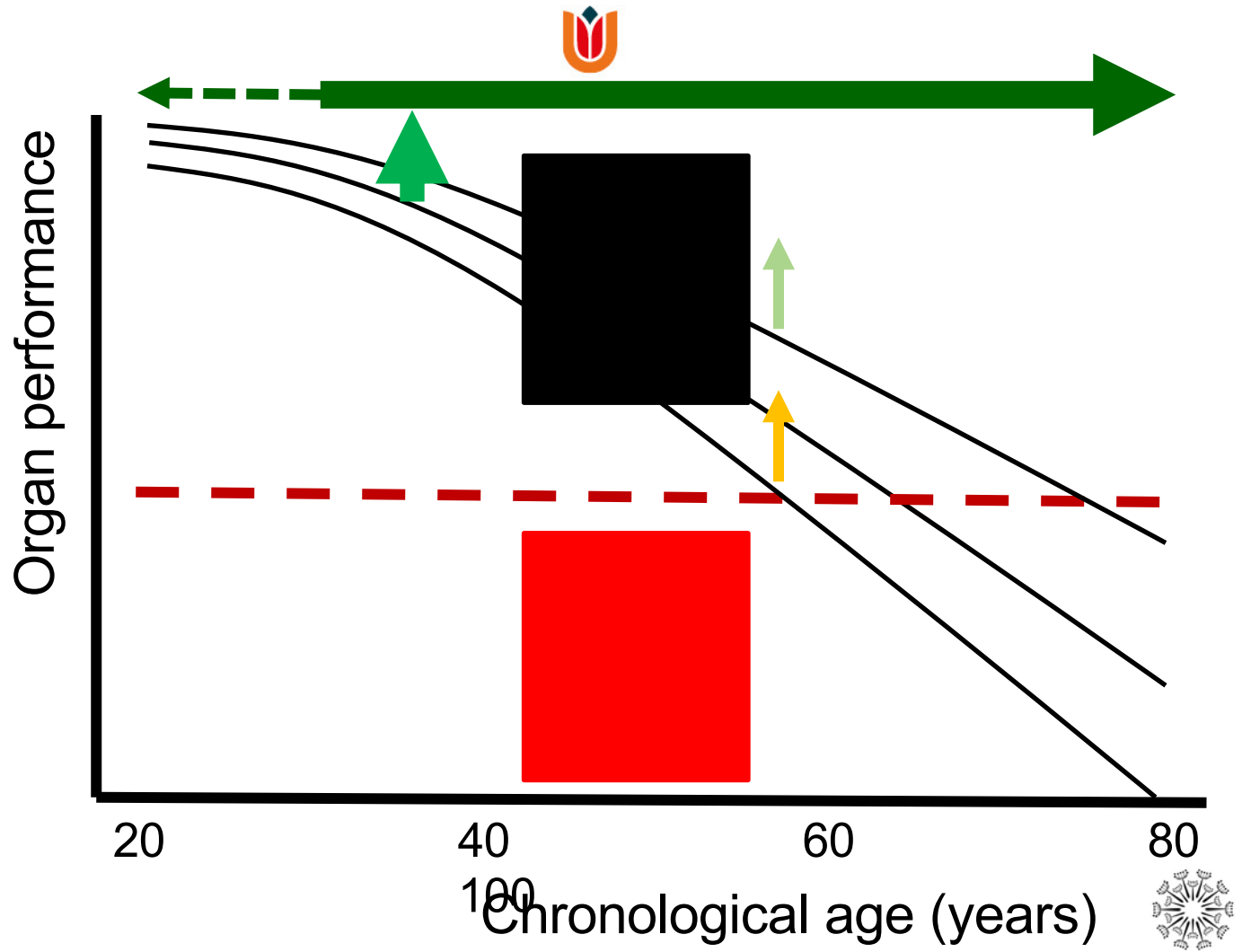


Bron: CBS 2021



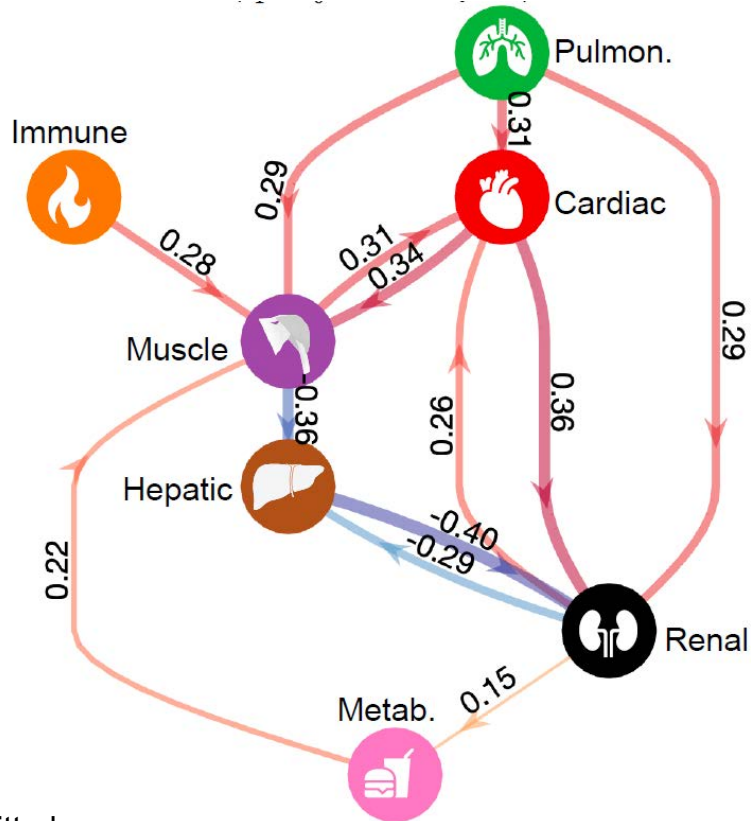
Tekst: Gerben Stolk







Before disease occurs ...



It is NOT one organ that is ageing, the course is predictable!

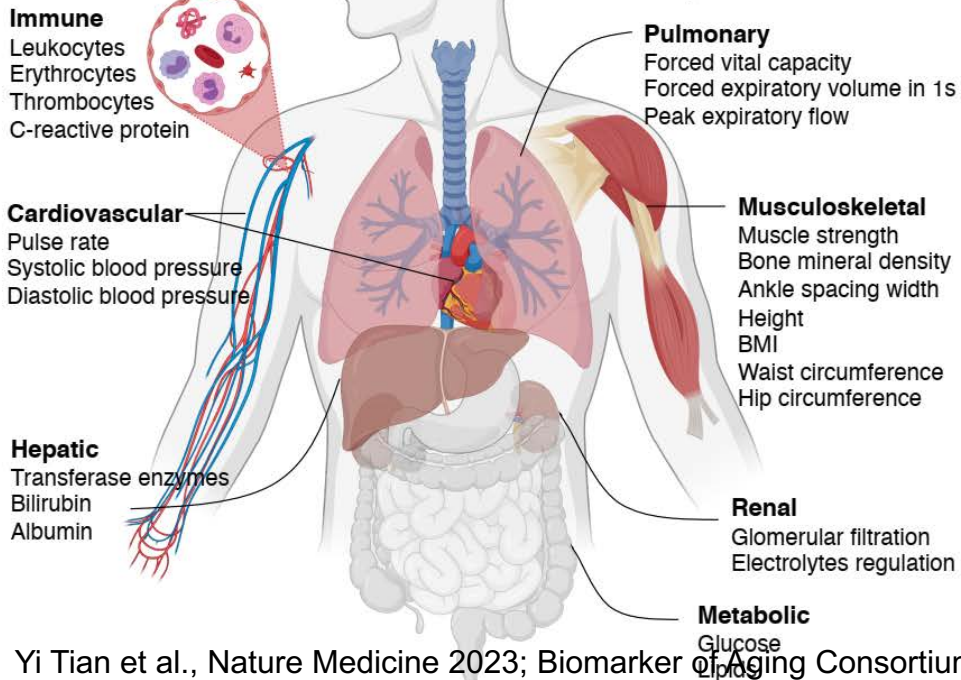


Diagnostics - clocks

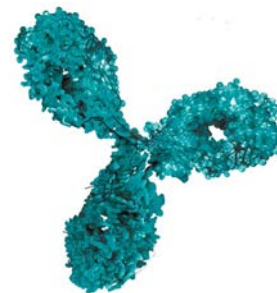
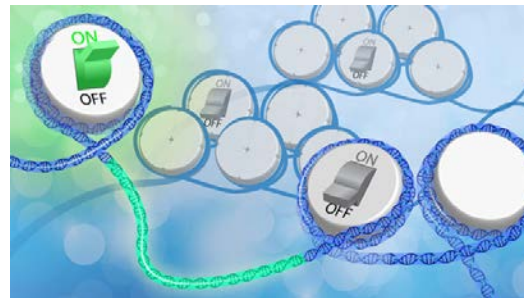


A

Biological clocks



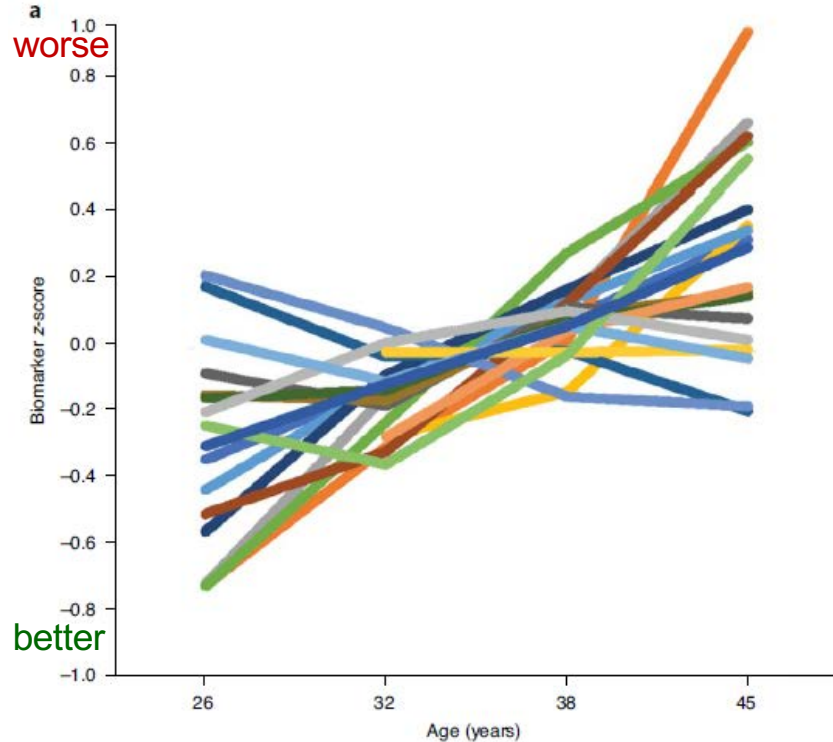
B



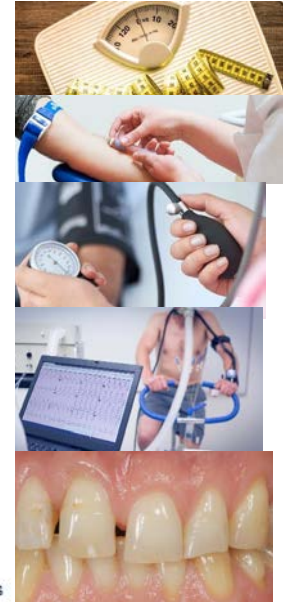
• Pre



Changes at age 30



- BMI
- Waist-hip ratio
- Hemoglobin A1c
- Leptin
- Mean arterial pressure
- VO₂Max (rev)
- FEV₁/FVC (rev)
- FEV₁ (rev)
- Total cholesterol
- Triglycerides
- HDL cholesterol (rev)
- Lipoprotein(a)
- ApoB100/ApoA1
- eGFR (rev)
- Blood urea nitrogen
- hsCRP
- White blood cell count
- Mean periodontal attachment loss
- Dental caries experience



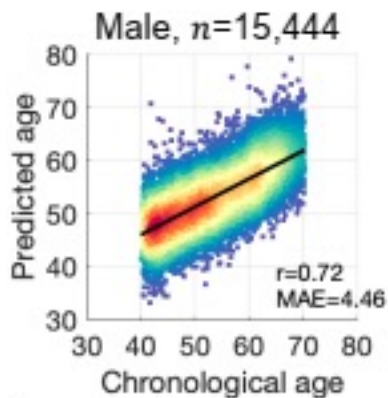
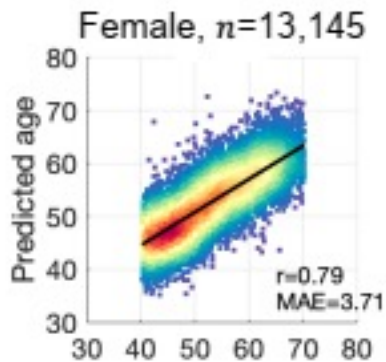
↓
disease



Body clock



78 physiological measures
across 7 organ systems



Healthy Longevity Medicine is optimizing healthspan by targeting ageing processes across the lifespan

Healthy Longevity Medicine Society

Healthy Longevity Medicine Society

International peak professional medical society in the field of longevity medicine

Mission Vision

Overview

The Healthy Longevity Medicine Society (HLMS) was established in August 2022 to build a clinically credible framework and platform for longevity medicine that promotes the highest standards of interdisciplinary collaboration in the field. The HLMS is governed by a Council of elected members representing different geographical locations and sectors. The HLMS aims to educate, foster research and professional development, set recommendations and guidelines, and coordinate activities across the various domains of longevity medicine.

Our Mission

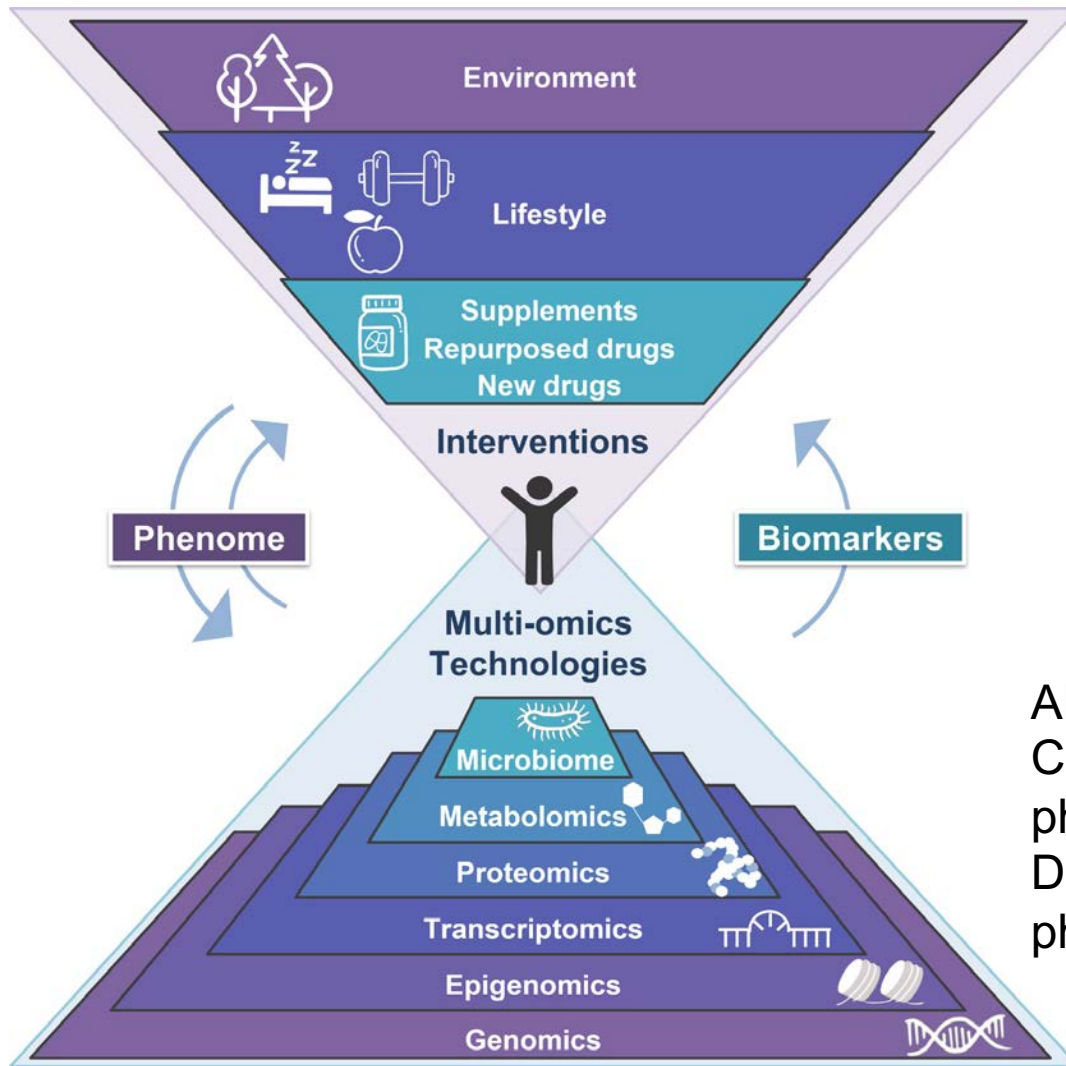
The HLMS has four main objectives:

- To identify and promote educational opportunities in longevity medicine, including accreditations and credentials
- To set and promote professional standards (including physician guidelines) in longevity medicine, thereby advancing and

Longevity Medicine

educate
quality
accelerate

specialized specialty
guidelines/standards
multi networks



AND:
Clinical
phenotyping
Digital
phenotyping

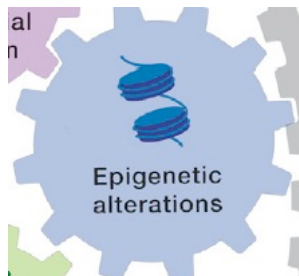


Cocktail

10 healthy, 51–65 years

Growth hormon (rhGH)
Dihydroepiandrosteron (DHEA)
500mg metformin
3,000IU vitamin D3
50mg zinc

} 1 year



2.5 years epigenetic younger 6 months after intervention

Longevity dividend:



health and economic gains by slowing the biological processes of aging

costs

Picco et al. *BMC Health Services Research* (2016) 16:173
DOI 10.1186/s12913-016-1421-7

BMC Health Services Research

RESEARCH ARTICLE

Open Access

Economic burden of multimorbidity among older adults: impact on healthcare and societal costs

Louisa Picco^{1*}, Evanthia Achilla², Edmansyah Abidin¹, Siow Ann Chong³, Janhavi Ajit Vaingankar⁴, Paul McCrone⁵, Hong Choon Chua⁶, Derrick Heng⁷, Harish Magadi⁸, Li Ling Ng⁹, Martin Prince² and Mythily Subramaniam¹

pp/a

no chronic condition:

SGD\$2,806

one chronic condition:

SGD\$5,610

multimorbidity:

SGD\$15,148

value

ANALYSIS

<https://doi.org/10.1038/n43587-021-00086-0>

nature
aging

OPEN

The economic value of targeting aging

Andrew J. Scott^{1,2*}, Martin Ellison³ and David A. Sinclair⁴

Developments in life expectancy and the growing emphasis on biological and 'healthy' aging raise a number of important questions for health scientists and economists alike. Is it preferable to make lives healthier by compressing morbidity, or longer by extending life? What are the gains from targeting aging itself compared to efforts to eradicate specific diseases? Here we analyze existing data to evaluate the economic value of increases in life expectancy, improvements in health and treatments that target aging. We show that a compression of morbidity that improves health is more valuable than further increases in life expectancy, and that targeting aging offers potentially larger economic gains than eradicating individual diseases. We show that a slowdown in aging that increases life expectancy by 1 year is worth US\$38 trillion, and by 10 years, US\$367 trillion. Ultimately, the more progress that is made in improving how we age, the greater the value of further improvements.

slowdown in aging that increases life expectancy by 1 year is worth US\$38 trillion

enabler

THE LANCET
Healthy Longevity

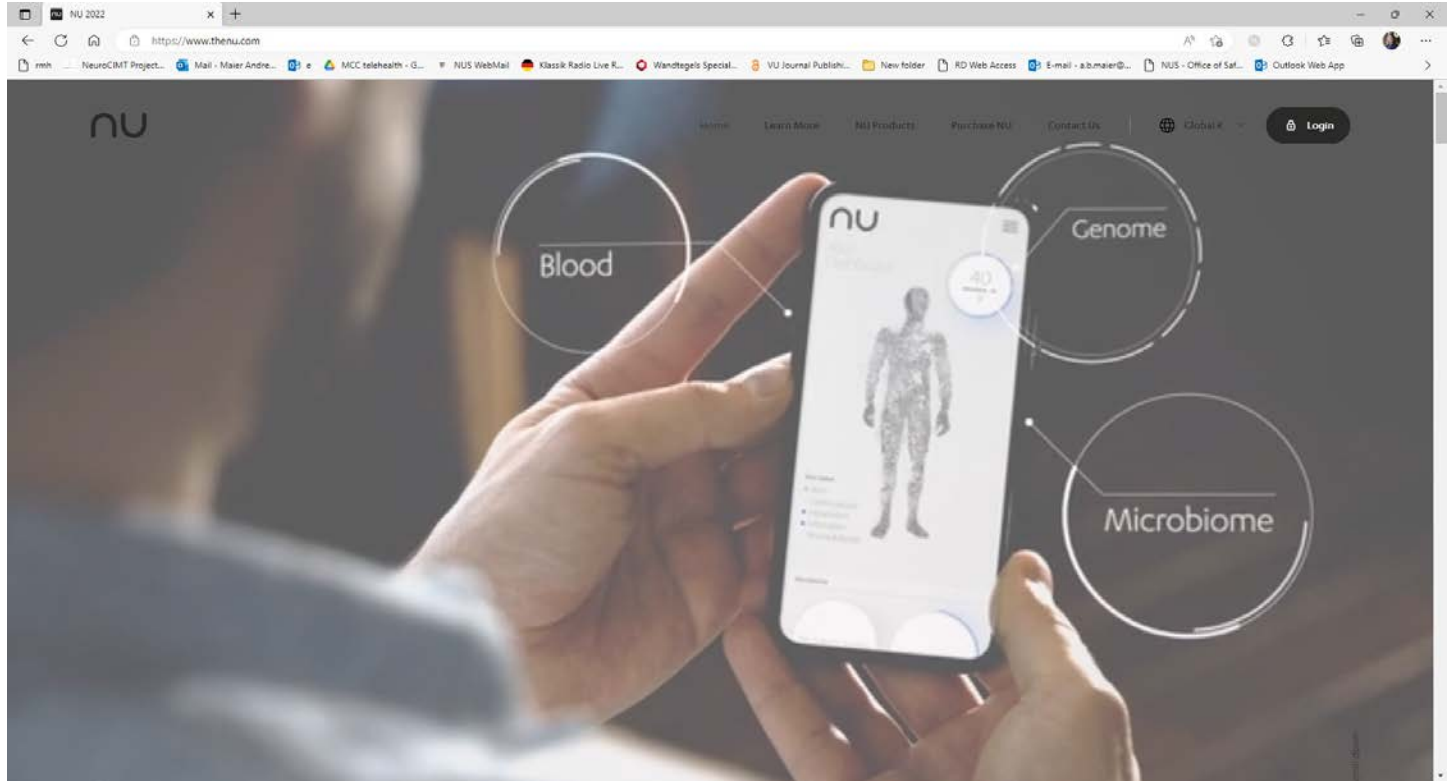
CORRESPONDENCE | VOLUME 3, ISSUE 1, E11, JANUARY 01, 2022

Advanced pathological ageing should be represented in the ICD

Evelyne Bischof · Andrea B Maier · Kai-Fu Lee · Alex Zhavoronkov · David Sinclair

Open Access · Published: January, 2022 · DOI: [https://doi.org/10.1016/S2666-7568\(21\)00303-2](https://doi.org/10.1016/S2666-7568(21)00303-2)

XT9T





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[Resources](#)

[Supplements](#)

[Guide](#)

[My Profile](#)

Andrea Maier

Cool fact of the day: **COMT** "Warrior gene with better performance when under stress."

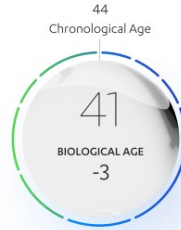
[Brain](#)

[Cardiovascular](#)

[Metabolism](#)

[Inflammation](#)

[Muscle & Bones](#)



My Biological Age

Your overall biological age is calculated from the blood, microbiome, and epigenetic ages.

[View My Biological Clocks >](#)

My Tests



Genome

Strength Neutral Focus
28% 32% 40%



Blood

Markers out of range Markers in range
2% 98%



Microbiome

Diversity
25%



Telomeres

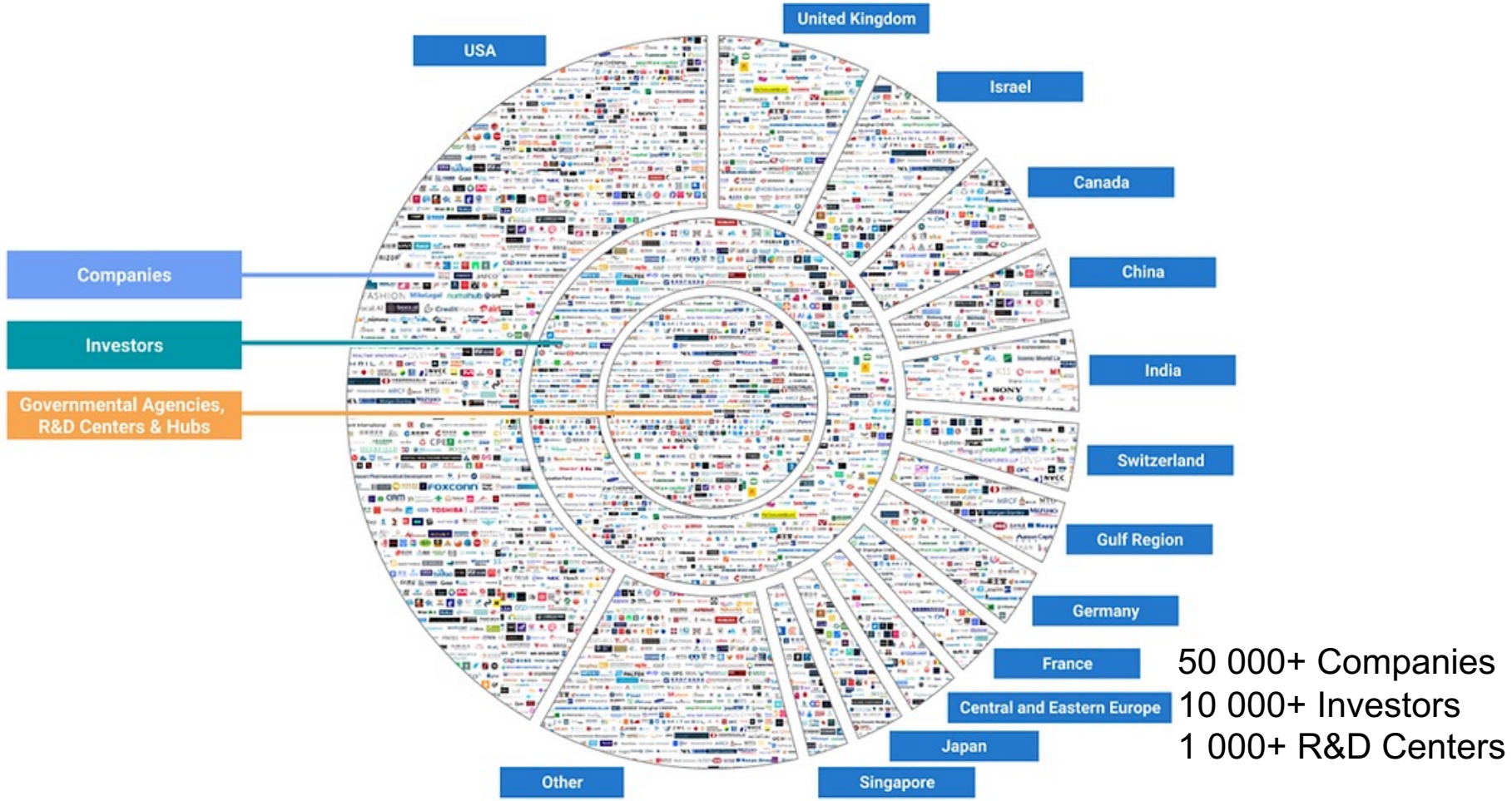
Strength
28%





Prof Andrea Maier

Longevity ecosystem







DV4FIT

HET VITALITEITSPROGRAMMA VAN
DURA VERMEER



DE BELOFTE AAN ONZE MEDEWERKERS



WAAROM #DV4FIT?

Werken aan je energie!

Met #DV4FIT willen we mensen bewust maken waar hun invloed ligt en wat verandering in levensstijl kan doen om lekker in je vel te zitten. Met als doel dat je je fit en gemotiveerd bent om je werk uit te voeren. Meer dan alleen preventie.

Mentaal | Fysiek | Voeding | Financieel



DV4FIT

WERKEN AAN JE EIGEN ENERGIE!

>> Data verzamelen: zo blijven we leren

**BEHOEFTE
MEDEWERKERS**
O.B.V. ONDERZOEK & GESPREKKEN.



BELEID

#DV4FIT IS ER VOOR IEDEREEN.
LOKAAL INSPIREREN OM EIGEN
PROGRAMMA TE MAKEN.



DOELSTELLINGEN

BIJDRAGEN AAN NORMALISEREN
VITALITEIT, MW VOELT ZICH FIT &
GEMOTIVEERD.



AANBOD

STRUCTUREEL AANBOD &
ACTIVITEITENKALENDER.

DOELGROEPEN

FOCUS #DV4FIT

>> Niet bewust – medio bewust – bewust

>> Specifieke groepen: 25-35jr / 55+

AANBOD

>> STRUCTUREEL & ACTIVITEITEN

- > Vaste partners
- > Dura Vermeer Academie
- > Vitaliteitsweek: fit in je hoofd
- > Stappenchallenge
- > Webinars
- > Fruit voor iedereen
- > #DV4FIT op de agenda





KEY LEARNINGS

>> #DV4FIT

- > Je kunt niet alles doen
- > Blijf realistisch – gedragsverandering kost tijd
- > Niet bewuste medewerkers bereiken via leidinggevend en & directe collega's
- > Alles valt of staat met een goed communicatieplan
- > Communiceer vanuit verschillende hoeken
- > Kracht van herhaling en continuïteit
- > USP voor nieuwe medewerkers
- > Collega's aan het woord en prijsvragen werken!
- > Activiteiten mentale gezondheid liefst online

ZIJN ER NOG VRAGEN?

