



Physical Activity 5

The pandemic of physical inactivity: global action for public health

Harold W Kohl 3rd, Cora Lynn Craig, Estelle Victoria Lambert, Shigeru Inoue, Jasem Ramadan Alkandari, Grit Leetongin, Sonja Kahlmeier, for the Lancet Physical Activity Series Working Group*

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This is the fifth in a *Series* of five papers about physical activity

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Physical inactivity is the fourth leading cause of death worldwide. We summarise present global efforts to counteract this problem and point the way forward to address the pandemic of physical inactivity. Although evidence for the benefits of physical activity for health has been available since the 1950s, promotion to improve the health of populations has lagged in relation to the available evidence and has only recently developed an identifiable infrastructure, including efforts in planning, policy, leadership and advocacy, workforce training and development, and monitoring and surveillance. The reasons for this late start are myriad, multifactorial, and complex. This infrastructure should continue to be formed, intersectoral approaches are essential to advance, and advocacy remains a key pillar. Although there is a need to build global capacity based on the present foundations, a systems approach that focuses on populations and the complex interactions among the correlates of physical inactivity, rather than solely a behavioural science approach focusing on individuals, is the way forward to increase physical activity worldwide.

The pandemic of physical inactivity should be a public health priority

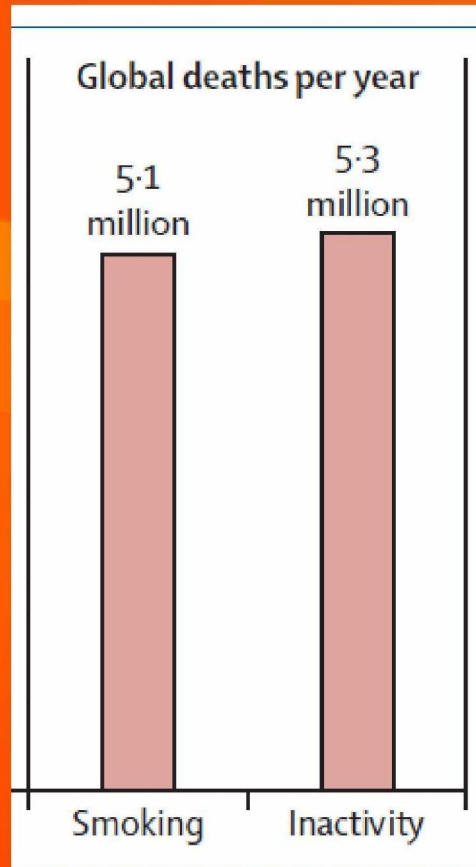
Available data suggest that 31% of the world's population is not meeting the minimum recommendations

Stressing harms of physical inactivity to promote exercise

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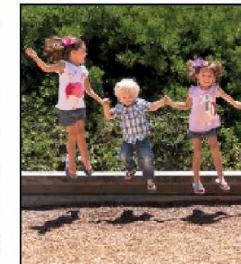
Physical activity, sedentary behaviour, and sleep: movement behaviours in early life



In 2016, at least 41 million children younger than 5 years worldwide were estimated to be overweight or obese, and this number is likely to increase to at least 50 million by 2030.¹ Although the prevalence of overweight or obesity among children younger than 5 years has plateaued in some developed countries, rates have increased among children in low-income and middle-income countries in the past 15 years.² Obesity

addressing the obesity crisis and the non-communicable diseases that ensue.

In response to this epidemic, WHO's Commission on Ending Childhood Obesity³ recognised the need to focus on prevention in early life (0–5 years) and on parents and society creating the opportunities, values, and environments to support healthy diet and movement behaviours (physical activity, sedentariness, and sleep).

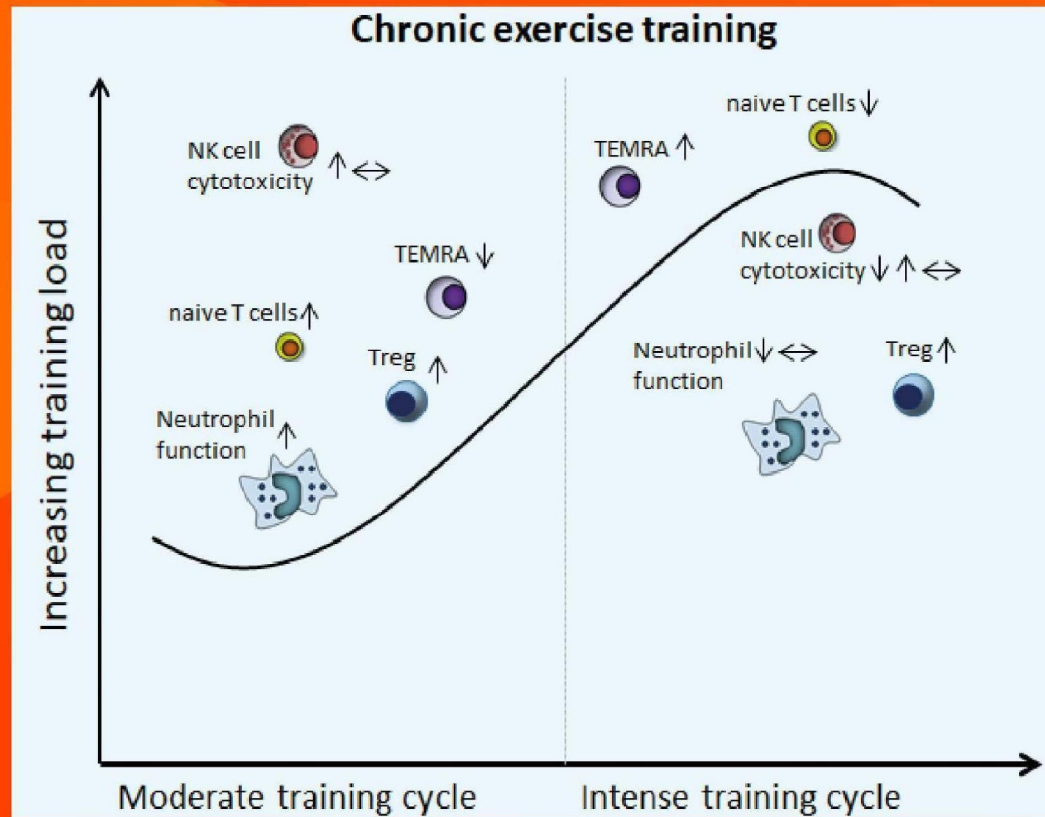


JHU Cultural Science Photo Library

Attacking the pandemic of physical inactivity: what is holding us back?

(10)(2e) Pratt ¹, Andrea Ramirez Varela,² Deborah Salvo,³
Harold W Kohl III,⁴ Ding Ding ⁵

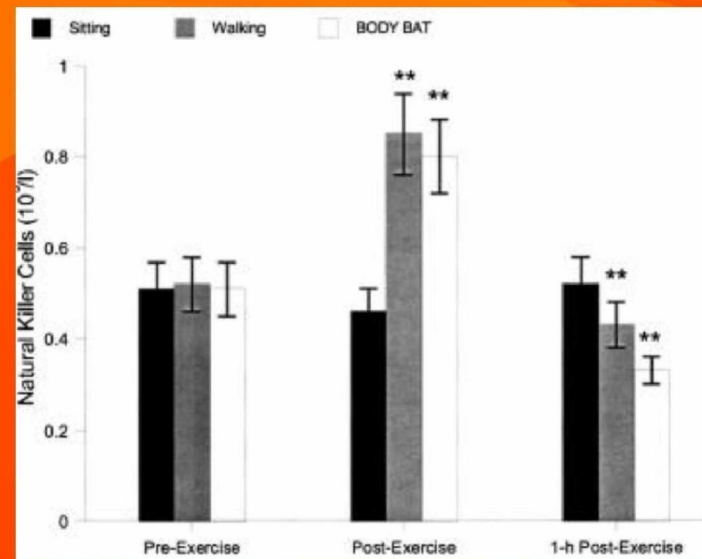
Pratt M, *et al. Br J Sports Med* Month 2019 Vol 0 No 0



Immune Response to a 30-Minute Walk

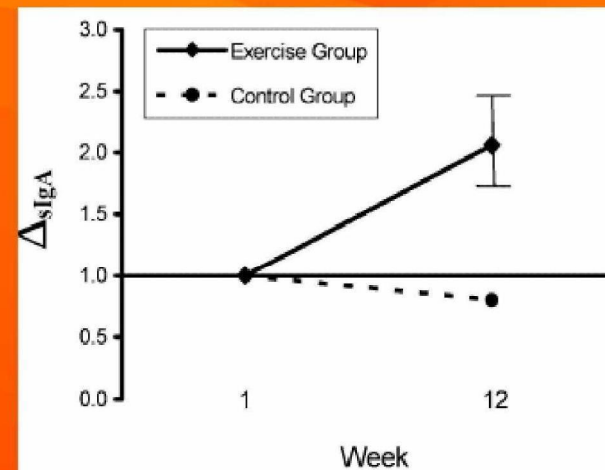
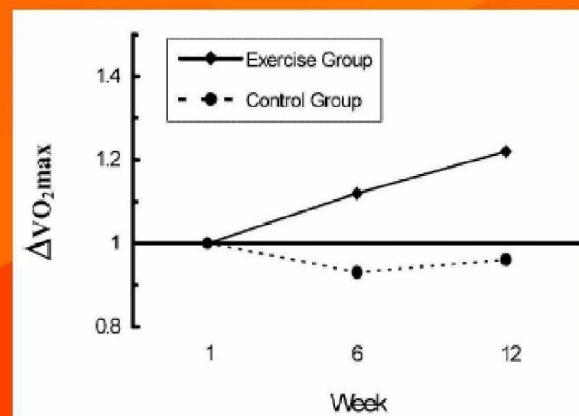
DAVID C. NIEMAN, DRU A. HENSON, MELANIE D. AUSTIN, and VICTOR A. BROWN

Department of Health, Leisure, and Exercise Science; Appalachian State University, Boone, NC



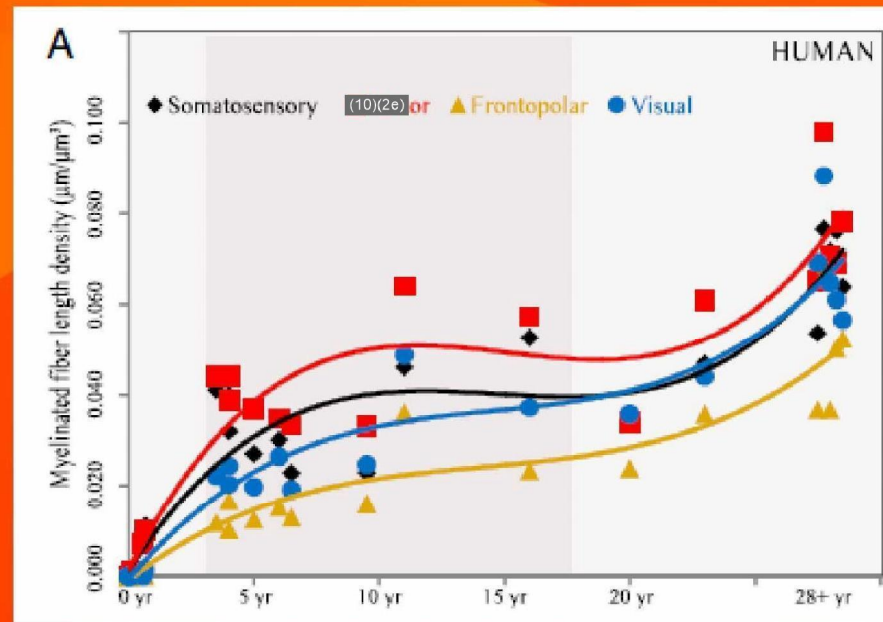
Panagiota Klentrou · Thomas Cieslak
Melanie MacNeil · Angela Vintinner · Michael Plyley

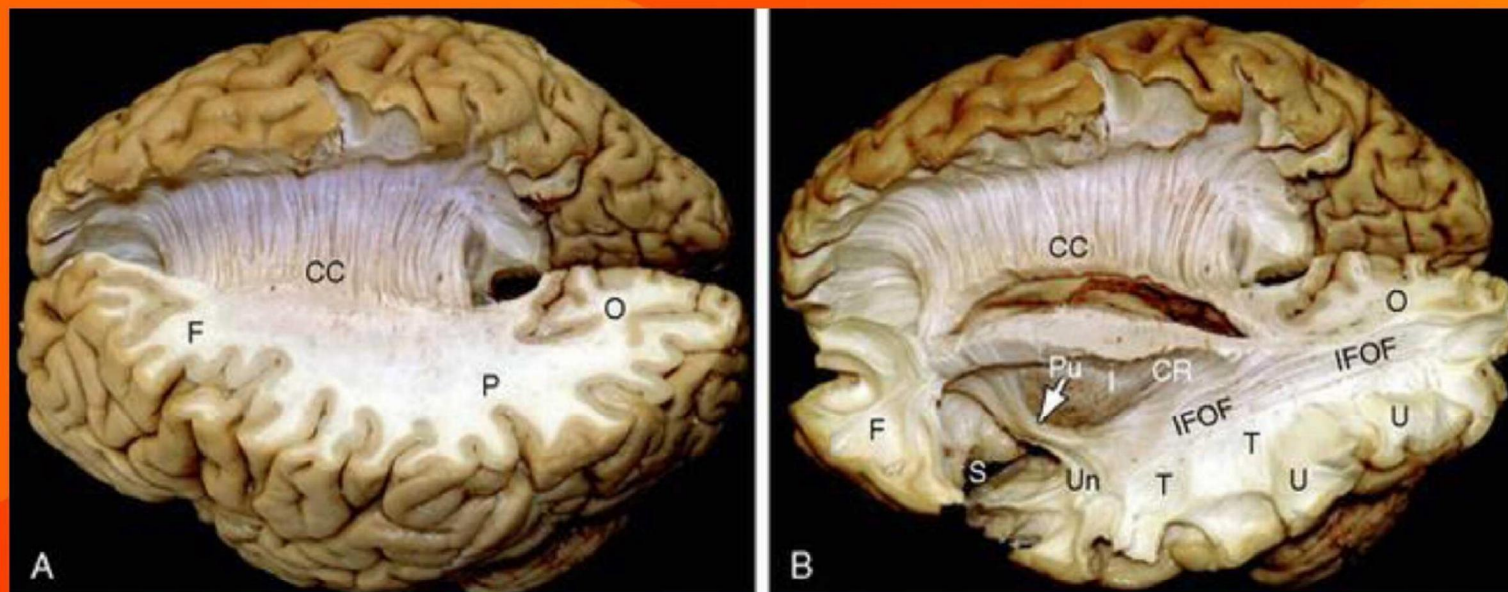
Effect of moderate exercise on salivary immunoglobulin A and infection risk in humans

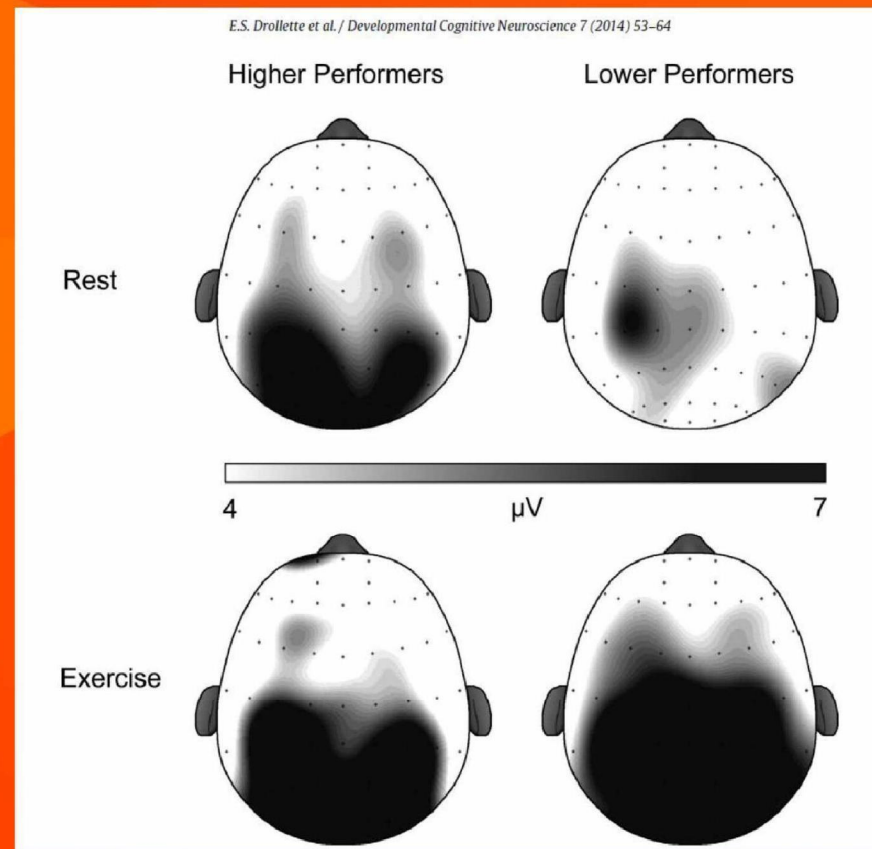


Prolonged myelination in human neocortical evolution

Daniel J. Miller^a, Tetyana Duka^a, Cheryl D. Stimpson^a, Steven J. Schapiro^b, Wallace B. Baze^b, Mark J. McArthur^b, Archibald J. Fobbs^c, André M. M. Sousa^{d,e}, Nenad Sestan^d, Derek E. Wildman^f, Leonard Lipovich^f,
 (10)(2e) W. Kuzawa^g, Patrick R. Hof^{h,i}, and Chet C. Sherwood^{a,1}

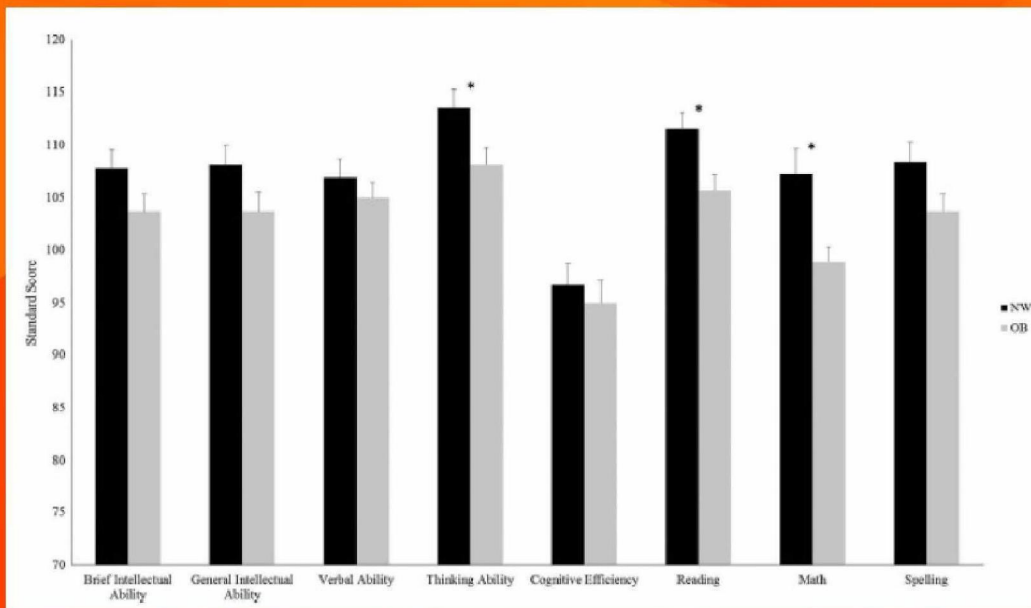




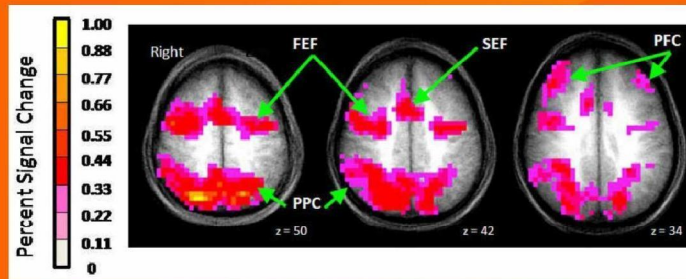


The Associations between Adiposity, Cognitive Function, and Achievement in Children

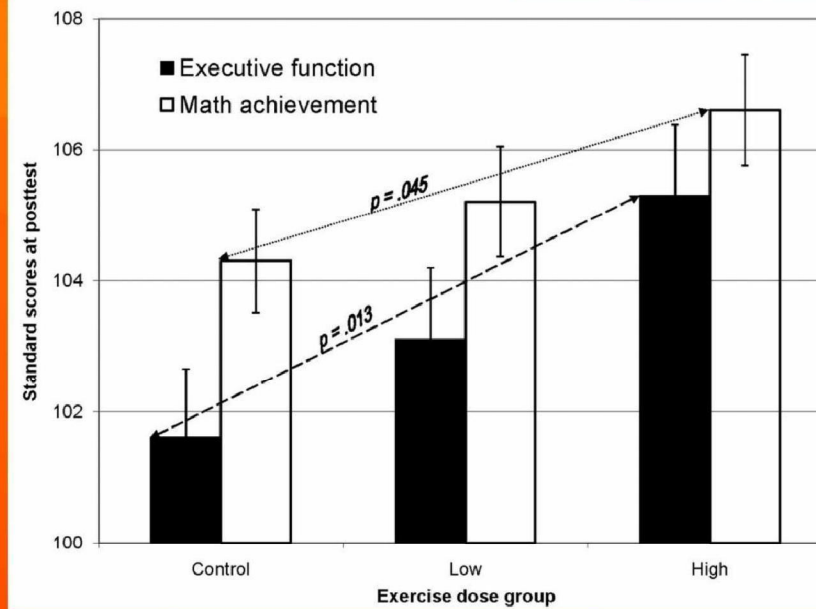
LAUREN RAINE¹, ERIC DROLLETTE², SHIH-CHUN KAO¹, DANIEL WESTFALL¹, LAURA CHADDOCK-HEYMAN³, ARTHUR F. KRAMER^{1,3}, NAIMAN KHAN⁴, and CHARLES HILLMAN^{1,5}

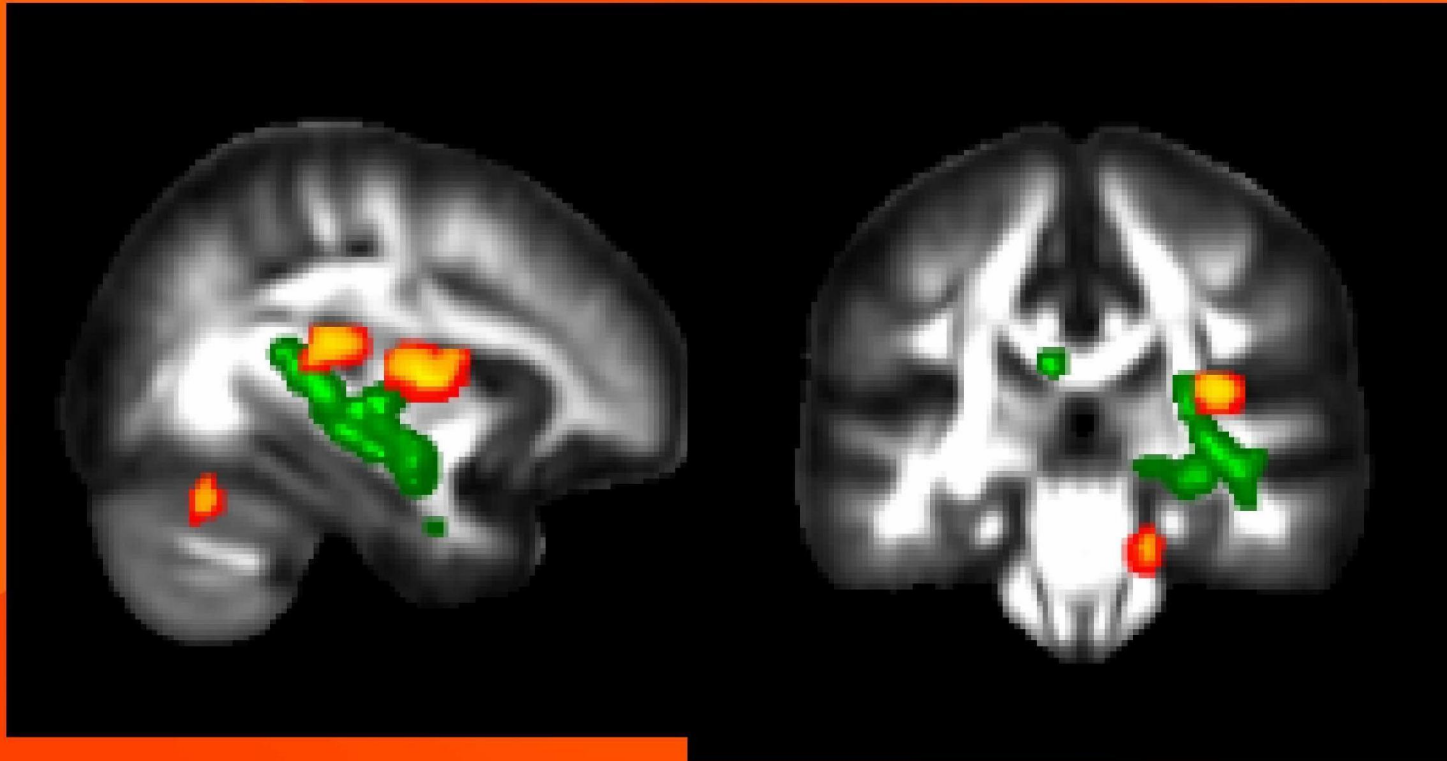


Exercise Improves Executive Function and Achievement and Alters Brain Activation in Overweight Children: A Randomized Controlled Trial



Low: 20 min per dag
High: 40 min. per dag
Duur: 14 weken

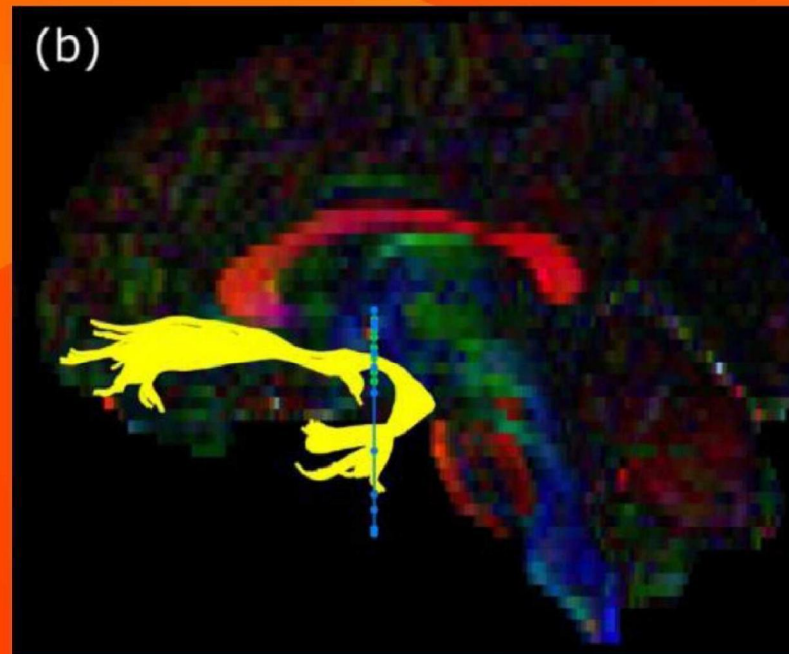




Mueller et al., 2015: obese children

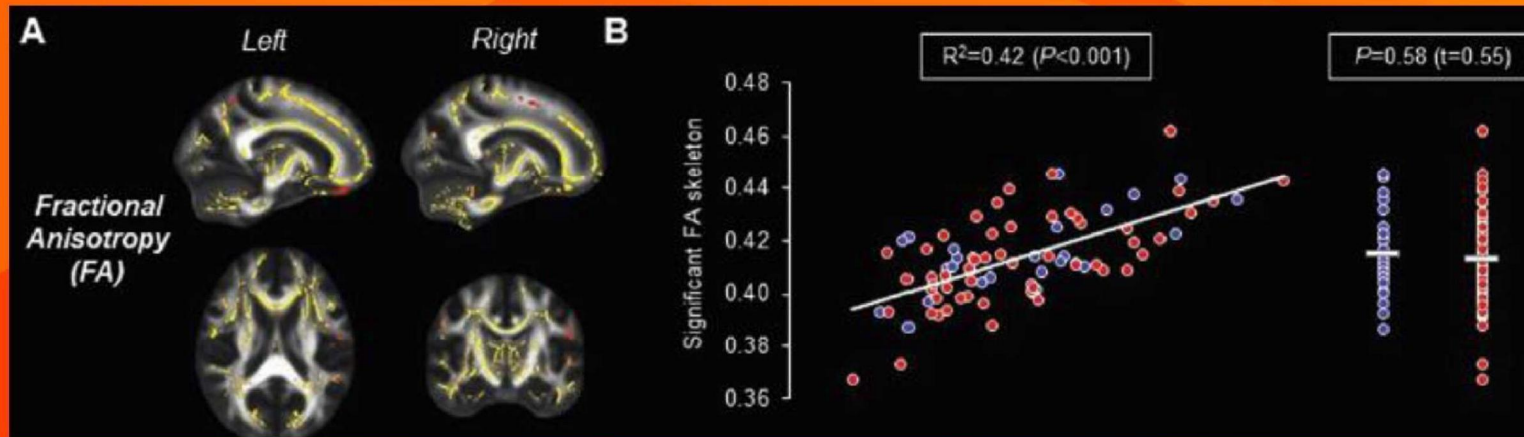
3 maanden, 2 x 1 uur per week, running/biking,
afgewisseld met krachttraining

An 8-month Exercise Intervention Alters Fronto-temporal White Matter Integrity in Overweight Children



Journal of Alzheimer's Disease 61 (2018) 729–739
DOI 10.3233/JAD-170415
IOS Press

Cardiorespiratory Fitness and White Matter Neuronal Fiber Integrity in Mild Cognitive Impairment



Cardiorespiratory fitness and white matter integrity in Alzheimer's disease

RD. Perea^{1,2}, ED. Vidoni¹, JK. Morris¹, RS. Graves¹, JM. Burns¹, and RA. Honea^{1,2}

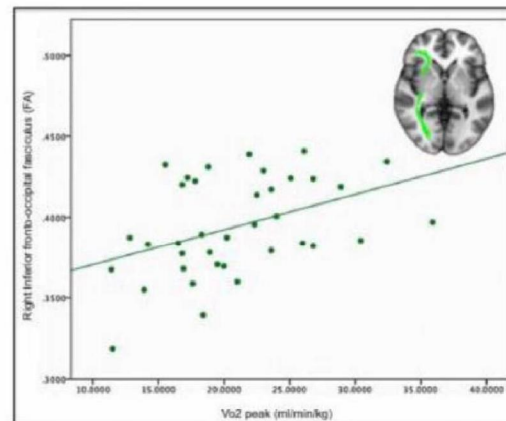
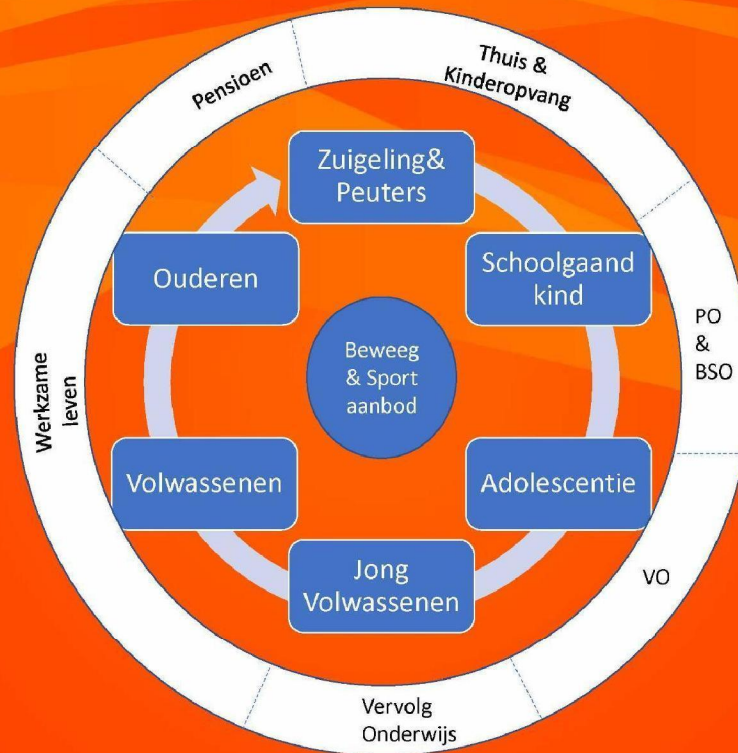


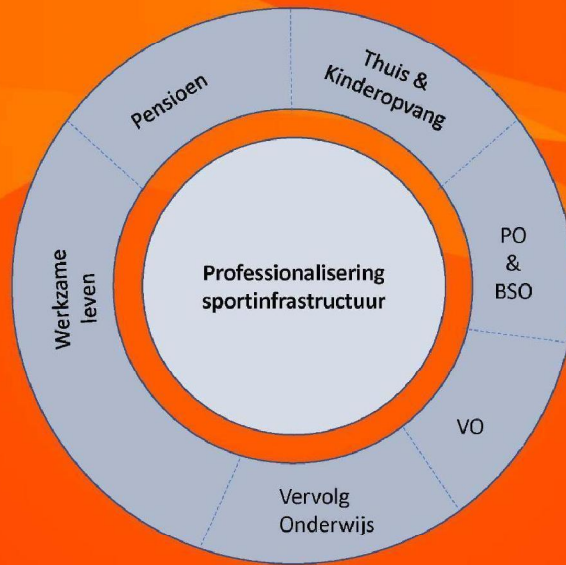
Figure 2. Linear fit plot for VO₂ peak and fractional anisotropy (FA) in the right inferior fronto-occipital fasciculus (green). The tract-of-interest is overlaid on a T1 MNI template, and orientation is radiological (left is right).

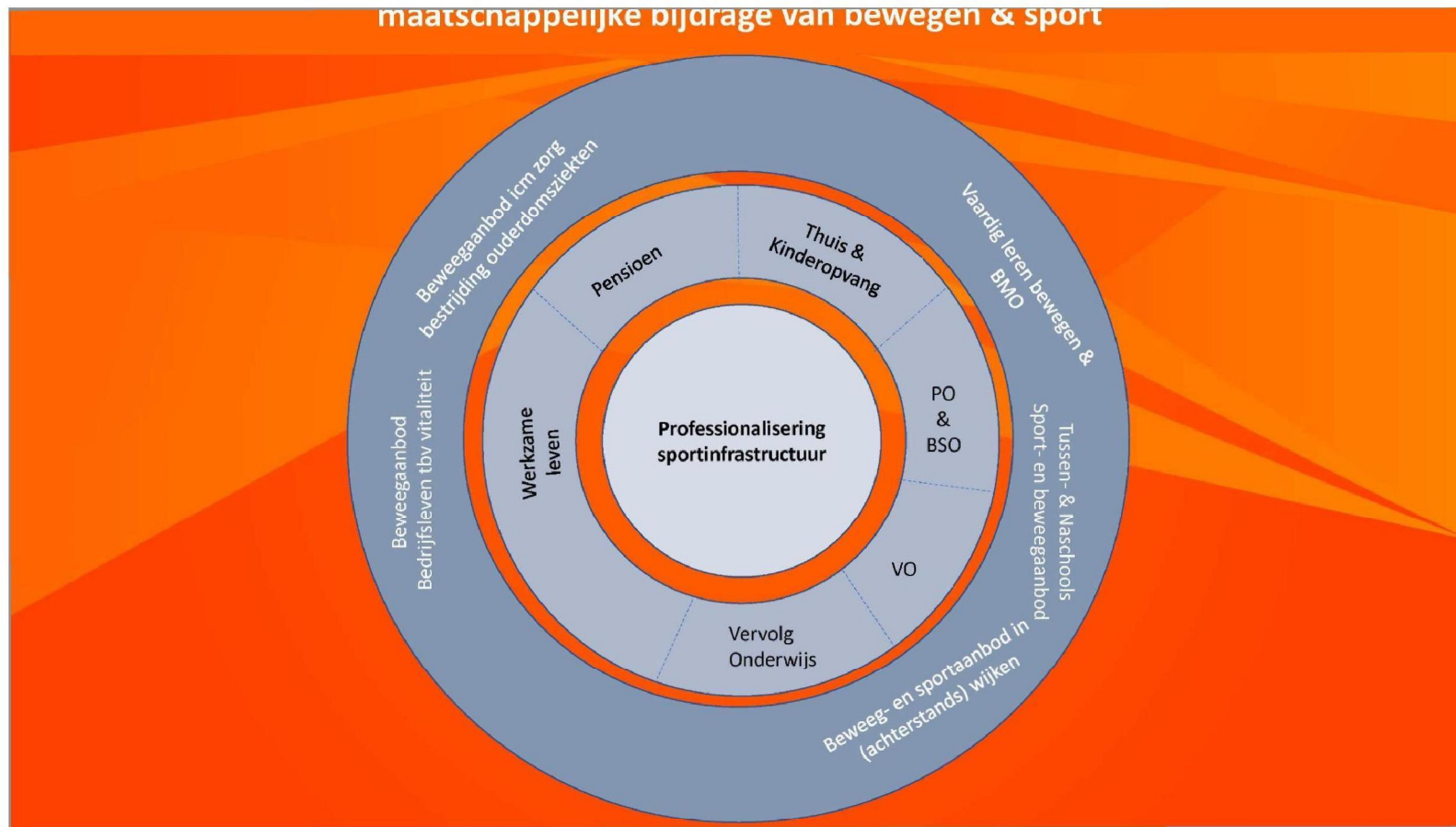


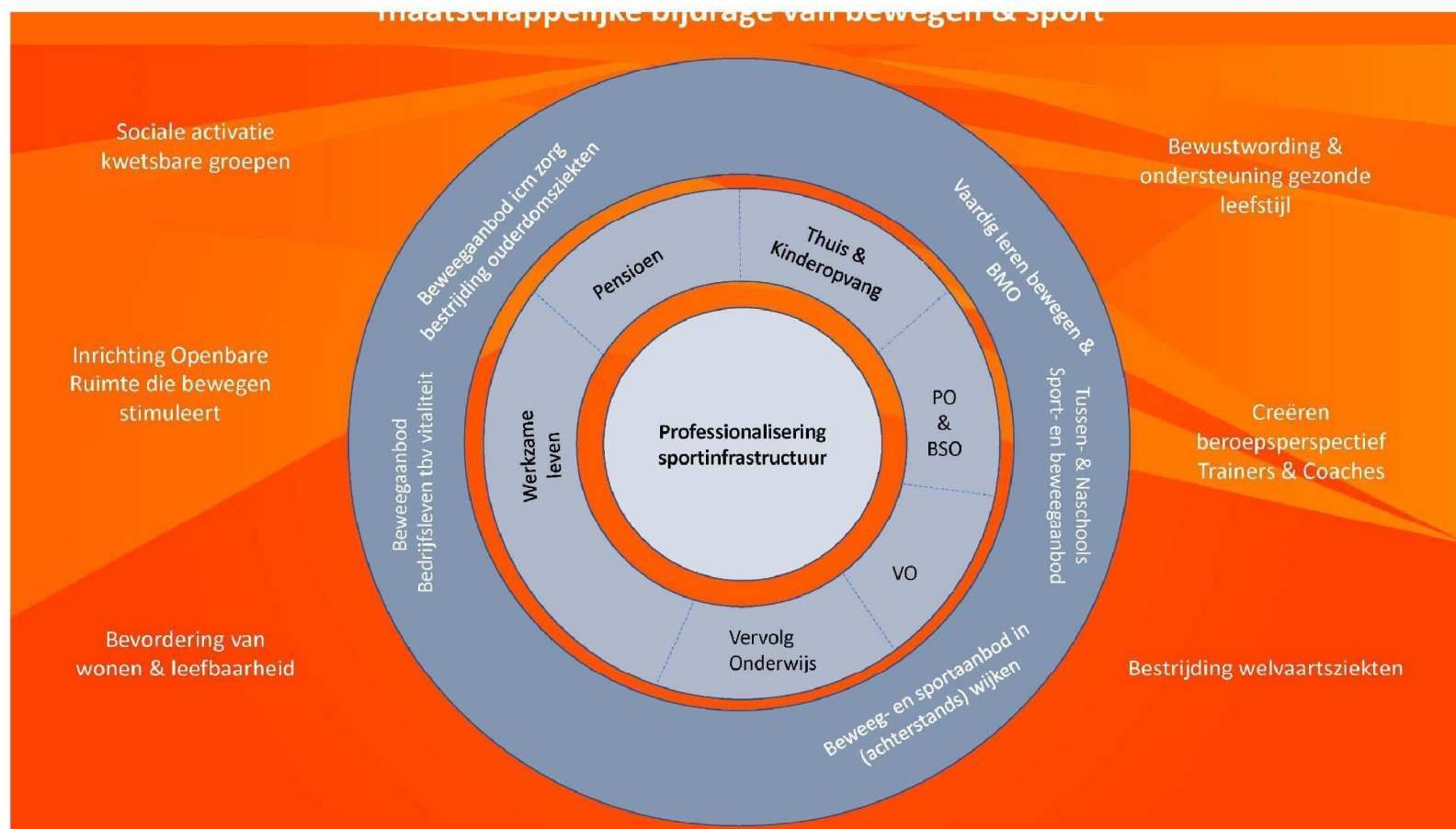
De uitdaging is door alle fasen het beweegaanbod structureel te organiseren.



maatschappelijke bijdrage van bewegen & sport







bijvoorbeeld tussen- & naschools aanbod



Samenvattend

- Bewegen levert een bijdrage aan een vitaal & weerbaar Nederland.
- Professionalisering van het sportaanbod creëert de randvoorwaarden om de maatschappelijke bijdrage van sport te vergroten;
 - Aan het onderwijs voor organiseren van meer sport- en beweegmomenten
 - Aan het bedrijfsleven (VNO-NCW) voor het organiseren van (flexibel) sportaanbod tbv duurzame inzetbaarheid van medewerkers
 - Aan de zorg bij bestrijding van welvaartziekten als obesitas, diabetes en in het sociaal en fysiek actief houden van ouderen ter bestrijding van ouderdomsziekten en sociaal isolement
 - Bijdrage aan het verbinden van verschillende culturele groepen in onze samenleving

Dit vraagt om:

- Een structurele en integrale aanpak voor bewegen door alle levensfasen heen
- Een collectief bewustzijn wat er nodig is voor een leven lang vitaliteit en weerbaarheid
- In een publieke ruimte en infrastructuur die uitnodigt voor drempelloos bewegen
- Die ondersteunen bij het maken van gezonde leefstijl keuzes

Wij hebben verstand van bewegen, maar kunnen dit niet alleen en willen daarbij graag samen met de (rijks)overheid en de maatschappelijke partners werken aan een integraal plan om structureel invulling te geven aan een vitaal en weerbaar Nederland

