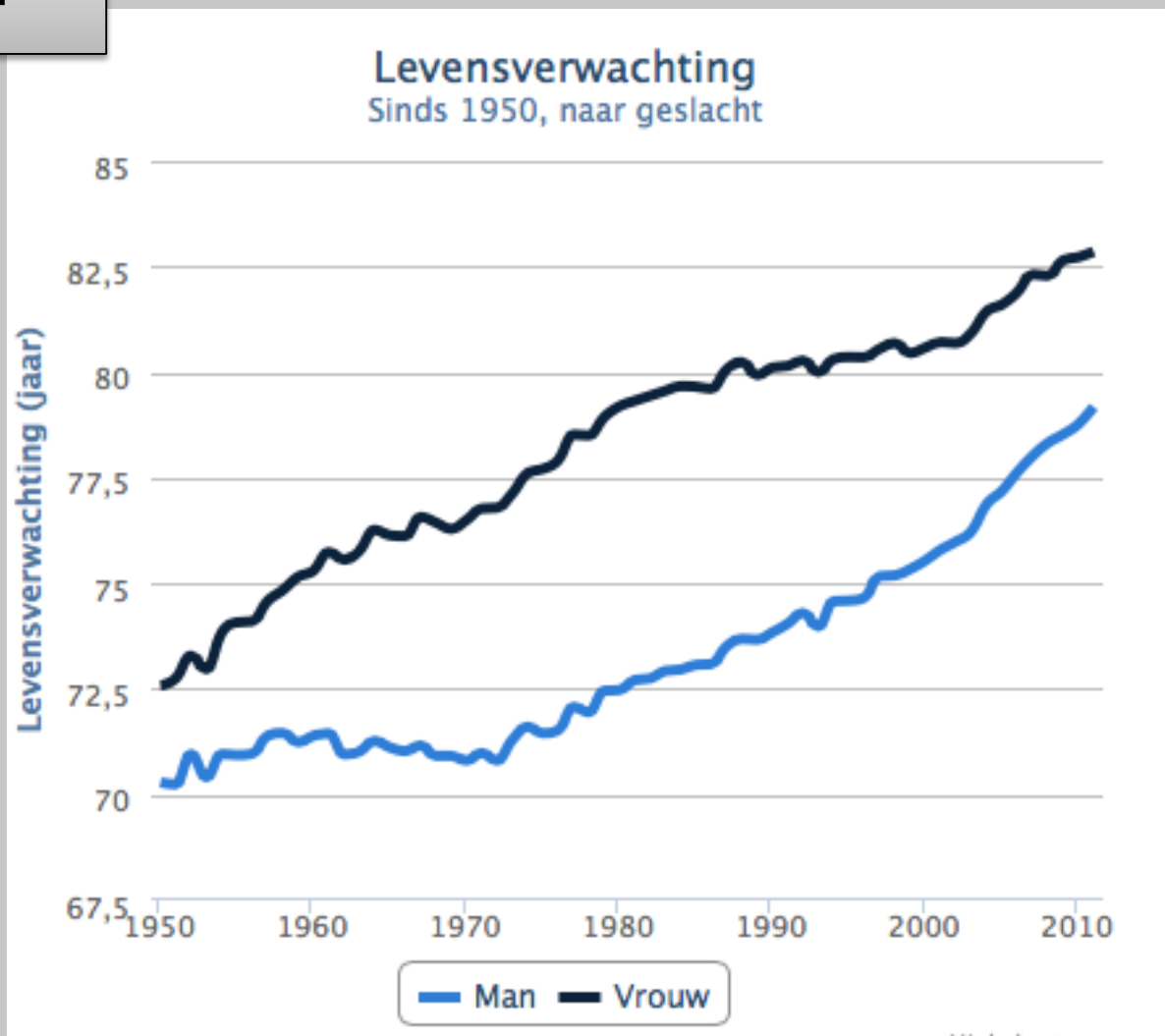




Urologische mannenemancipatie 10 jaar later

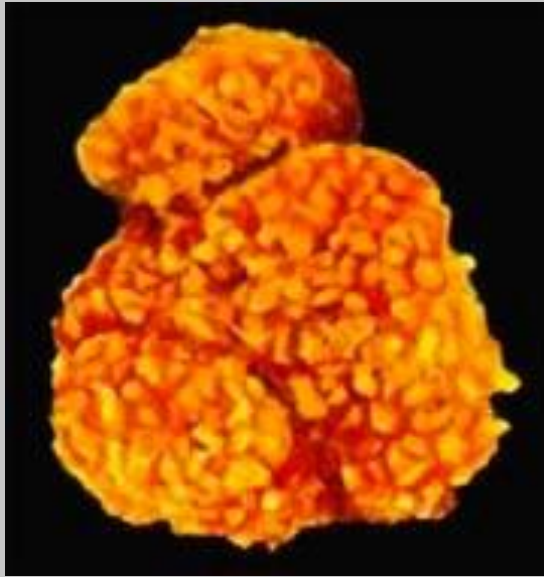
Eric Meuleman
Uroloog, VUmc
Amsterdam, NL

Gendergap





Gendergap. Waarom?



Y-chromosoom



Gendergap. Waarom?

Gebruik van huisartsenzorg

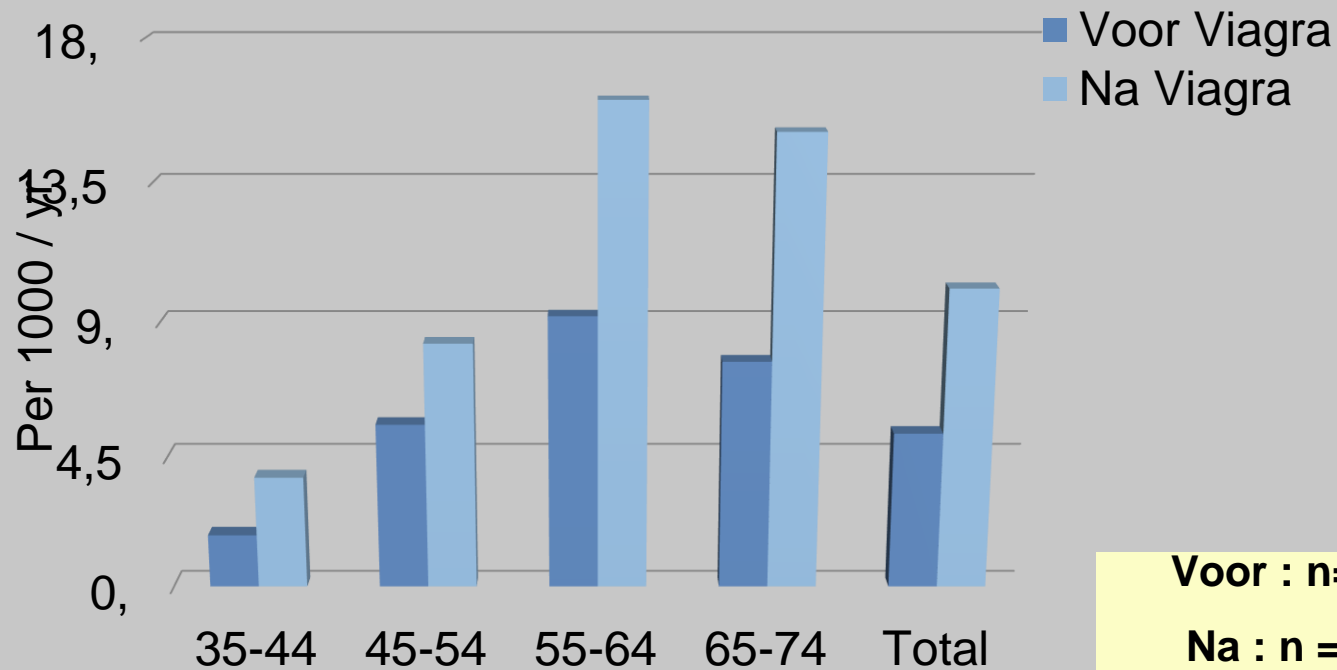
Volgens eigen opgave en huisartsregistratie

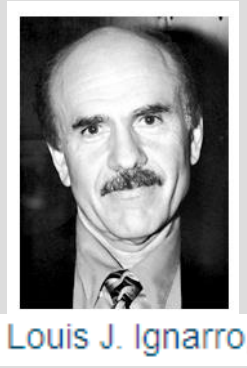
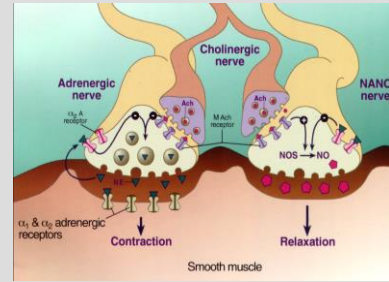
	Mannen	Vrouwen	Totaal
CBS-Gezondheidsenquête (2011)			
% met contact	67,2	76,8	72,0
Aantal contacten per inwoner	3,6	5,1	4,3
Aantal contacten per patiënt	5,4	6,6	6,0
Landelijk Informatie Netwerk Huisartsenzorg 2010			
% met contact	71,6	82,8	77,2
Aantal contacten per inwoner	3,7	5,4	4,6
Aantal contacten per patiënt	5,1	6,5	5,9

Bronnen: CBS-Gezondheidsenquête; LINH gepubliceerd op [CBS StatLine](#)



Incidentie van erectiestoornissen in de Nederlandse huisartsen praktijk voor en na 1998





Sildenafil (Viagra)
 Vardenafil (Levitra)
 Tadalafil (Cialis)



PDE 5



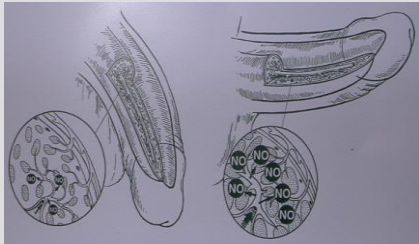
**GMP
 (Inactief)**



NO

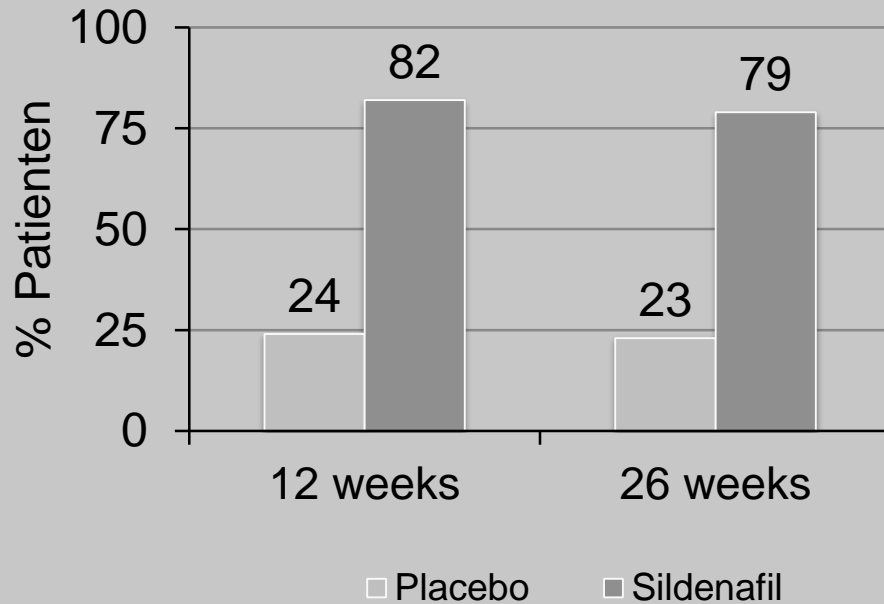


**cGMP
 (Actief)**





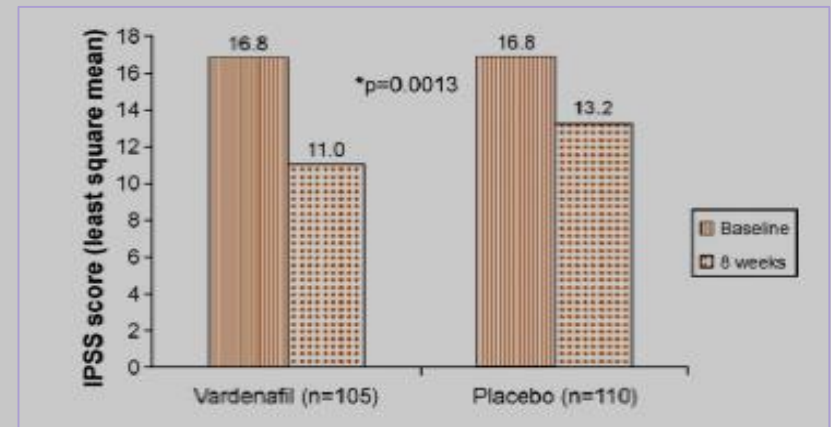
Voldoende erectie voor penetratie



Benign Prostatic Enlargement

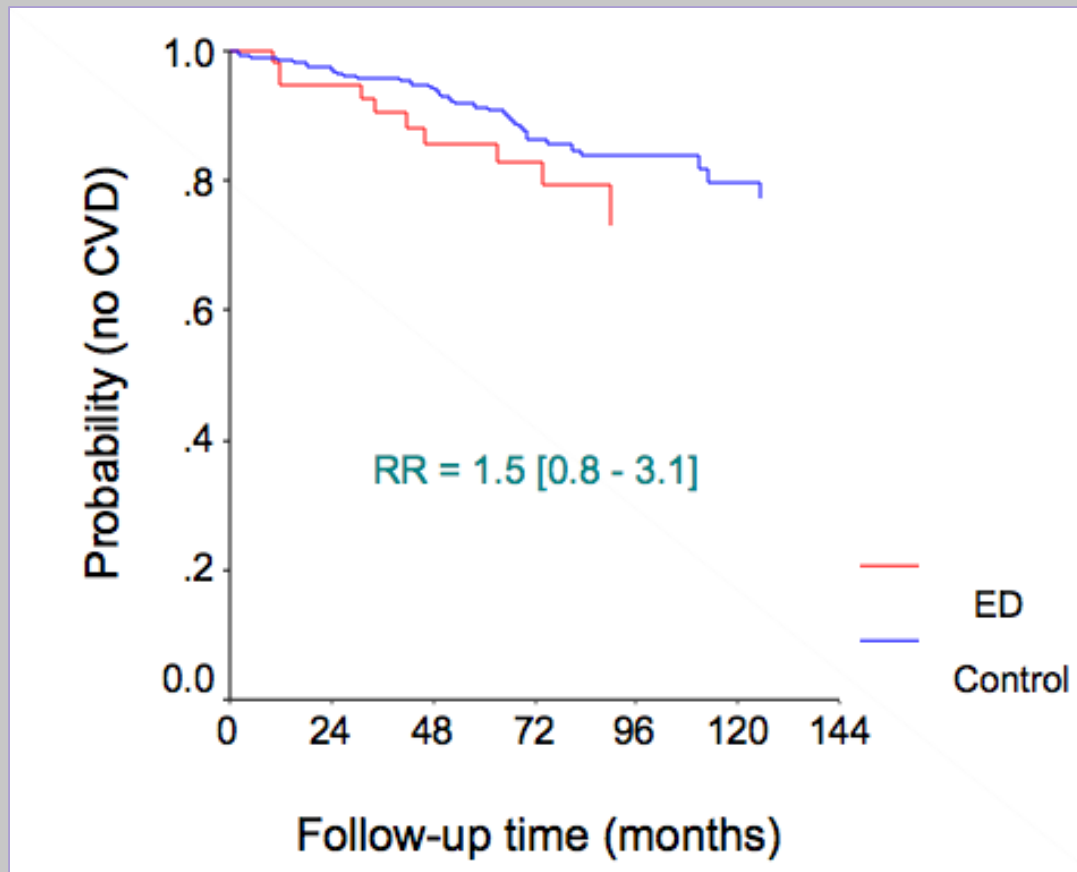
A Randomised, Placebo-Controlled Study to Assess the Efficacy of Twice-Daily Vardenafil in the Treatment of Lower Urinary Tract Symptoms Secondary to Benign Prostatic Hyperplasia

Christian G. Stief^{a,*}, Hartmut Porst^b, Dieter Neuser^c, Manfred Beneke^d, Ernst Ulbrich^d





ED als cardiovasculaire risicofactor



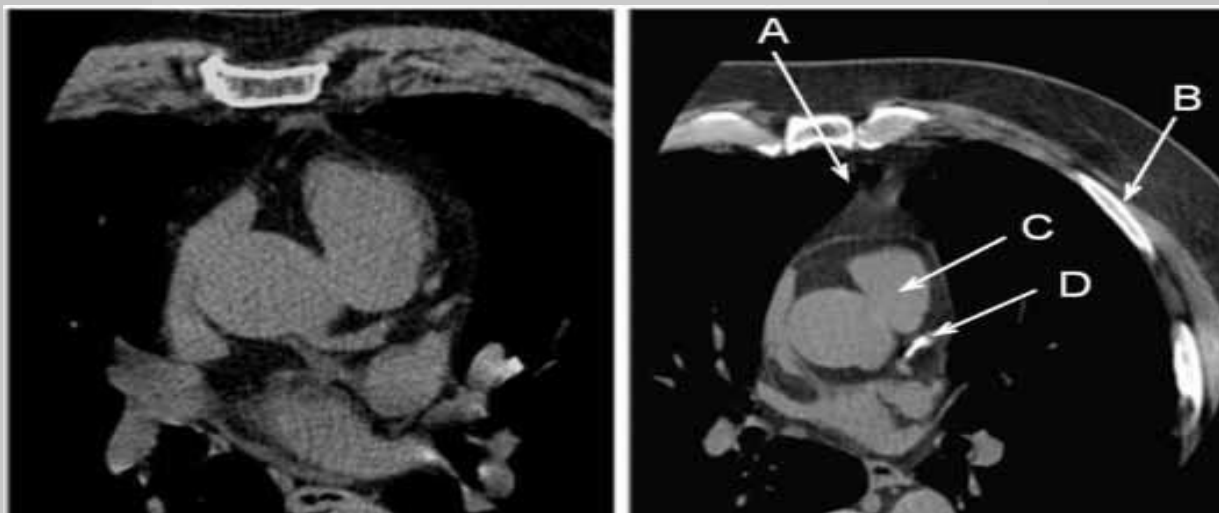


Hart CT-scan

N = 1.119

Coronair Arterie Calcificatie Score
(CACS)

Sexual Health Inventory for men (Shim)
Mannen met ED 54% meer kans op high
risk CACS gelijk aan roken en
hypertensie





ISSAM

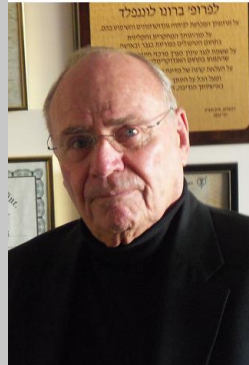
International Society For The Study of the Aging Male

1997

VU medisch centrum



Partial androgen deficiency of the aging male (PADAM)
Testosteron deficientie syndroom
Late onset hypogonadism
Penopauze



Behandeling van testosterontekort

Een testosterontekort kan eenvoudig worden behandeld door testosteron toe te dienen.

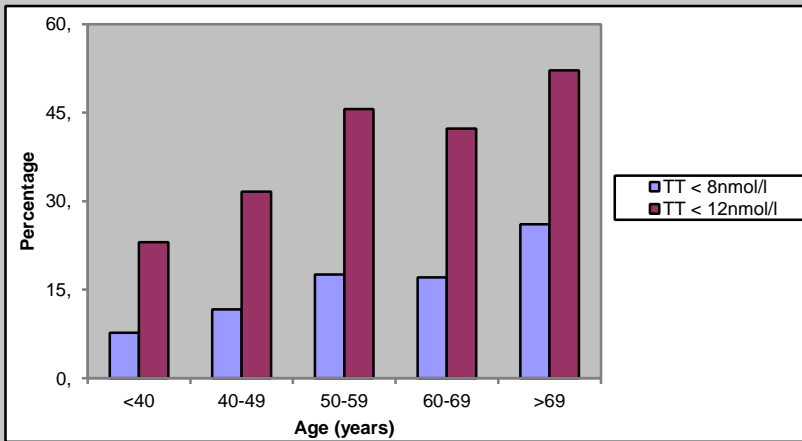
Slingeland Ziekenhuis

Kenniscentrum Urologie

HORMOONTEKORT ?

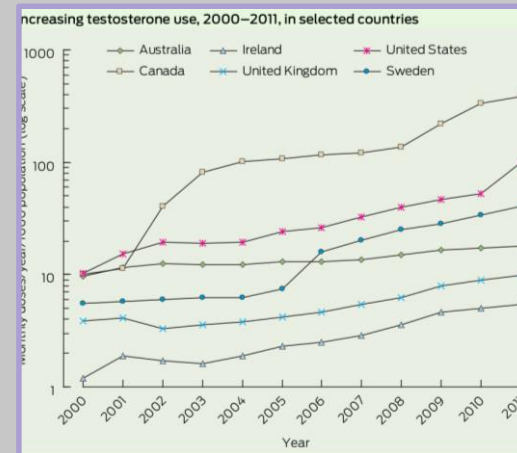
DOE DE ZELFTEST !

Testosteron spiegels dalen na het 40^{ste} met 1% per jaar¹
6.0–12.3% van de 40+ mannen hebben een lage T-spiegel



ANDROS
MANNENKLINIEK

Global trends in testosterone prescribing, 2000–2011: expanding the spectrum of prescription drug misuse

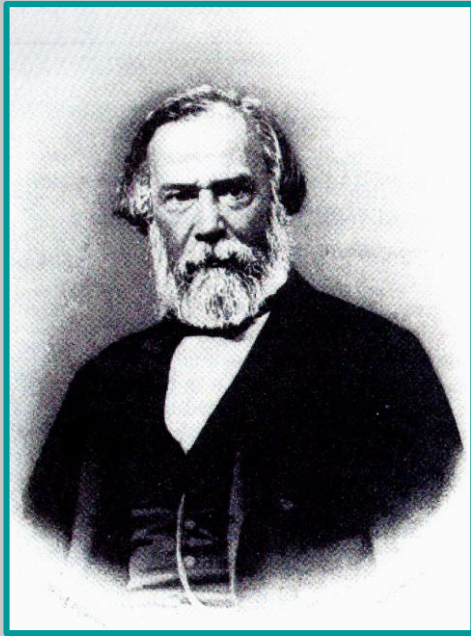


David J Handelsman
MB BS, FRACP, PhD,
Director

Morales A, Lunenfeld B. *Aging Male* 2002; 5: 74–86. 2. Araujo AB et al. *J Clin Endocrinol Metab* 2004; 89(12): 5920–5926

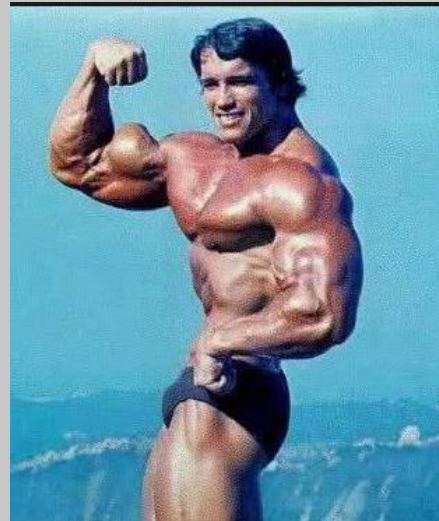
ORGANOTHERAPY WITH TESTICULAR EXTRACTS

Lancet 2: 105 (1889)



Increased physical strength,
mental abilities and sexual appetite
by self- injection of animal
testicle preparations

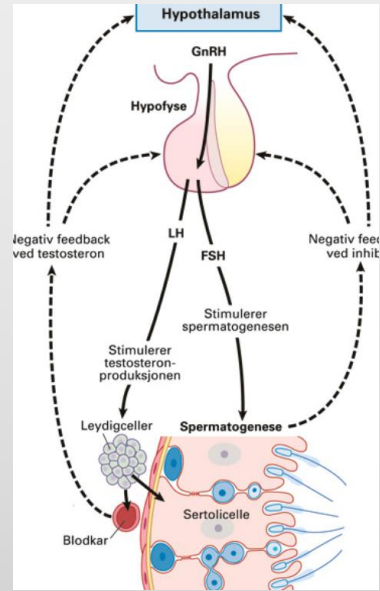
Brown - Séquard



Rejuvenation

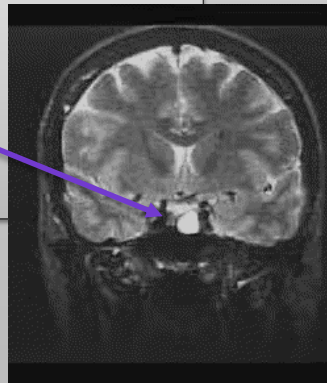


Testosteron behandeling bij mannen met testosteron tekort op basis van een genetische of verworven aandoening van de hypothalamus hypofyse gonade as



Hypogonadotroop Hypogonadisme

- (LH, FSH ↓)
- Kallmann
- Idiopatisch (IHH)
- Hypofyse Tumor
- Anabole steroiden
- Morbide obesitas
- Granulomateuze ziekten
- Haemochromatose



Hypergonadotroop Hypogonadisme

- (LH, FSH ↑)
- Testiculaire dysgenese
- Klinefelter
- Anorchie
- Castratie
- Cytotoxische medicatie
- Radiotherapie

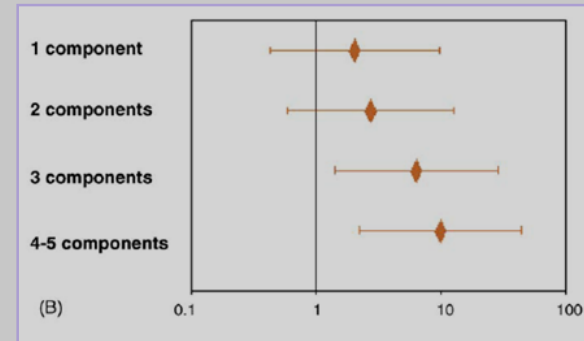
Laat hypogonadisme



Visceral obesity	Waist circumference: ≥ 102 cm
Hypertension	<ul style="list-style-type: none"> • 130/85mmHg • Being treated for hypertension
Dyslipidemia	Triglycerides: ≥ 1.7 mmol/l HDL-cholesterol: < 1.0 mmol/l
Diabetes mellitus type 2	Fasting glucose: ≥ 6.1 mmol/l

Note. Metabolic syndrome is present if \geq three factors (triglycerides and high-density lipoproteins are counted separately) are positive.

Metabool syndroom
 DM
 Chronische infecties
 Kanker
 COPD
 Nierinsufficiëntie
 Depressie



Relatief risico op hypogonadisme (TT < 8.0 nmol/L)

Corona G et al. *Eur Urol* 2006; 50: 595-604

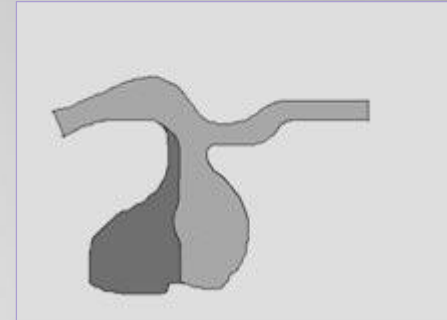


Viscerale adipocyten

Aromatisatie

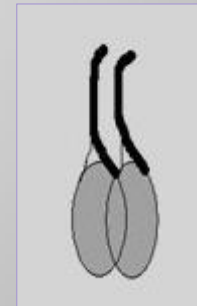
oestradiol

Hypofyse voorkwab



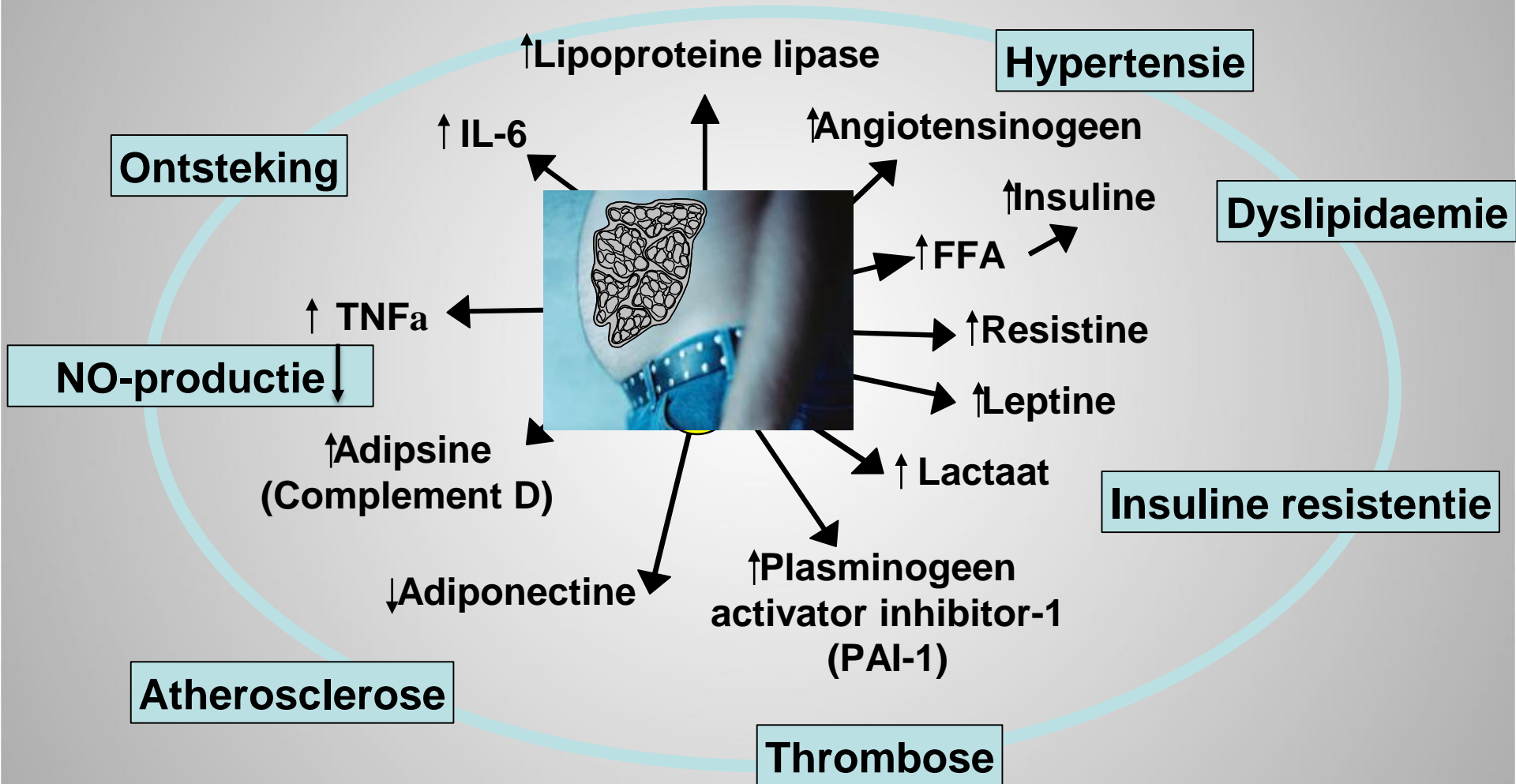
vermindering LH spiegels
en gepulste amplitude

Testes

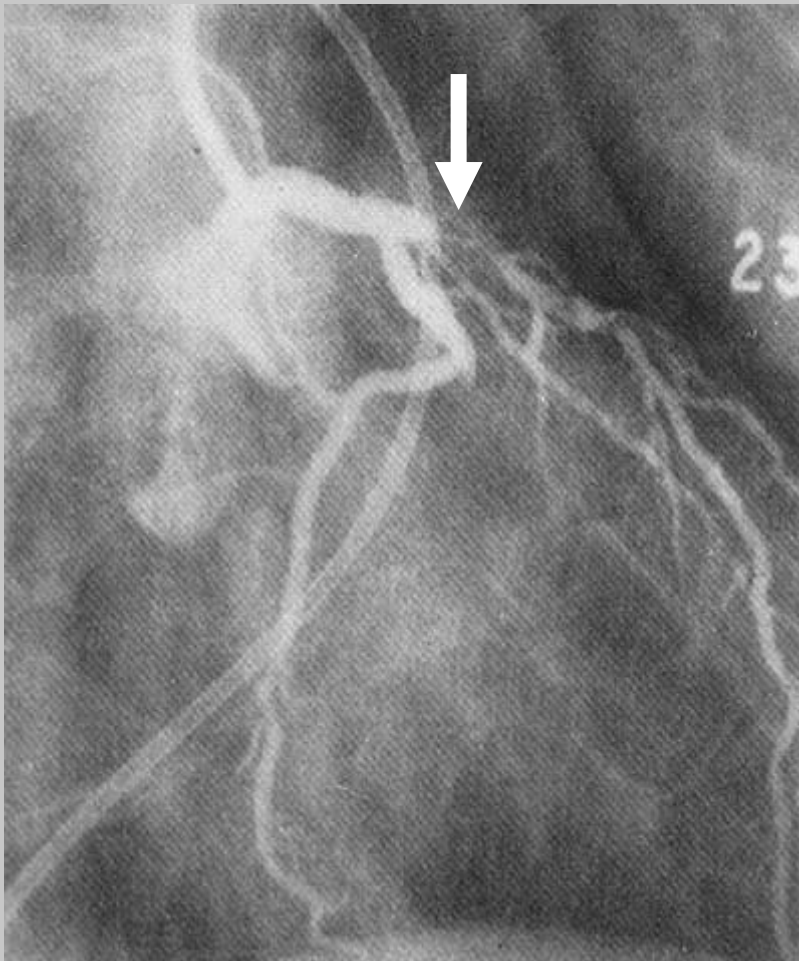


TESTOSTERON

Metabool syndroom is een cardiovasculaire risicofactor



Hypogonadisme als cardiovasculair risico



Case control study

60 men with 1 or more coronary stenoses >75%
30 men with normal coronary angiograms
Excluded if MI or severe illness in last 3 months

Men with coronary artery disease have lower levels
of androgens than men with normal coronary
angiograms

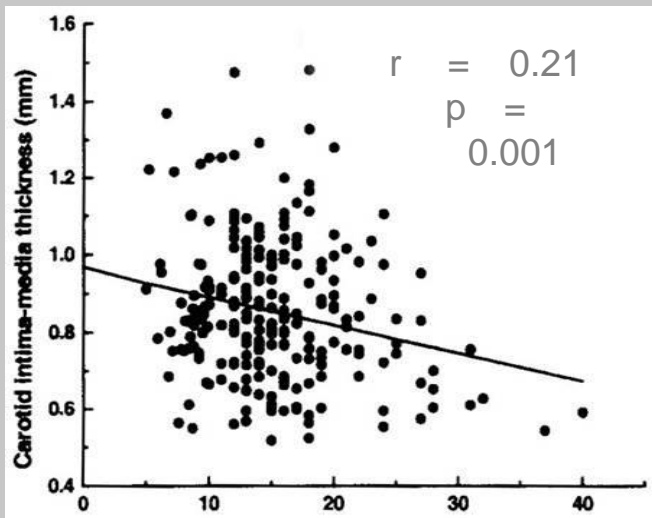
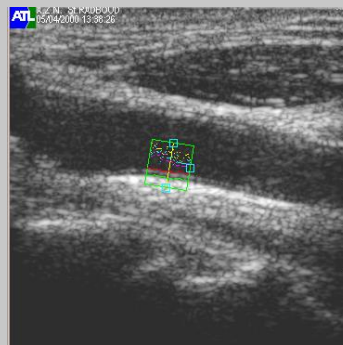
K. M. English¹, O. Mandour², R. P. Steeds¹, M. J. Diver³, T. H. Jones² and
K. S. Channer¹

Eur Heart J. 2000 Jun;21(11):890-4.

Hypogonadisme als cardiovasculair risico



Correlation between serum testosterone and maximum intima-media thickness of the carotid bulb in 236 middle-aged men

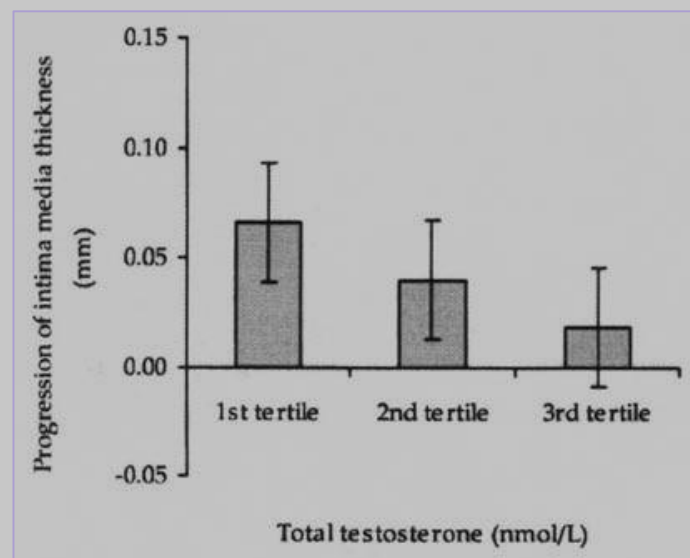


Increased Carotid Atherosclerosis in Andropausal Middle-Aged Men

Juuso Mäkinen, MD,*† Mikko J. Järvisalo, MD, PhD,*††† Pasi Pöllänen, MD, PhD,§||
 Antti Perheentupa, MD, PhD,§# Kerttu Irjala, MD, PhD,¶ Markku Koskenvuo, MD, PhD,**
 Juha Mäkinen, MD, PhD,§ Ilpo Huhtaniemi, MD, PhD#†† Olli T. Raitakari, MD, PhD††

Mäkinen J et al. *JACC* 2005; 45: 1603-1608.

Progression of mean IMT of common carotid artery in tertiles of serum Testosterone

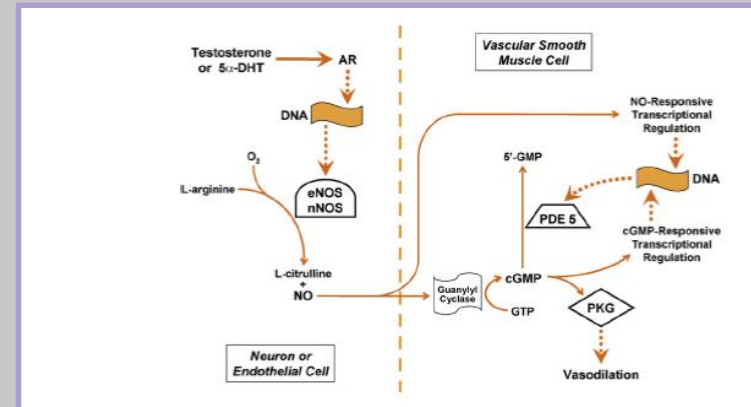
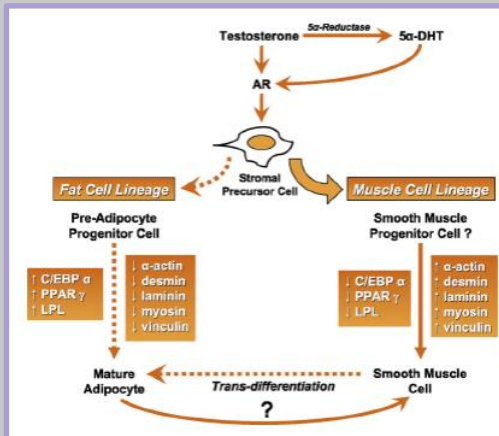


Endogenous Sex Hormones and Progression of Carotid Atherosclerosis in Elderly Men

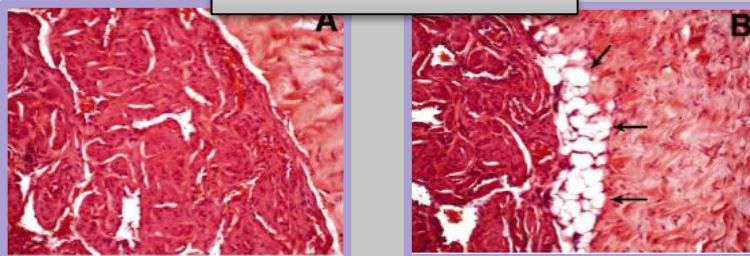
Majon Müller, MD, PhD; Annewieke W. van den Beld, MD, PhD; Michiel L. Bots, MD, PhD; Diederick E. Grobbee, MD, PhD; Steven W.J. Lamberts, MD, PhD; Yvonne T. van der Schouw, PhD

Circulation 2004; 109: 2074-2079.

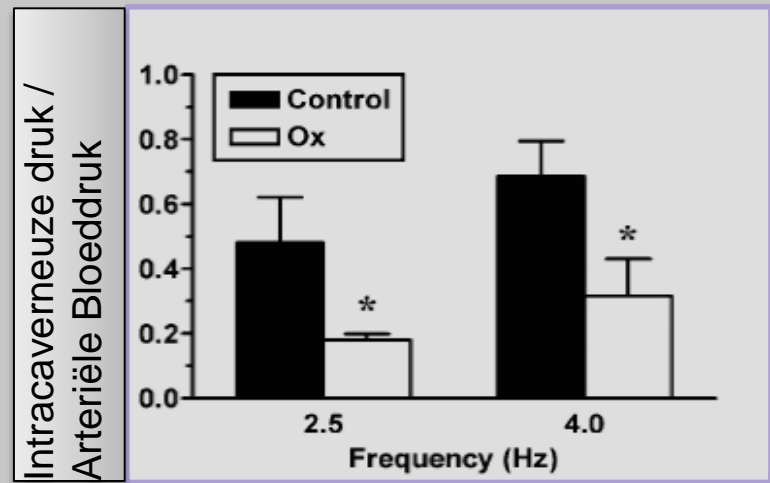
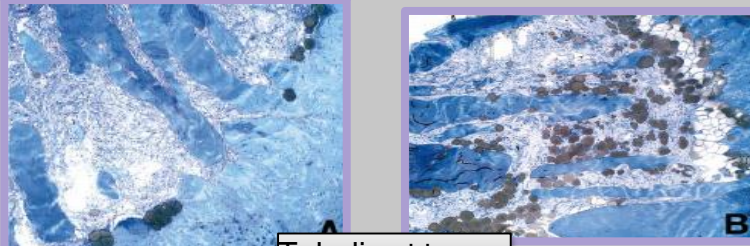
Testosteron en de genitale respons



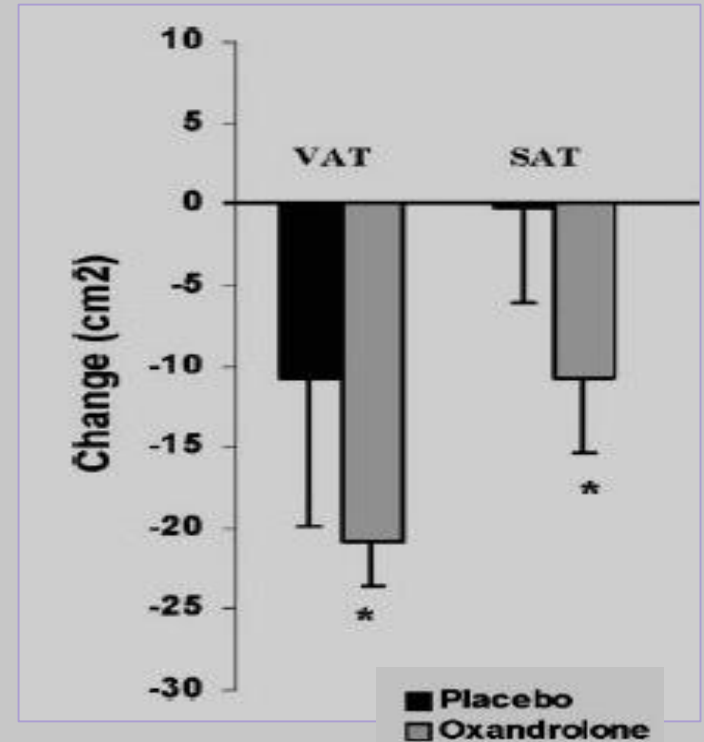
Hematoxyline + eosine



Toludine blauw



Is T-behandeling effectief ?

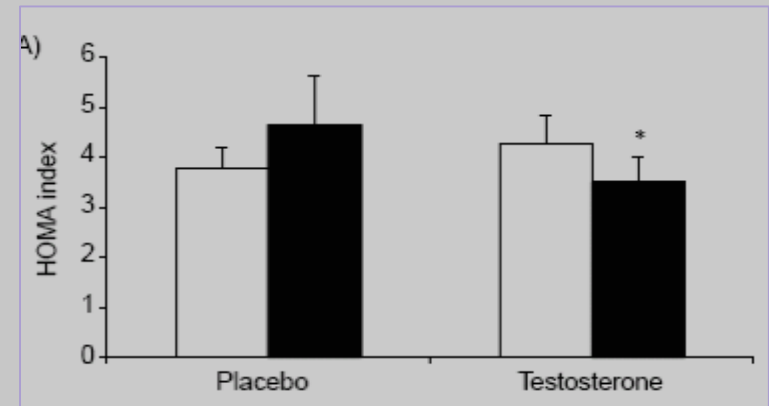
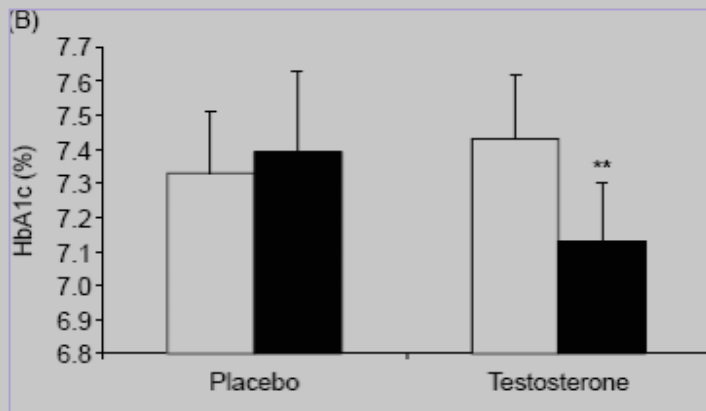
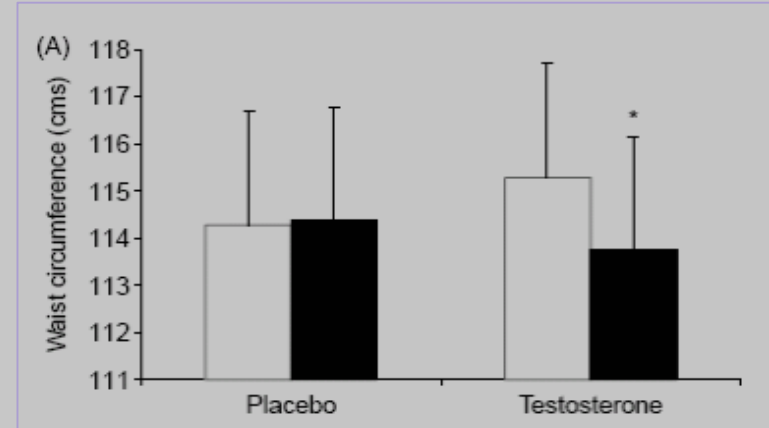


Effects of Androgen Therapy on Adipose Tissue and Metabolism in Older Men

E. TODD SCHROEDER, LING ZHENG, MICHELLE D. ONG, CARMEN MARTINEZ, CARLA FLORES, YOLANDA STEWART, COLLEEN AZEN, AND FRED R. SATTLER

Is T-behandeling effectief ?

Het effect van T-behandeling bij mannen met DM type II



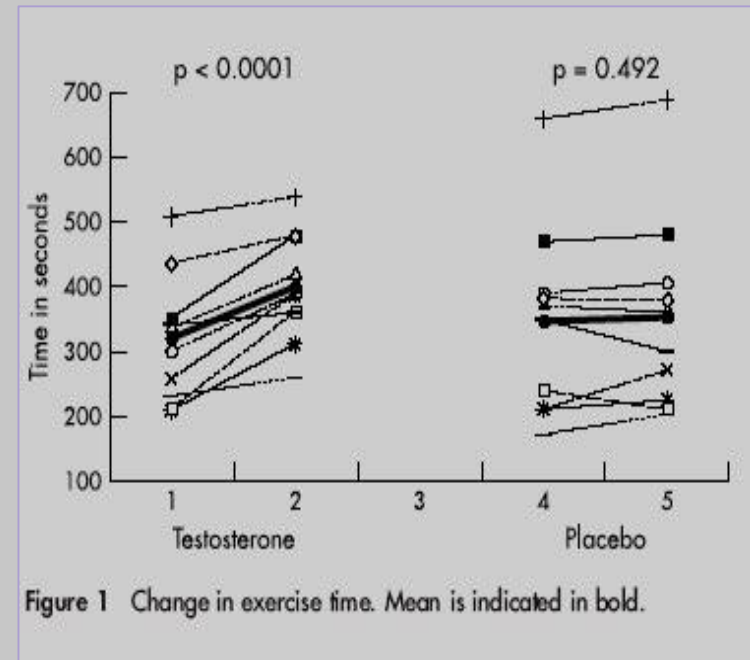
Testosterone replacement therapy improves insulin resistance, glycaemic control, visceral adiposity and hypercholesterolaemia in hypogonadal men with type 2 diabetes

D Kapoor^{1,3}, E Goodwin¹, K S Channer² and T H Jones^{1,3}



Is T-behandeling effectief ?

Testosteron therapie in hypogonadale mannen verbetert tijd tot coronair ischemie



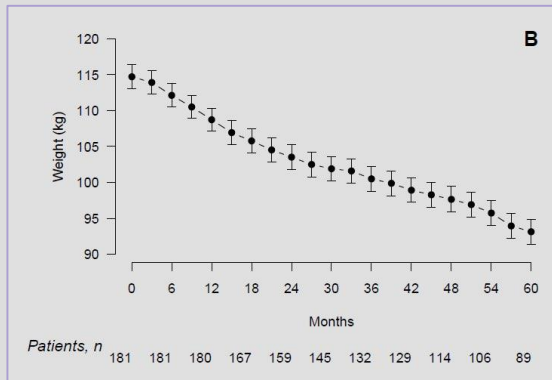
Testosterone replacement in hypogonadal men with angina improves ischaemic threshold and quality of life

C J Malkin, P J Pugh, P D Morris, K E Kerry, R D Jones, T H Jones, K S Channer

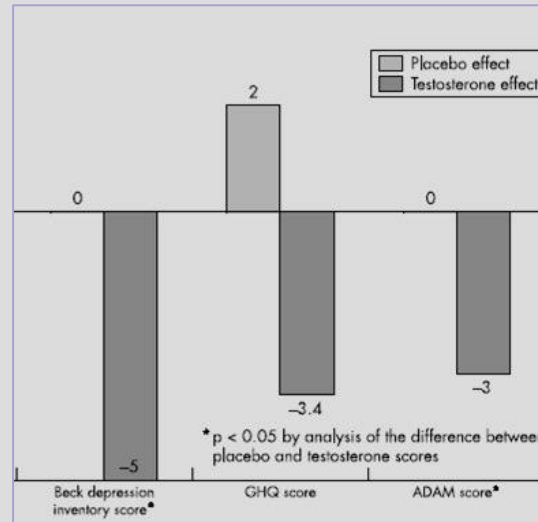
Heart 2004;90:871-876. doi: 10.1136/hrt.2003.021121

Is T-behandeling effectief ?

Obesitas



Depressie



Seksuele kwaliteit van leven

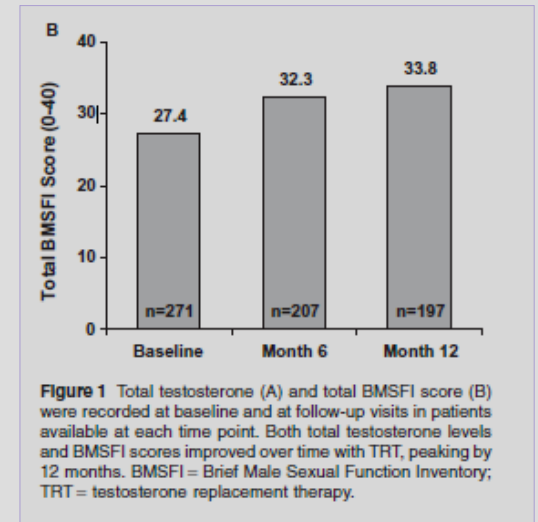


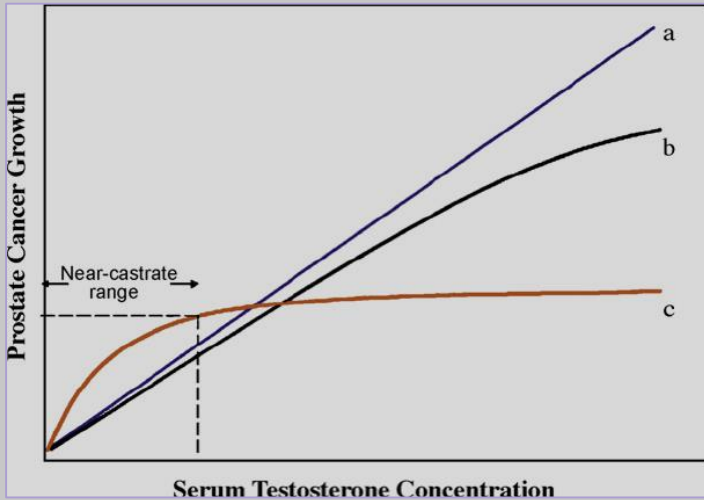
Figure 1 Total testosterone (A) and total BMSFI score (B) were recorded at baseline and at follow-up visits in patients available at each time point. Both total testosterone levels and BMSFI scores improved over time with TRT, peaking by 12 months. BMSFI = Brief Male Sexual Function Inventory; TRT = testosterone replacement therapy.

A dangerous elixir?

Testosterone therapy jacks up vigour, sex drive and mental acuity — or so proponents claim. But are those who experiment with this potent sex hormone gambling with their health? Helen Pearson investigates.

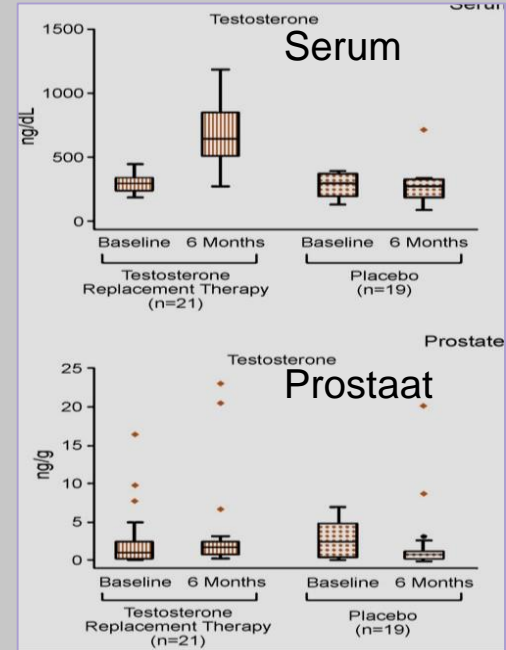
Prostaat

Het saturatie model



Morgentaler A, Traish AM. Eur Urol 2009;55:310–21.

Het effect van exogeneen testosteron(T) op de T-spiegels in prostaat weefsel van hypogonadale mannen



Marks LS, Mazer NA, Mostaghel E, et al. Effect of testosterone replacement therapy on prostate tissue in men with late-onset hypogonadism: a randomized controlled trial. JAMA 2006;296:2351–61.



A dangerous elixir?

Testosterone therapy jacks up vigour, sex drive and mental acuity — or so proponents claim. But are those who experiment with this potent sex hormone gambling with their health? Helen Pearson investigates.

Cardiovasculair

In this population of older men with limitations in mobility and a high prevalence of chronic disease, the application of a testosterone gel was associated with an increased risk of cardiovascular adverse events. The small size of the trial and the unique population prevent broader inferences from being made about the safety of testosterone therapy. (ClinicalTrials.gov number, NCT00240981.)

N ENGL J MED 363;2 NEJM.ORG JULY 8, 2010

The experience in Low T Centers shows that, in an injectable testosterone patient registry, testosterone is generally safe for younger men who do not have significant risk factors. Of patients that developed MI with testosterone, there was no association with testosterone or hematocrit levels.

Conclusions: The effects of testosterone on cardiovascular-related events varied with source of funding. Nevertheless, overall and particularly in trials not funded by the pharmaceutical industry, exogenous testosterone increased the risk of cardiovascular-related events, with corresponding implications for the use of testosterone therapy.

The FDA also recommended that: “Testosterone is an FDA-approved replacement therapy only for men with disorders of the testicles, pituitary gland or brain that cause hypogonadism” and that “it should not be used to relieve symptoms in men who have low testosterone for no reasons other than aging.”



IT'S ALL IN THE TIMING

Taking hormones to replace those lost during menopause helps many women with their symptoms, yet it may also cause cognitive decline. Could the age at which hormones are taken determine whether they will be beneficial or harmful? Tom Siegfried reports.

“The time and the age at which a person takes hormone therapy may predict the clinical outcome.”
— Peter Schmidt

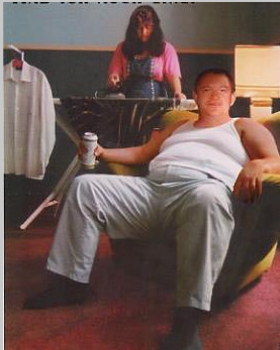
Following a formal in-depth review, the FDA released a new warning and updated labeling on TRT to reflect the possible increased risk of heart attacks and strokes associated with testosterone use. The Committee concurs in the FDA conclusion that the signal for cardiovascular risk is weak and that we need definitive studies.

Adverse Events Associated with Testosterone Administration

Myocardial Infarction and Stroke Risk in Young Healthy Men Treated with Injectable Testosterone

Robert S. Tan, Kelly R. Cook, and William G. Reilly

Chakradhar Reddy, M.D., Andrew D. Caillaud, M.D., Thomas G. Travison, Ph.D., Thomas W. Storer, Ph.D., Ph.D., Richard J. Ross, Jr., Ph.D., Aaron Tennstedt, Ph.D., M. Lakshman, M.D., Anne Krasnoff, M.D., Philip E. Knapp, M.D., Geeta Bhasin, B.A., Ajeet Aggarwal, M.D., Lauren Collins, R.N.P., Nathan LeBrasseur, Ph.D.



REVIEW

Lifestyle and metabolic approaches to maximizing erectile and vascular health

DR Meldrum^{1,2}, JC Gambone^{1,2}, MA Morris³, K Esposito⁴, D Giugliano⁴ and LJ Ignarro^{2,5}

International Journal of Impotence Research (2012) 24, 61–68
 © 2012 Macmillan Publishers Limited All rights reserved 0955-9930/12
 www.nature.com/ijir

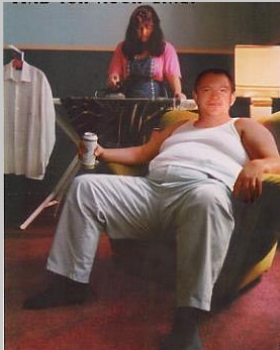


Table 1 Summary of lifestyle and metabolic factors having positive (+) or negative (–) effects on ED or vascular NO demonstrated by *randomized trials or **observational studies

Factor (+), (–)	End point (ED, NO)	References
Weight loss (+)	ED, NO	*13
Exercise (+)	ED, NO	**16,17,22–25,29
High fat intake (–)	NO	**29
High sugar intake (–)	NO	*45
Angiotensin receptor blockers (+)	ED, NO	*16,33
Testosterone (+)	ED, NO	*35,36; **34
Smoking (–)	ED, NO	**37,38
Mild/moderate alcohol (+)	ED, NO	**41; *42
Excessive alcohol (–)	NO	*42,43
Antioxidants (+)	ED, NO	*38,45,46,48,50
Folate (+)/hyperhomocysteinemia (–)	ED, NO	**52,53
Omega-3 fatty acids (+)	NO	*56; **57
Renal failure (–)	ED	**58,59
Aging (–)	ED, NO	**61
L-Arginine 5 g per day (+)	ED, NO	*65,66
PDE-5 inhibitors (+)	ED, NO	*50,69

Abbreviation: NO, nitric oxide.

Alternatieven

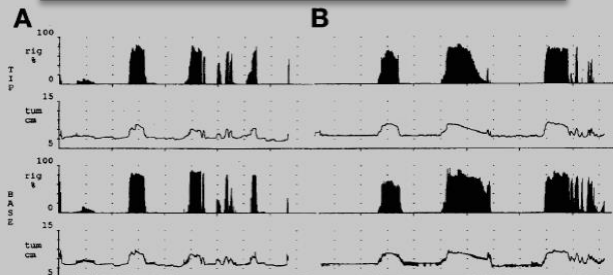


IMPROVEMENT IN ERECTILE FUNCTION IN MEN WITH ORGANIC ERECTILE DYSFUNCTION BY CORRECTION OF ELEVATED CHOLESTEROL LEVELS: A CLINICAL OBSERVATION

ERIN A. SALTZMAN, ANDRE T. GUAY^{*,†} AND JERILYNN JACOBSON

From the Center for Sexual Function, Endocrinology Department, Lahey Clinic Northshore, Peabody, Massachusetts

J Urol. 2004 Jul;172(1):255-8.



Nocturnal penile activity before (A) and after (B) 4 months of treatment with atorvastatin in 1 of 9 patients. *rig*, rigidity. *tum*, tumescence.

The effects of quinapril and atorvastatin on the responsiveness to sildenafil in men with erectile dysfunction

Alan J Bank^{a,b}, Aaron S Kelly^{a,b}, Daniel R Kaiser^{a,b}, William W Crawford^a, Benjamin Waxman^c, Douglas A Schow^d and Kevin L Billups^{b,e}

Vascular medicine 2006;11:251-257

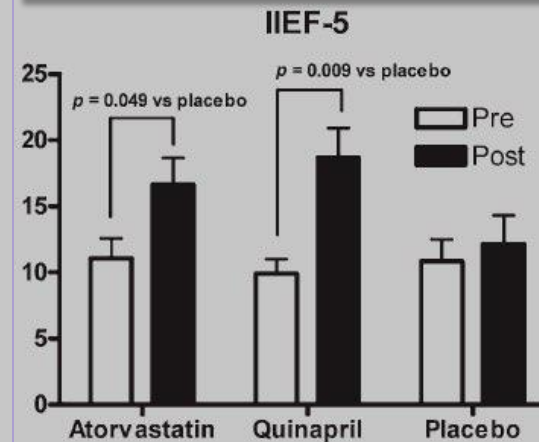
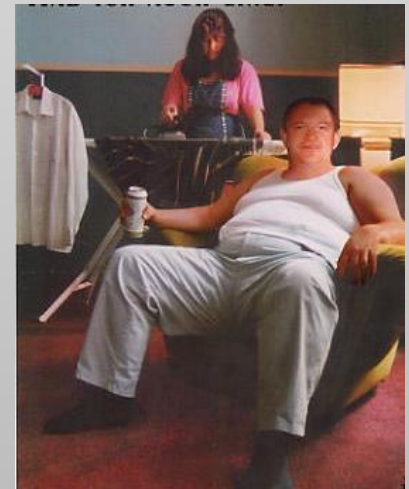
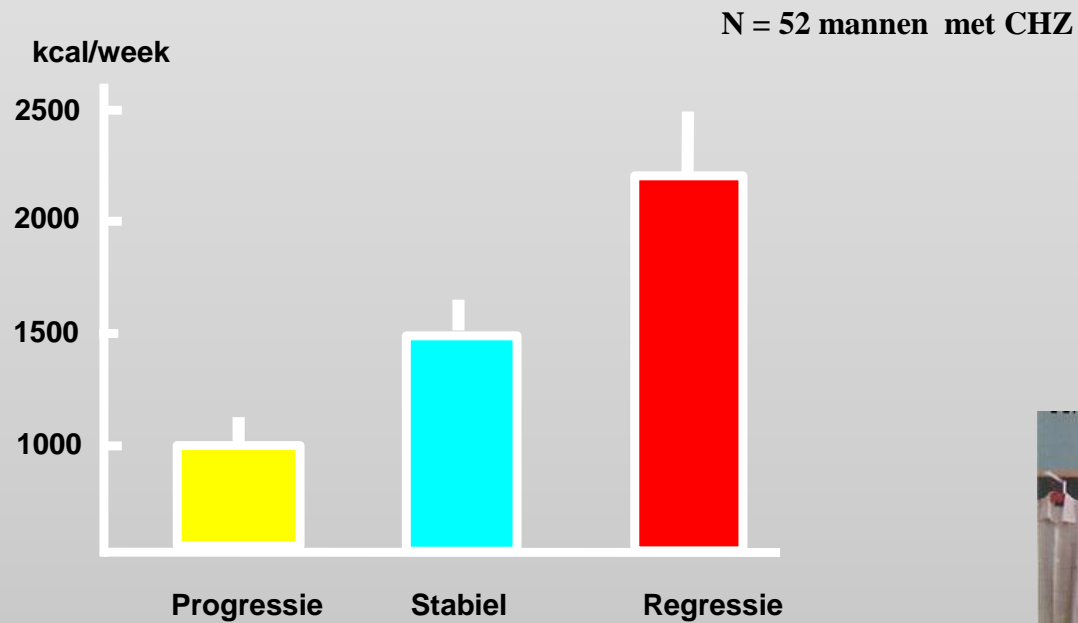
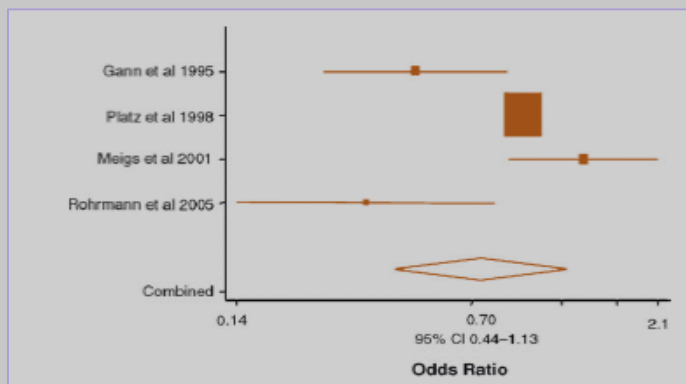


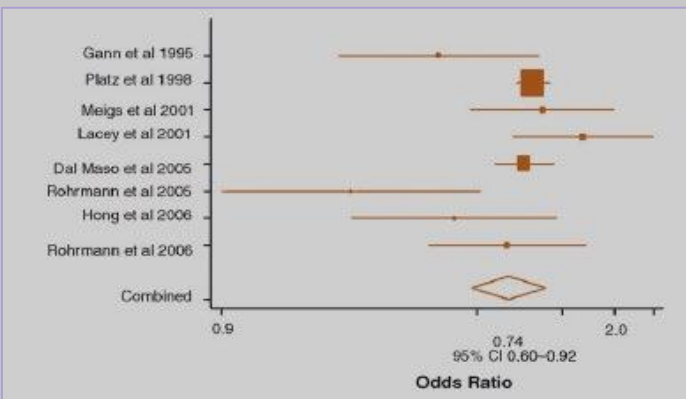
Figure 1 Effects of atorvastatin and quinapril on the IIEF-5 score in men with erectile dysfunction. (IIEF-5 = International Index of Erectile Function-5.)

Bewegen

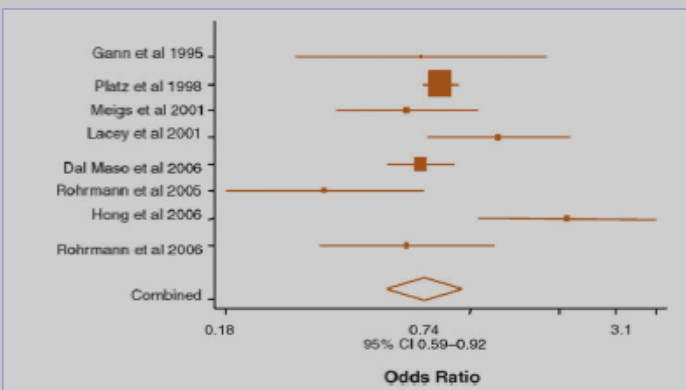




Licht

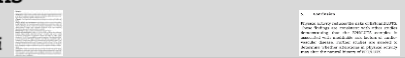


Matig



Fors

De relatie tussen de mate van fysieke inspanning en het risico op plasklachten



Haalbaarheidsonderzoek naar een leefstijlprogramma gericht op gezond bewegen op de polikliniek urologie VUmc

Mannen > 40 jr met plasklachten en of erectiestoornissen
Lichaamsbeweging minder dan 30 minuten per dag tenminste 5 dagen per week

Gepersonaliseerd fitness programma
Combinatie van cardio workout en gewichtheffen
Tweemaal per week gedurende 2 maanden

Resultaten

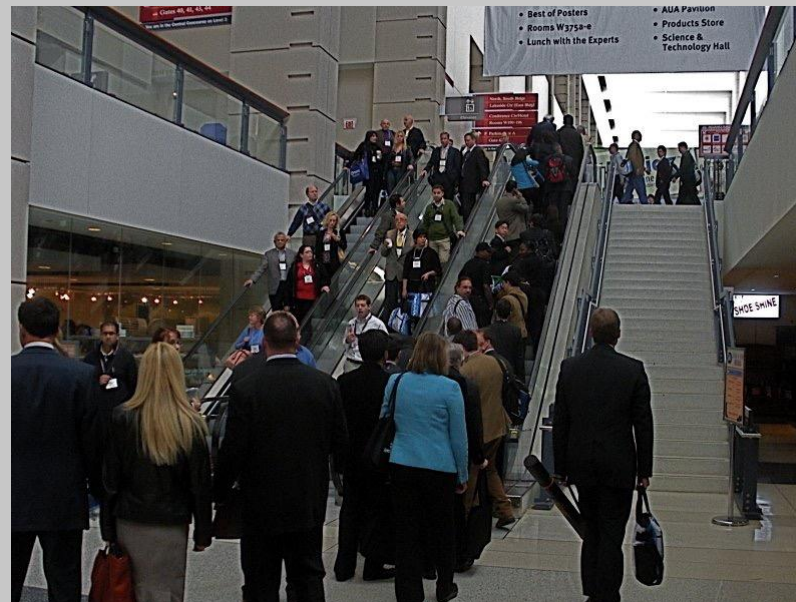
Zittende leefstijl: 20/49 (41%)

Bereid te participeren: 14 / 20 (70%)

Afvallers na informed consent: 10 / 14 (71%)

Gestart met programma: 4

Programma voltooid: 0





18 Omish, D., Scherwitz, L. W., Billings, J. H., Brown, S. E., Gould, K. L., Merritt, T. (2001). Intensive lifestyle changes for reversal of coronary heart disease. *JAMA*, 280, 1998.



Voeding
Beweging
Stress management
Actief inzetten sociale support

- Mannen van 40 t/m 75 jaar met zorgvraag LUTS/ED
- Begeleiding in leefstijl gedurende 6 maanden
- Individueel, in een groep en gebruik online dashboard
- Begeleiding door een getrainde health coach



- 71 procent voltooide het programma
- BMI, buikomvang, Testosteron, HBA1c verbeterden bij 41-63 %
- Plasklachten bij 60%
- Erectiestoornissen bij 28%



Mannen worden 3,5 jaar ouder dan elf jaar geleden