Erectile dysfunction, cardiovascular disease & diabetes

Living with Diabetes in the 21st Century

BY DR PATRICIA SCHARTAU

3RD DECEMBER 2019

GP IN HAMPSTEAD, LONDON

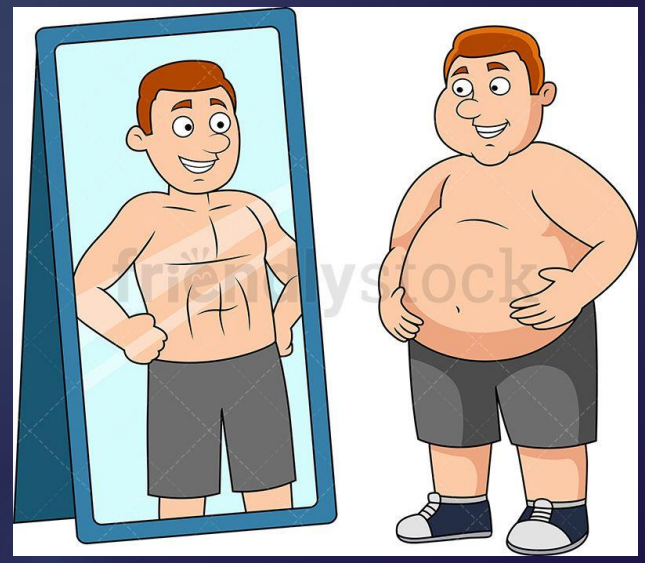
ACADEMIC CLINICAL LECTURER IN PRIMARY CARE AT UCL

NHS ENTREPRENEUR

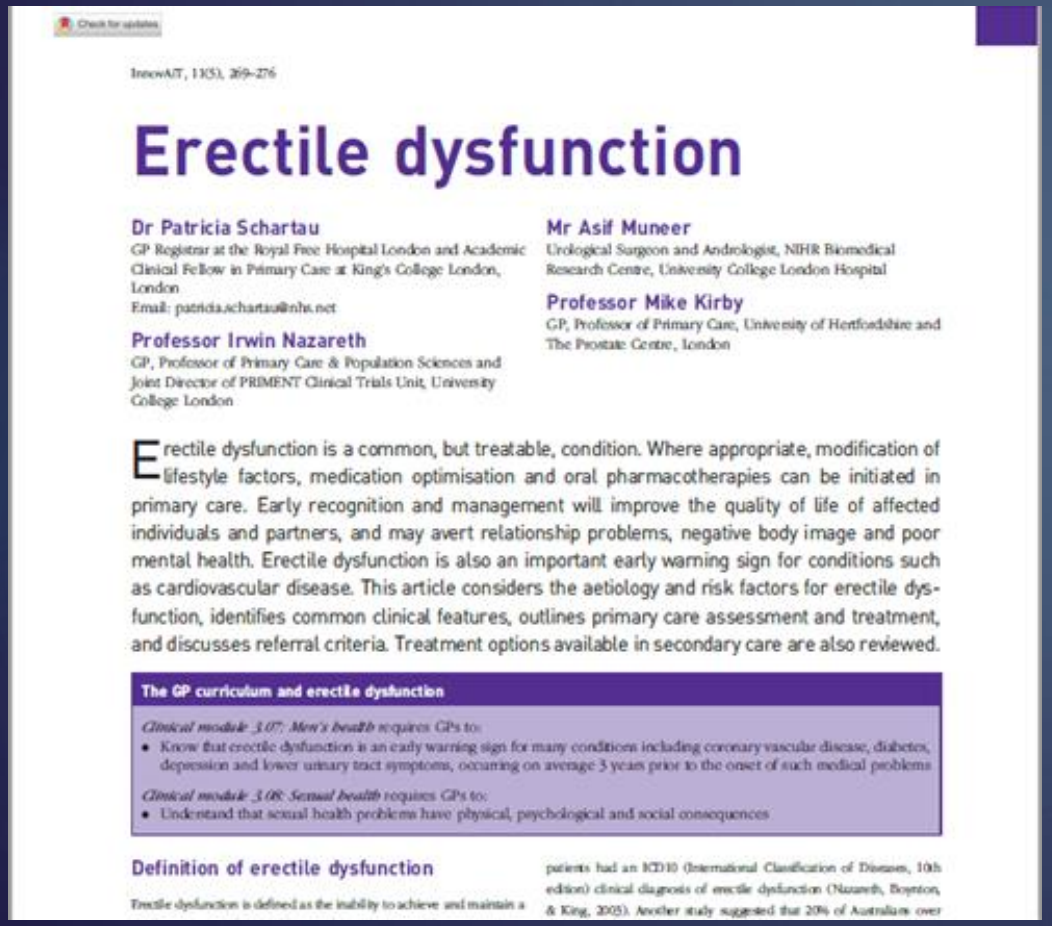
- No disclosures

Case: Rudolf

- 48y, train driver, husband and father
- 2 years of increasing tiredness, low mood, reduced sex drive and ED
- No sign PMHx, non-smoker, alcohol 6 IU/week, OTC Vitamins
- BMI: 27 ; waist circumference 97.7cm, normal BP and PR
- Seen GP two years ago: Dx with T2DM and depression
- ED not addressed, lifestyle measures advocated



What are the barriers to ED assessment?



Innovait, 1(5), 269-276

Erectile dysfunction

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Erectile dysfunction is a common, but treatable, condition. Where appropriate, modification of lifestyle factors, medication optimisation and oral pharmacotherapies can be initiated in primary care. Early recognition and management will improve the quality of life of affected individuals and partners, and may avert relationship problems, negative body image and poor mental health. Erectile dysfunction is also an important early warning sign for conditions such as cardiovascular disease. This article considers the aetiology and risk factors for erectile dysfunction, identifies common clinical features, outlines primary care assessment and treatment, and discusses referral criteria. Treatment options available in secondary care are also reviewed.

The GP curriculum and erectile dysfunction

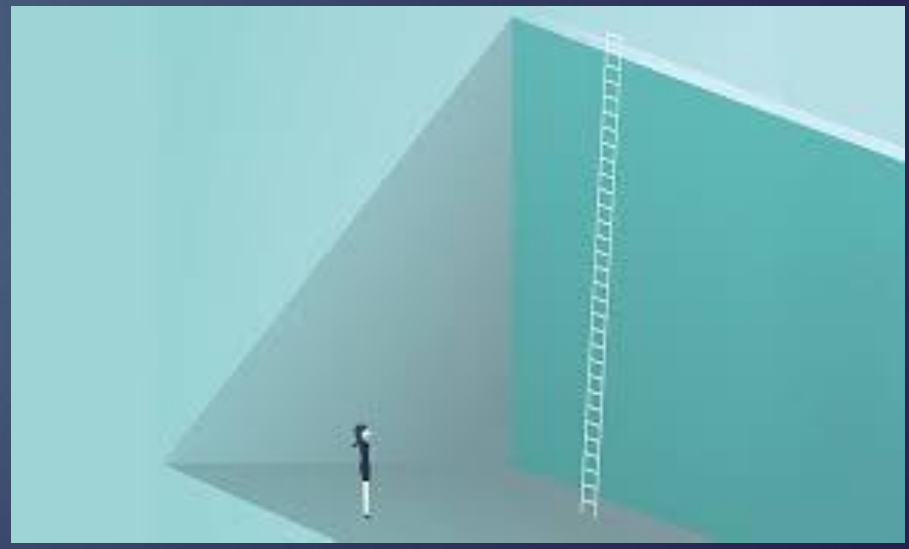
Clinical module 3.07: Men's health requires GPs to:
- Know that erectile dysfunction is an early warning sign for many conditions including coronary vascular disease, diabetes, depression and lower urinary tract symptoms, occurring on average 3 years prior to the onset of such medical problems

Clinical module 3.08: Sexual health requires GPs to:
- Understand that sexual health problems have physical, psychological and social consequences

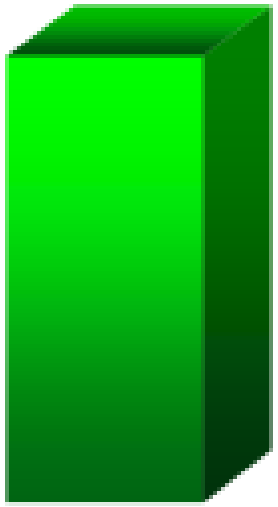
Definition of erectile dysfunction

Erectile dysfunction is defined as the inability to achieve and maintain a

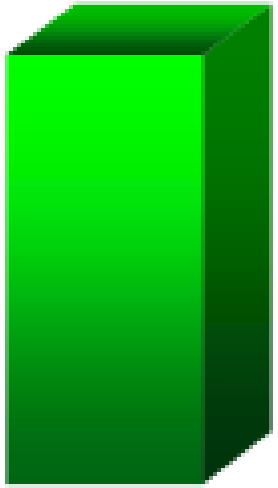
patients had an ICD10 (International Classification of Diseases, 10th edition) clinical diagnosis of erectile dysfunction (Nazareth, Boynton, & King, 2003). Another study suggested that 20% of Australian over



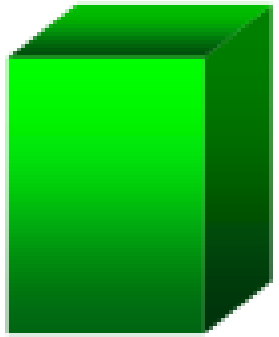
Patients reluctant to talk to their doctors about ED – WHY?



Patients believe ED would not be recognized as a medical problem



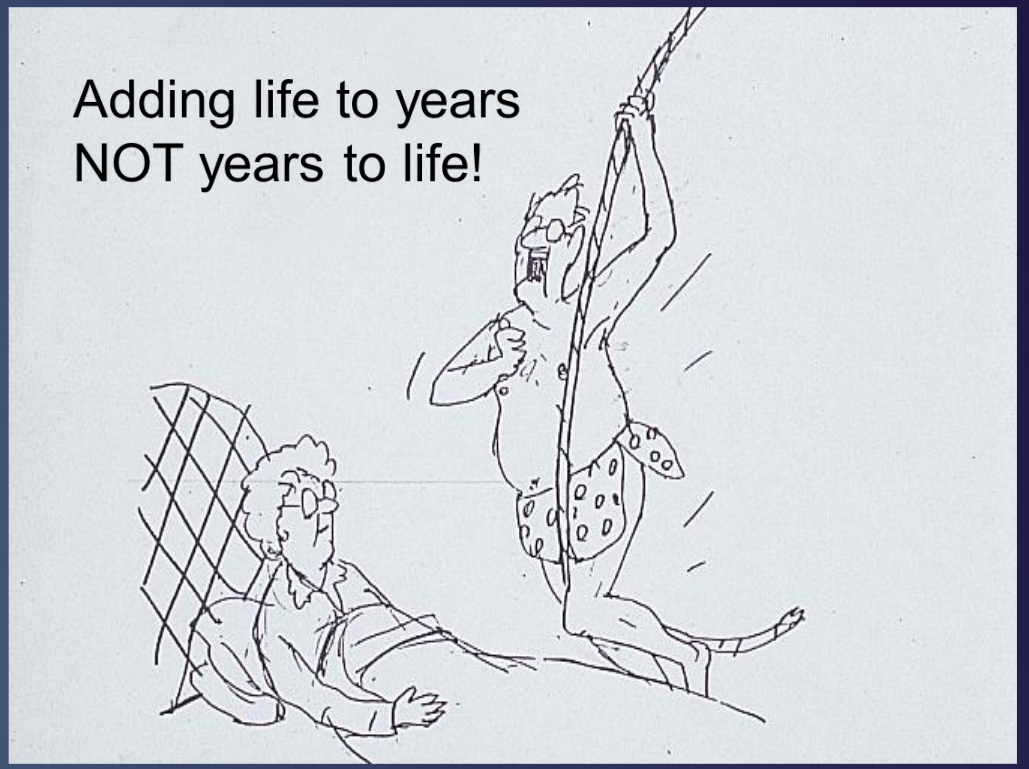
Patients fear that discussing sexuality may embarrass their doctors



44% of men attending urologists have ED but fail to mention it - most are too embarrassed

Marwick C. JAMA 1999;281:2173–2174

- **Doctors equally hesitant to discuss ED with their patients:**
- Feel not equipped to address the problem
- Waiting for patient to raise the problem
- Time pressures
- GPs attitudes towards sexuality in older life
- 80% of men with ED would like to talk about it but only if GP raises the subject!

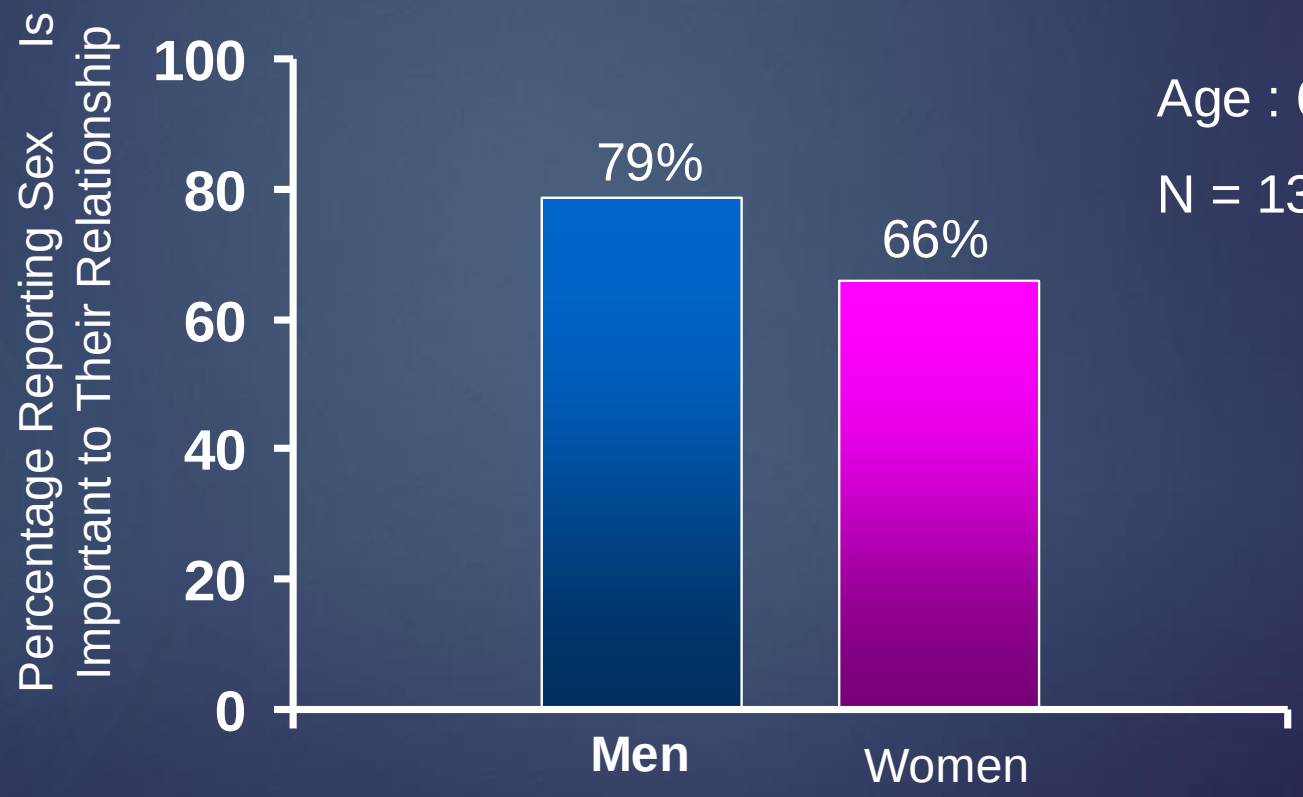


Gott, M. & Hincliff, S. (203). Family practice, 20, 690-5.

Why should we ask about ED?

"Good news, honey! Dr. Bingham couldn't detect any impotence."

Quality of Life: Most men & women report sex is important to their relationship

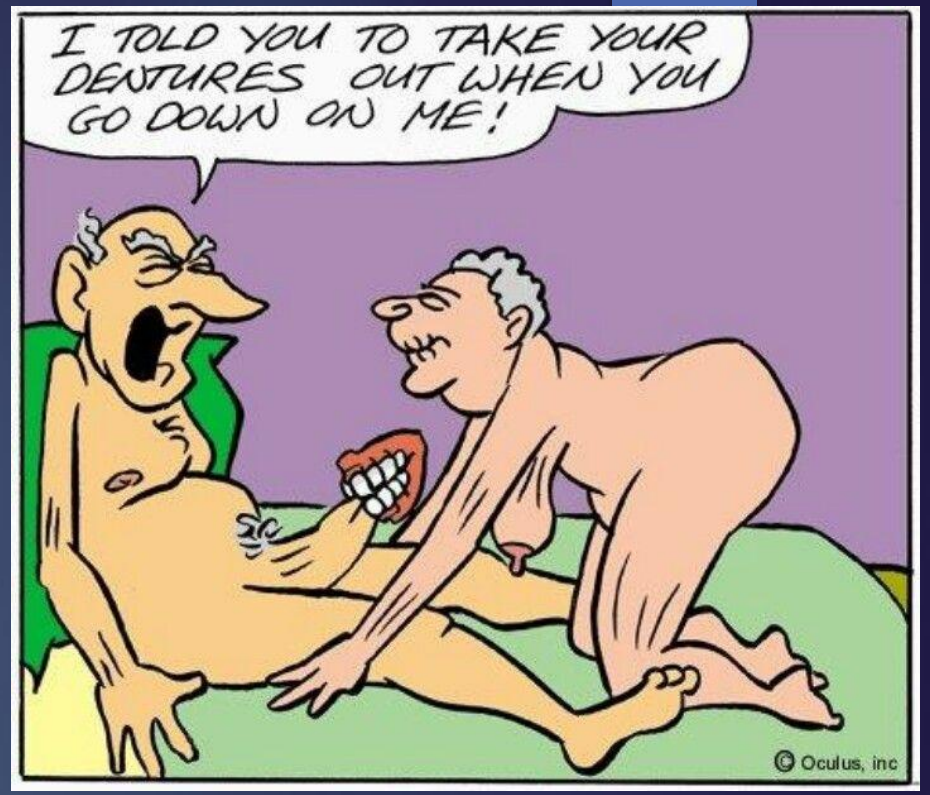


Age : 60 years +

N = 1300

The National Council on Aging. National Council on Aging Website. Available at: http://www.ncoa.org/content.cfm?sectionID=105&detail=128[10]

Physical health



- **The Duke Longitudinal Study of Ageing (1982)**
  Frequency of intercourse a significant predictor of longevity in men
- **Swedish Study (1981)**
  Early cessation of sex associated with premature death
- **Caerphilly Cohort Study (BMJ 1997)**
  50% reduction in cardiac death with more than two orgasms per week

Physical health

- **ED is a risk factor for CVD →** Qrisk 3
- "…equivalent to a current moderate level of smoking. ED confers a 1.46 increased risk for cardiovascular disease"[1]
- In a younger man, it is associated with a marked increase in the risk of future cardiac events[2]
- Pro-active management of ED to address other cardiovascular risk factors"[1]

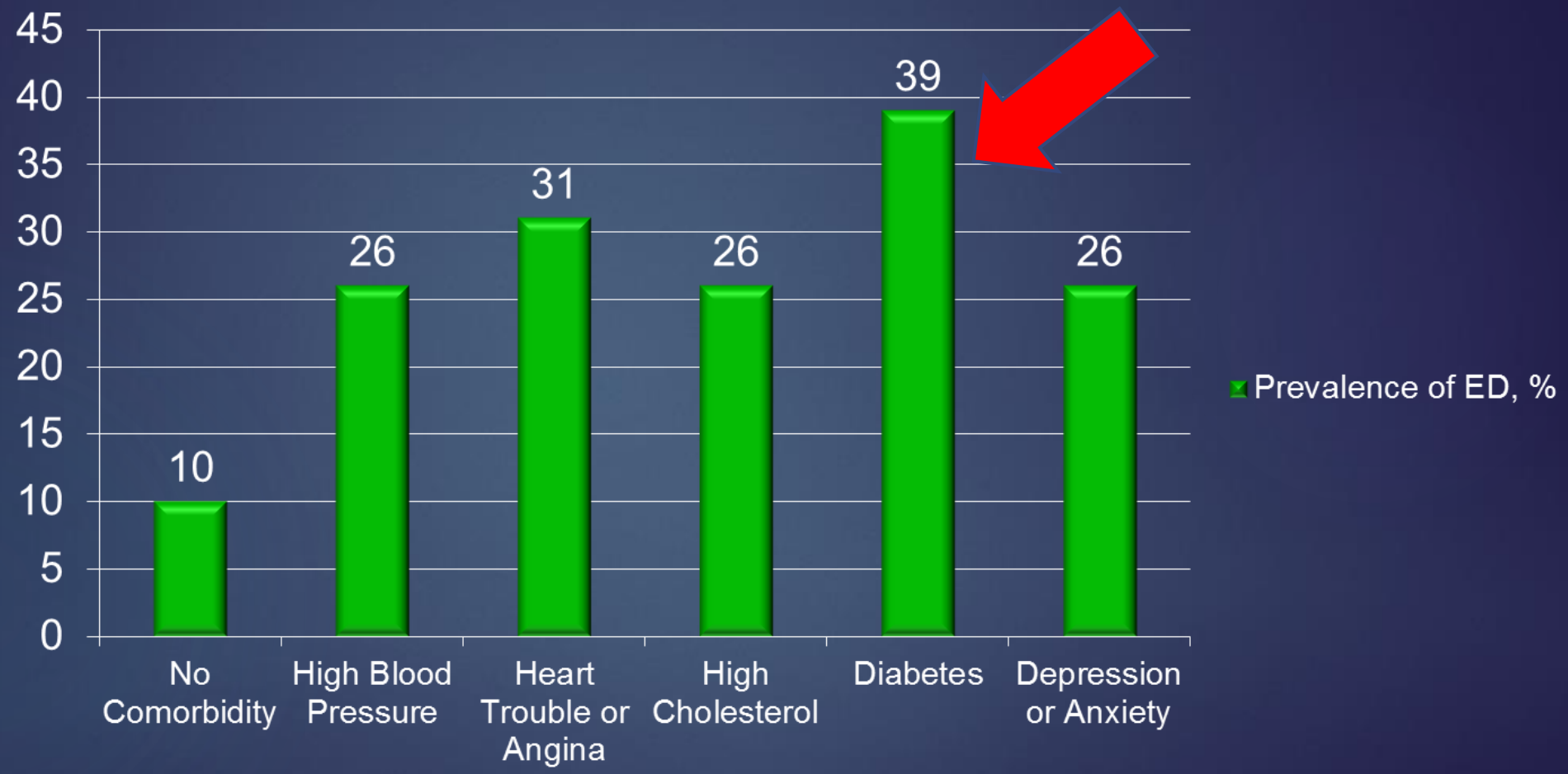
Hackett G et al. (2017), 'British Society for Sexual Medicine Guidelines on the Management of Erectile Dysfunction', accessed from http://www.bssm.org.uk/downloads/default.asp
Inman BA et al Mayo Clin Proc. 2009;84(2):108-113

Artery Size and Atherothrombosis

Artery	Size (mm)	Clinical event
Penile`	1-2	ED
Coronary	3-4	CAD
Carotid	5-7	TIA/Stroke
Femoral	6-8	Claudication

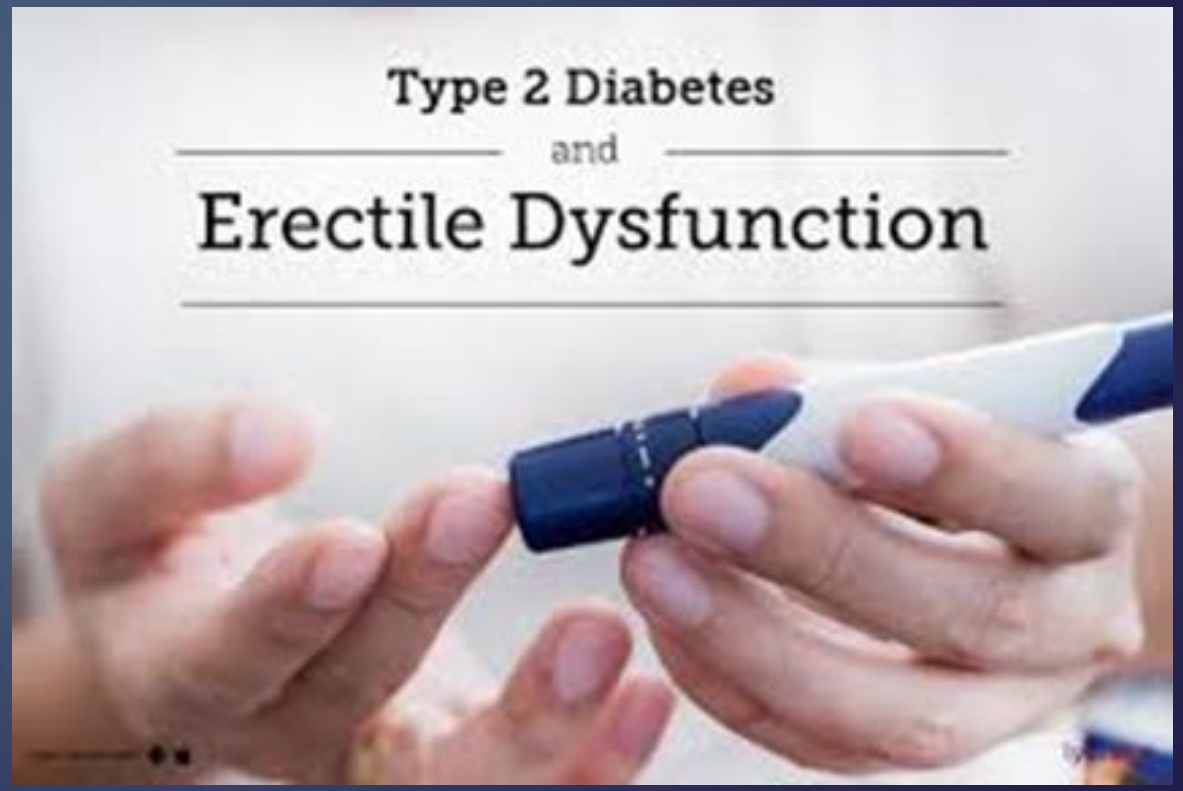
Montorsi et al. (2003). Eur Urol, 44, 352-54

Prevalence of ED in men with co-morbidities

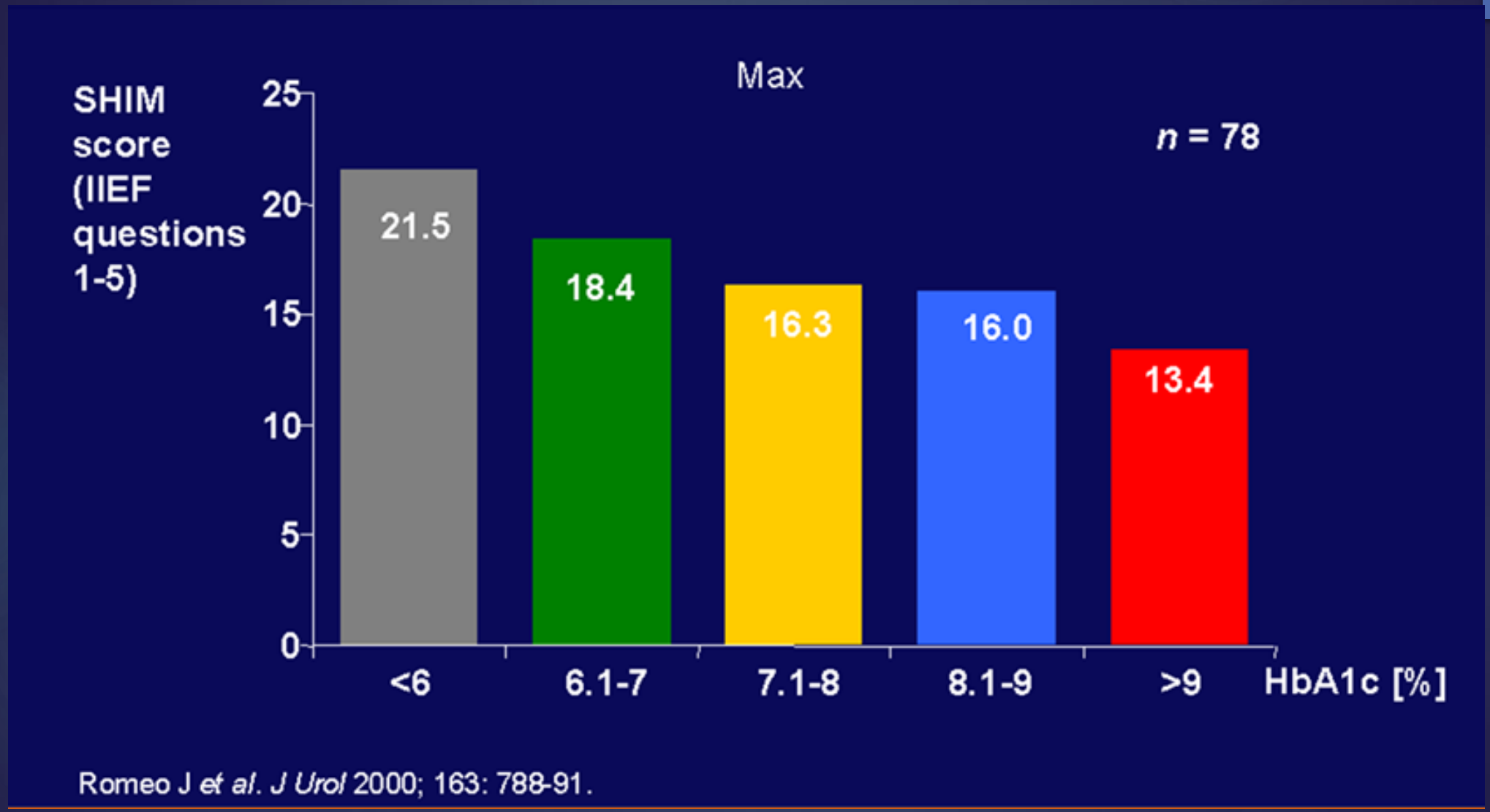


Rosen R et al CMRO 2004; 20 (5): 607 – 617

T2DM, ED & TD



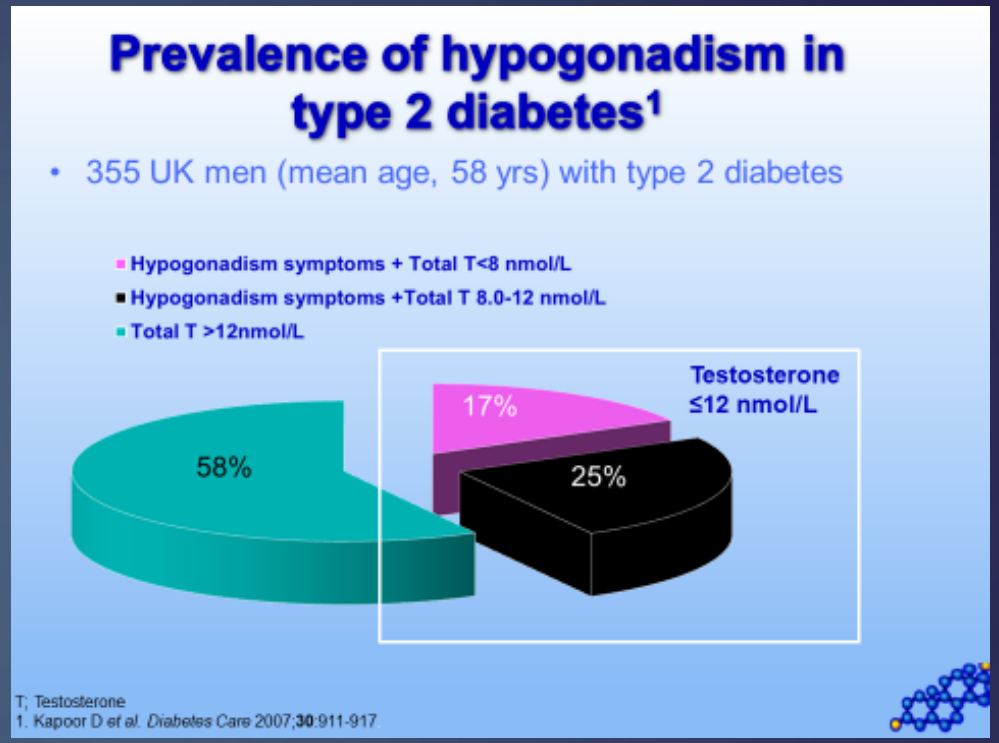
Correlation between ED and glycaemic control



Romeo J *et al*. *J Urol* 2000; 163: 788-91.

- T2DM on the rise: >3 million with DM diagnosis in the UK, 90% T2DM

- **Prevalence of ED in men with T2DM:**
  Range of 32 – 90%[1]



- **ED pathophysiology**: Micro and macrovascular, endocrine and neuropathic disease[2]

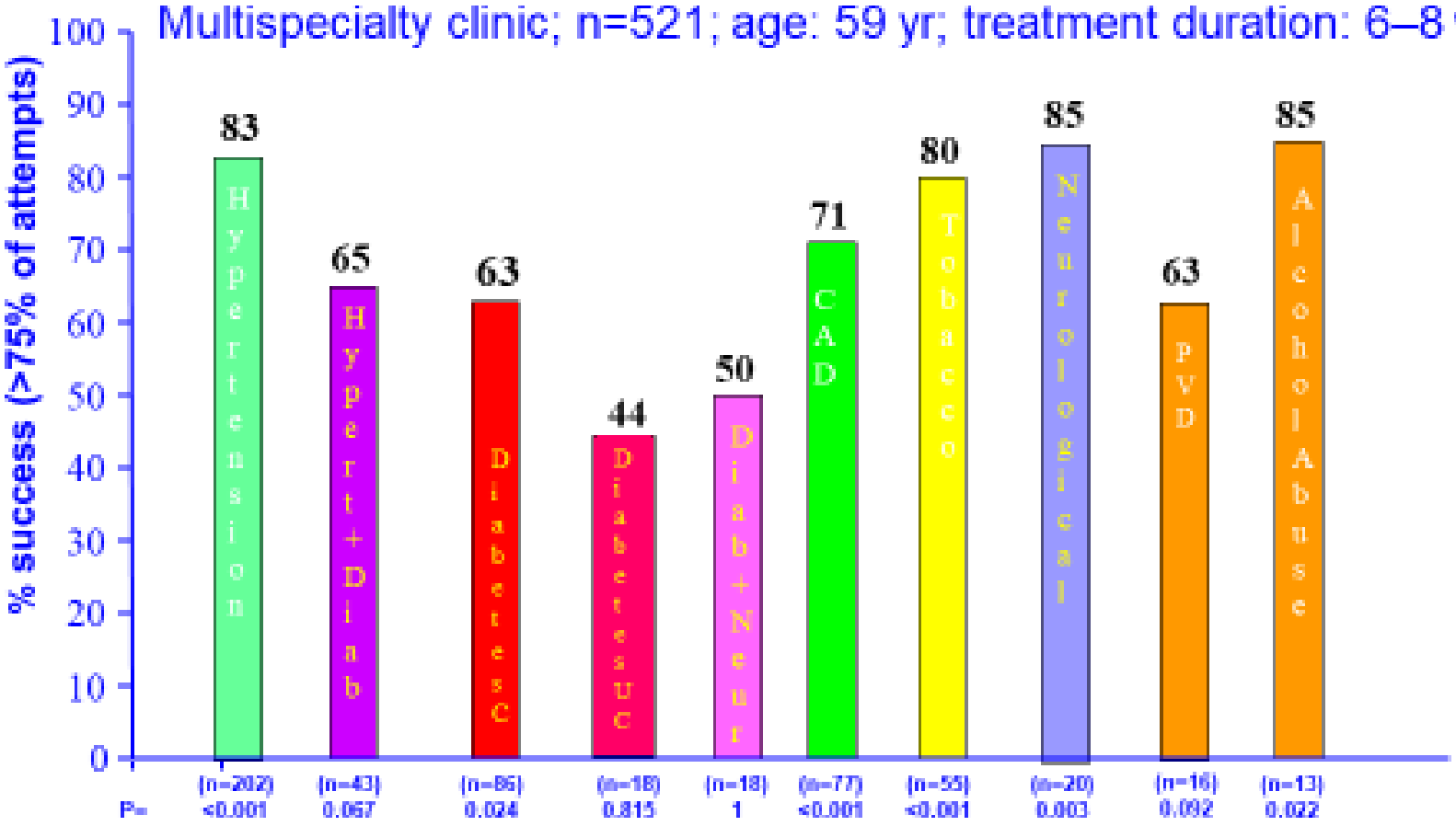
- ED is an early marker and independent risk factor for CVD[3] and a predictor of T2DM[4]

- ED is 3-4 times more common in men with T2DM[5,6]
- Severity correlates with diabetic control
- 40% of T2DM patients have low total testosterone (TD)

→ independently predicts mortality in T2DM; treatment-resistant ED[5,6]

1. Kamenov, Z.A. (2015). *Exp Clin Endocrinol Diabetes, 123,* 141-58.
2. Hackett, G., Heald, A.H., Sinclair, A. et al. (2016a). *Clin Pract, 70,* 244-53.
3. Kirby, M. & Hackett, G. (2017). *International Journal of Clinical Practice,* 72:e13054. doi.org/10.1111
4. Mazzilli, R.J., Elia, M., Delfino, F. et al. (2015). *Clin Ther, 166,* e317-20
5. Chiles, K.A. (2016). *Transl Androl Urol, 5,* 195-200
6. Hackett, G. (2016). *British Journal of Diabetes, 16,* 52-57. doi:10.15277/bjd.2016.076

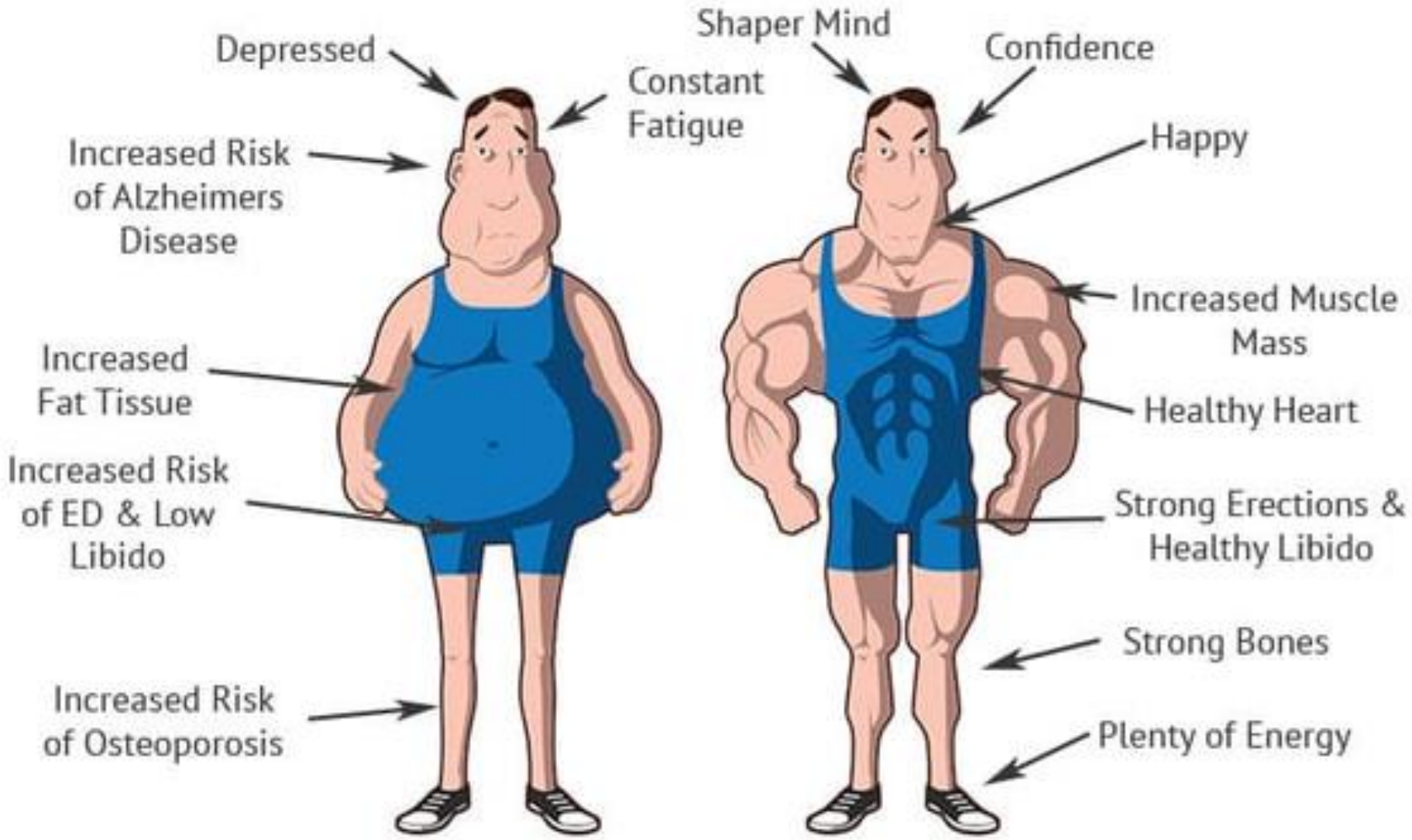
Success of Sildenafil in Patients with Risk Factors or Concomitant Conditions (%)



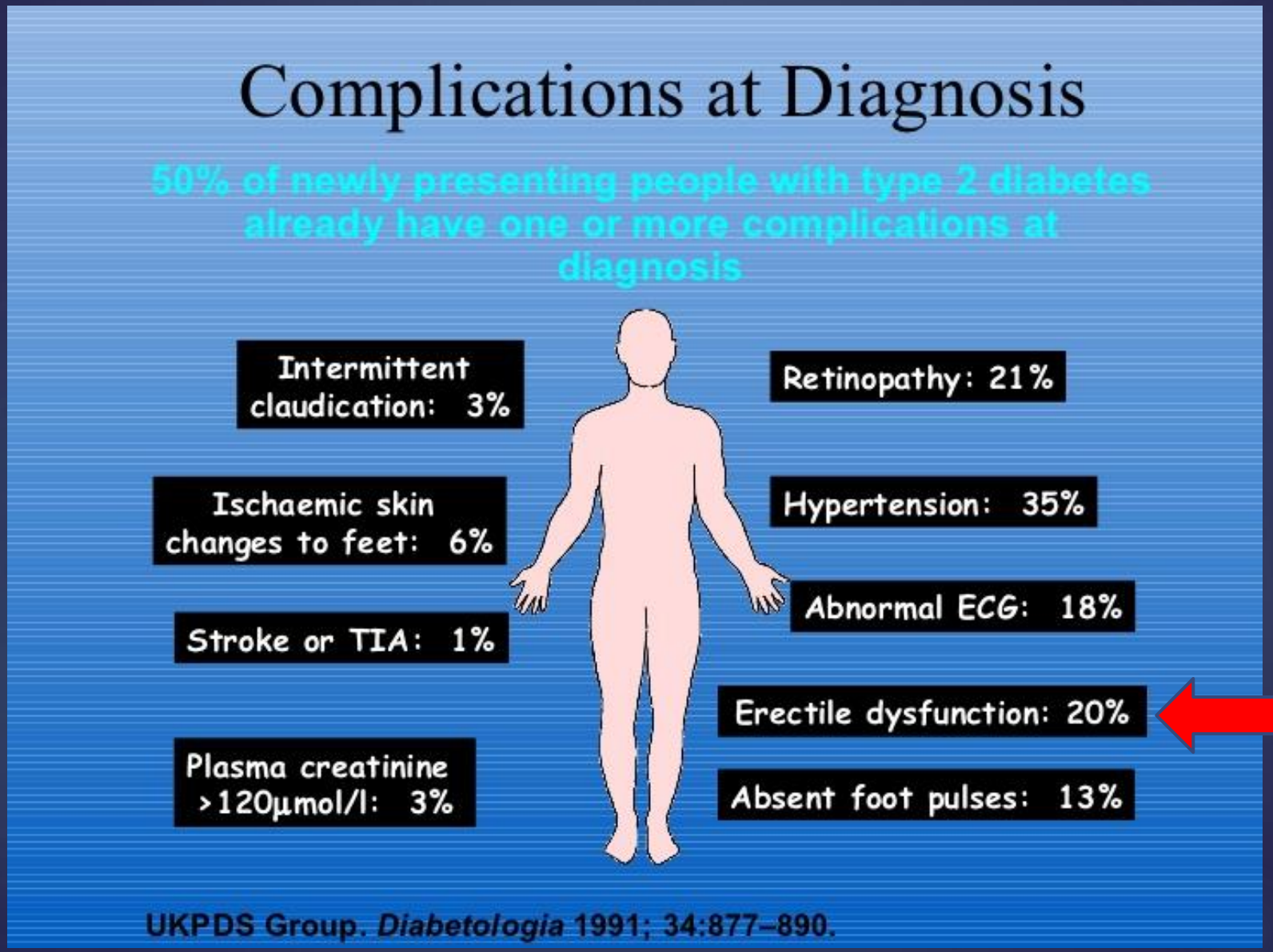
*Uncontrolled

Guay et al. J Andrology 2001;22(5):793–797

Benefits of Optimal Testosterone



Complications at diagnosis of T2DM



ORIGINAL ARTICLE

Phosphodiesterase type-5 inhibitor use in type 2 diabetes is associated with a reduction in all-cause mortality

Simon G Anderson,[1,2] David C Hutchings,[1] Mark Woodward,[2,3] Kazem Rahimi,[2] Martin K Rutter,[4,5] Mike Kirby,[6] Geoff Hackett,[7] Andrew W Trafford,[1] Adrian H Heald[8,9]

Anderson SG, *et al*. *Heart* 2016;**0**:1–7. doi:10.1136/heartjnl-2015-309223

ABSTRACT

Objective Experimental evidence has shown potential cardioprotective actions of phosphodiesterase type-5 inhibitors (PDE5is). We investigated whether PDE5i use in patients with type 2 diabetes, with high-attendant cardiovascular risk, was associated with altered mortality in a retrospective cohort study.

Research design and methods Between January 2007 and May 2015, 5956 men aged 40–89 years diagnosed with type 2 diabetes before 2007 were identified from anonymised electronic health records of 42 general practices in Cheshire, UK, and were followed for 7.5 years. HRs from multivariable survival (accelerated failure time, Weibull) models were used to describe the association between on-demand PDE5i use and all-cause mortality.

Results Compared with non-users, men who are prescribed PDE5is (n=1359) experienced lower percentage of deaths during follow-up (19.1% vs 23.8%) and lower risk of all-cause mortality (unadjusted HR=0.69 (95% CI: 0.64 to 0.79); p<0.001)). The reduction in risk of mortality (HR=0.54 (0.36 to 0.80); p=0.002) remained after adjusting for age, estimated glomerular filtration rate, smoking status, prior cerebrovascular accident (CVA) hypertension, prior myocardial infarction (MI), systolic blood pressure, use of statin, metformin, aspirin and β-blocker medication. PDE5i users had lower rates of incident MI (incidence rate ratio (0.62 (0.49 to 0.80), p<0.0001) with lower mortality (25.7% vs 40.1% deaths; age-adjusted HR=0.60 (0.54 to 0.69); p=0.001) compared with non-users within this subgroup.

Conclusion In a population of men with type 2 diabetes, use of PDE5is was associated with lower risk of overall mortality and mortality in those with a history of acute MI.

Mortality data of men with Type 2 Diabetes mellitus receiving PDE5 Inhibitors followed for approximately 4 years (N= 175)

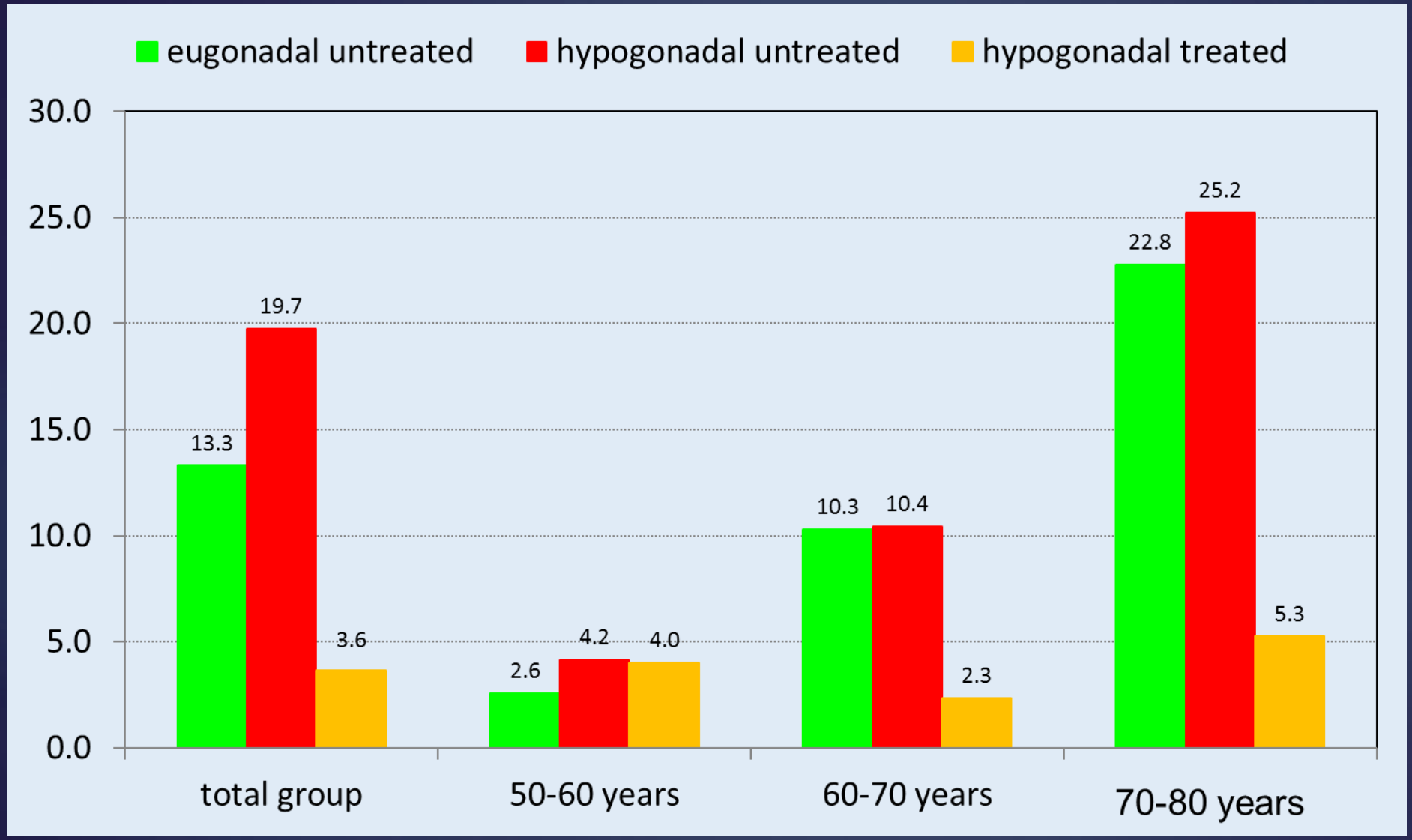
Table 1 Demographic and mortality data of total study group and when classified by testosterone baseline and individual treatment categories

	Total group	Normal T/untreated	Low T/untreated	Low T/treated	PSESI/untreated	PDESI/treated
Patients	857	320	362	175	682	175
Age at initial visit (mean/SD) – years	63.5/11.7	64.2/11.1	65.5/11.8	58.3/11.0	64.7/11.8	58.9/9.9
Age at final visit/death (mean/SD) – years	67.4/11.7	68.3/11.1	69.2/11.7	62.0/11.0	68.6/11.7	62.7/10.1
Statin treated at final visit/death (%)	662 (77.3)	247 (77.2)	282 (77.9)	133 (76.0)	535 (78.5)	127 (72.6)
Data at initial visit (*n*)						
BMI (kg/m^2)	31.2/5.7 (843)	29.8/4.7 (312)	31.8/5.9 (356)	32.6/6.4 (175)	31.2/5.8	31.4/5.3
HbA1c (%)	7.4/1.4 (710)	7.3/1.3 (289)	7.5/1.5(297)	7.6/1.3 (124)	7.4/1.4	7.5/1.1
Cholesterol (mean/SD) – mmol/l	4.2/1.0 (726	4.1/0.9 (289)	4.1/1.0 (305)	4.5/1.1 (132)	4.1/1.0	4.3/1.1
TG (mean/SD) – mmol/l	1.8/1.2 (703)	1.6/0.9 (288)	1.9/1.2 (291)	2.2/1.5 (124)	1.8/1.1 (703)	1.9/1.4 (130)
HDL cholesterol (mean/SD) – mmol/l	1.2/0.4 (701)	1.2/0.3 (286)	1.1/0.3 (295)	1.2/0.7 (120)	1.2/0.4 (573)	1.1/0.5 (128)
Systolic BP (mean/SD) – mmHg	138.8/16.4 (851)	136.4/15.9 (318)	139.4/16.8 (358)	141.8/16.1(175)	138.7/16.8 (677)	138.9/15.2 (174)
Diastolic BP (mean/SD) – mmHg	78.7/10.3 (851)	77.8/9.9 (318)	78.3/10.4 (358)	81.4/10.4 (175)	78.1/10.4 (677)	81.1/9.4 (174)
Total testosterone – nmol/l	11.9/5.2 (833)	16.5/4.2 (309)	9.0/3.2 (351)	9.6/4.3 (173)	11.8/5.1 (663)	12.3/5,7 (170)
Free testosterone – pmol/l	194.5/111.2 (337)	288.0/71.0 (120)	163.2/82.2 (78)	131.3/99.0 (139)	206.5/106.3 (256)	156.5/118.2 (81)
Mortality data						
Number of deaths	103	36	61	6	100	3
Follow-up (mean/SD) – years	3.8/1.2	4.1/1.2	3.6/1.2	3.72/1.07	3.81/1.24	3.9/1.1
% Mortality	12.0	11.3	16.9	3.4	14.7	1.7
% Mortality (*n*) – age categories (initial visit)						
50–60 years	2.9 (173)	3.5 (57)	3.0 (67)	2.0 (49)	3.6 (112)	1.6 (61)
60–70 years	7.5 (294)	8.4 (119)	8.7 (115)	3.3 (60)	8.0 (236)	1.7 (58)
70–80 years	20.7 (222)	20.5 (88)	23.9 (109)	8.0 (25)	22.4 (201)	4.8 (21)
% major adverse coronary events (MACE)	6.8	7.5	6.6	5.7	7.3	4.6
% prostate related events	2.7	2.8	2.8	2.3	3.1	1.1

HR: 0.21, CI: 0.066–0.68

Hackett G et al. Int J Clin Pract 70(3): 244-253 (2016) [11]

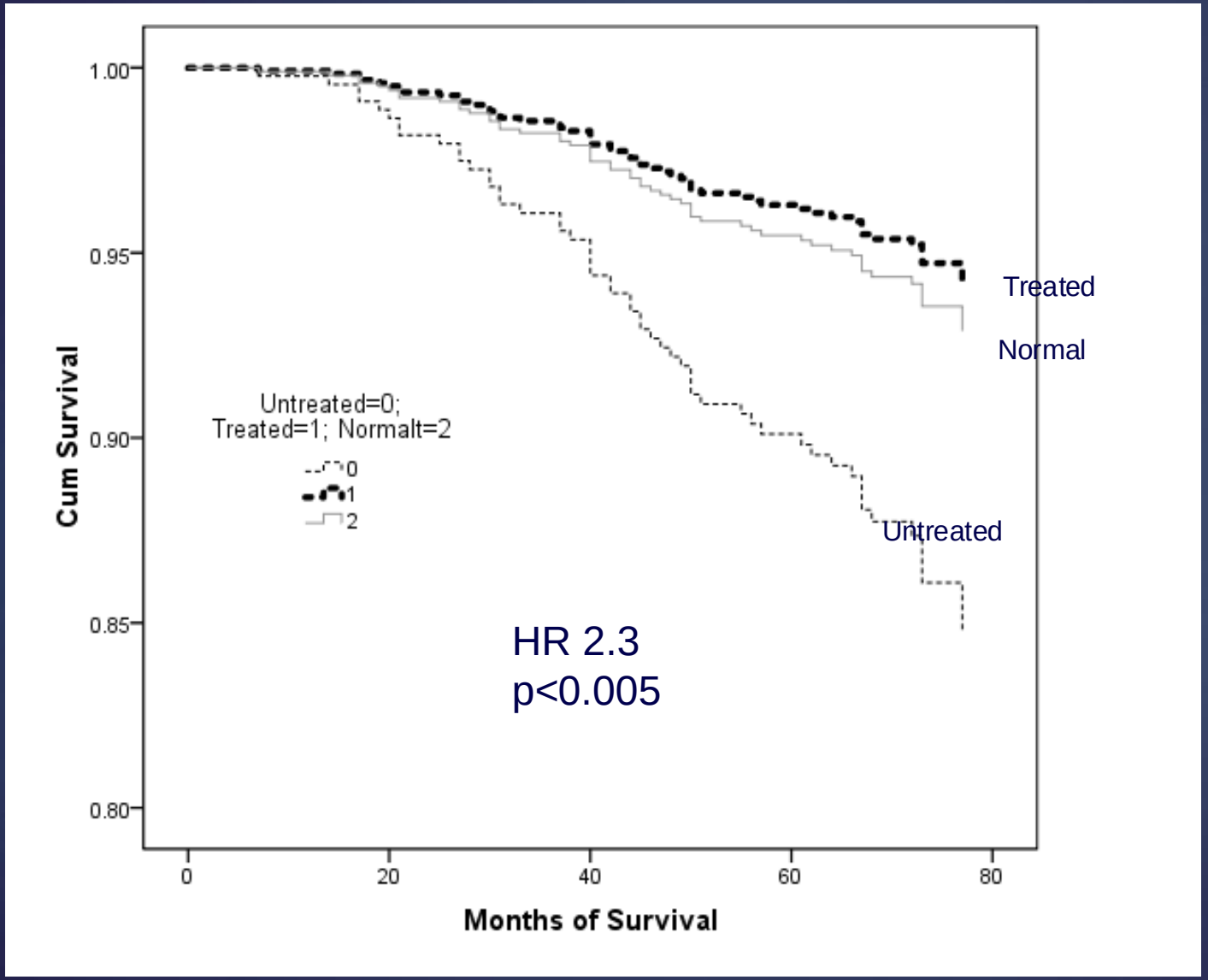
Mortality data of men with Type 2 Diabetes mellitus not receiving PDE5 Inhibitors followed for approximately 4 years (N= 682)



HR: 0.38, CI: 0.16–0.90

Hackett G et al. Int J Clin Pract 70(3): 244-253 (2016) [11]

Effect of TRT on 6 year mortality in men with T2DM



Muralheedharan V et al. Endocrine Abst 2011 25:P163

T2DM, ED, Hypogonadism

- **<u>Guidance T2DM: ED & TD</u>**

- **National & international**: All men with T2DM should be asked annually about ED, investigated and treated accordingly, and have their serum testosterone levels measured

- Opportunity to screen for (and treat) metabolic and cardiovascular health

- Financial incentive (QOF) to assess and diagnose ED in UK primary care (2013/14)

QOF 2013/14: ED in T2DM

DM015. The percentage of male patients with diabetes, on the register, with a record of being asked about erectile dysfunction in the preceding 12 months *NICE 2012 menu ID: NM51*	4	40–90%
DM016. The percentage of male patients with diabetes, on the register, who have a record of erectile dysfunction with a record of advice and assessment of contributory factors and treatment options in the preceding 12 months *NICE 2012 menu ID: NM52*	6	40–90%

Revitalise audit

- David, J. et al. (2017)
- 13 GP practices across the UK
- N = 3185

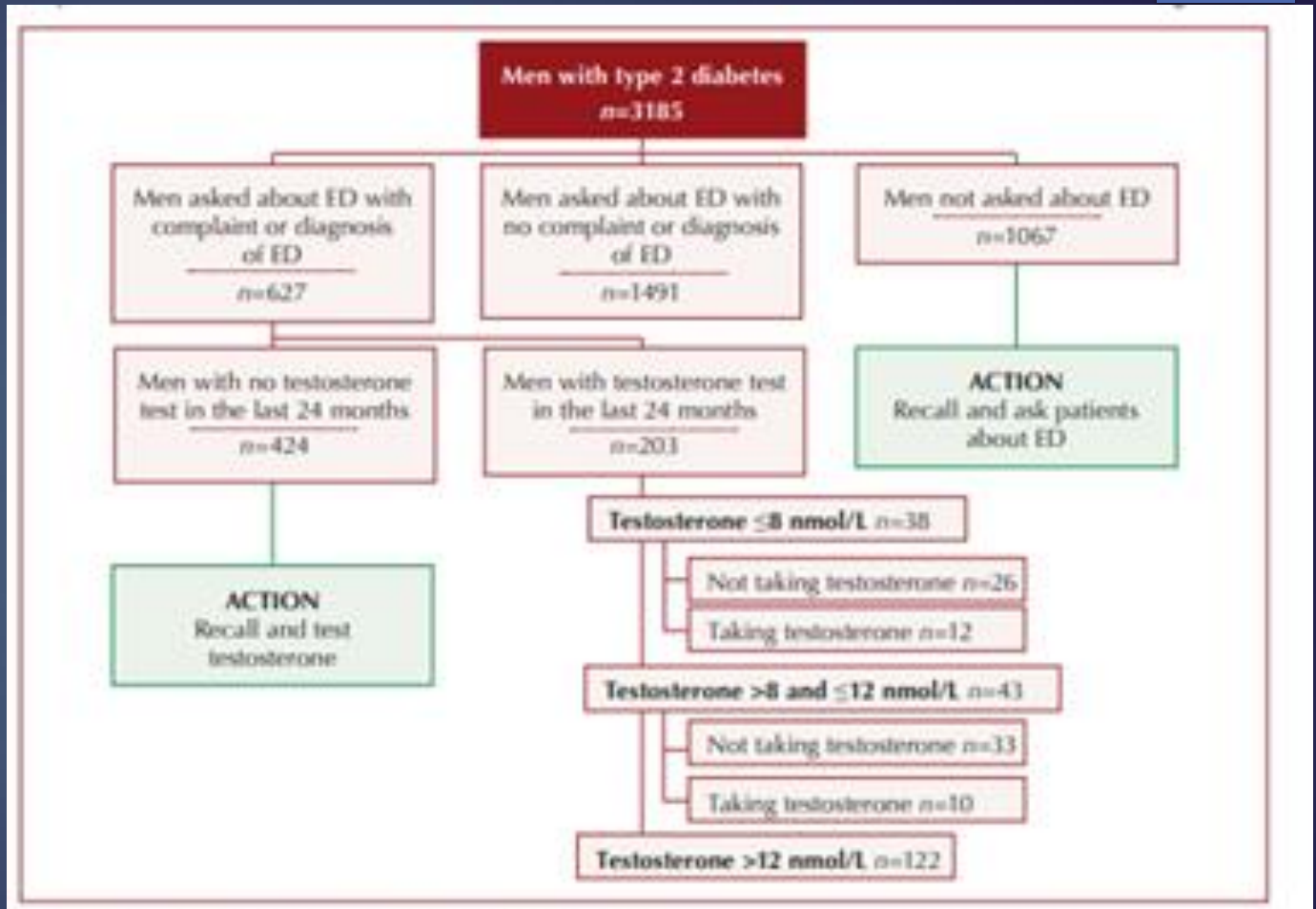


Figure 1. Disposition of men with type 2 diabetes from 13 GP practices. ED=erectile dysfunction.

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Revitalise audit

Results:

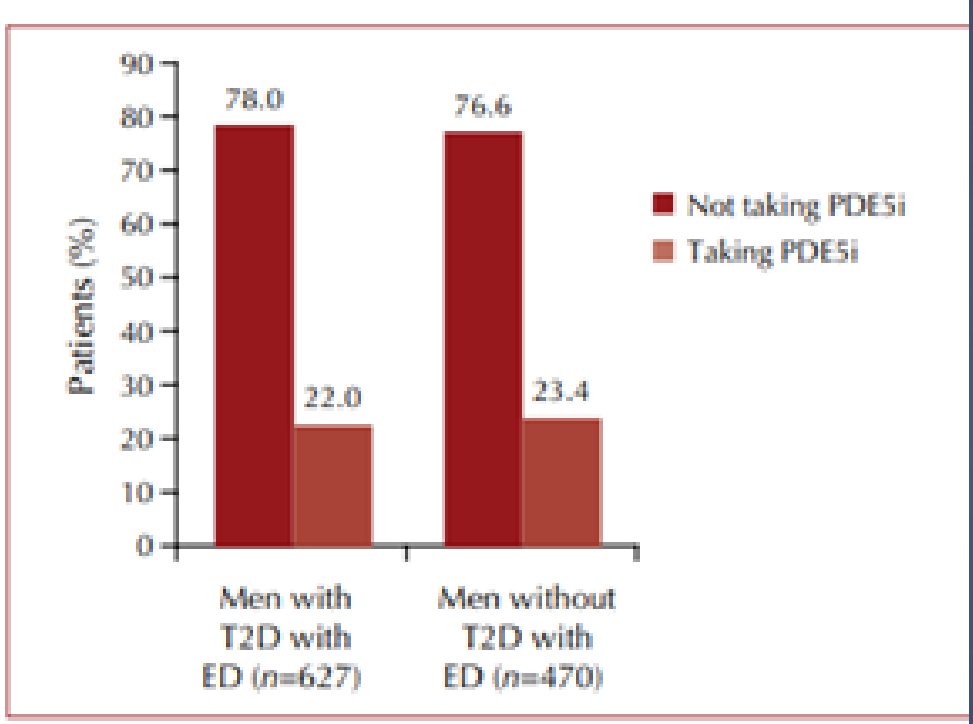


Figure 2. Use of phosphodiesterase type 5 inhibitors (PDE5i) in men with or without type 2 diabetes with erectile problems. ED=erectile dysfunction; T2D=type 2 diabetes.

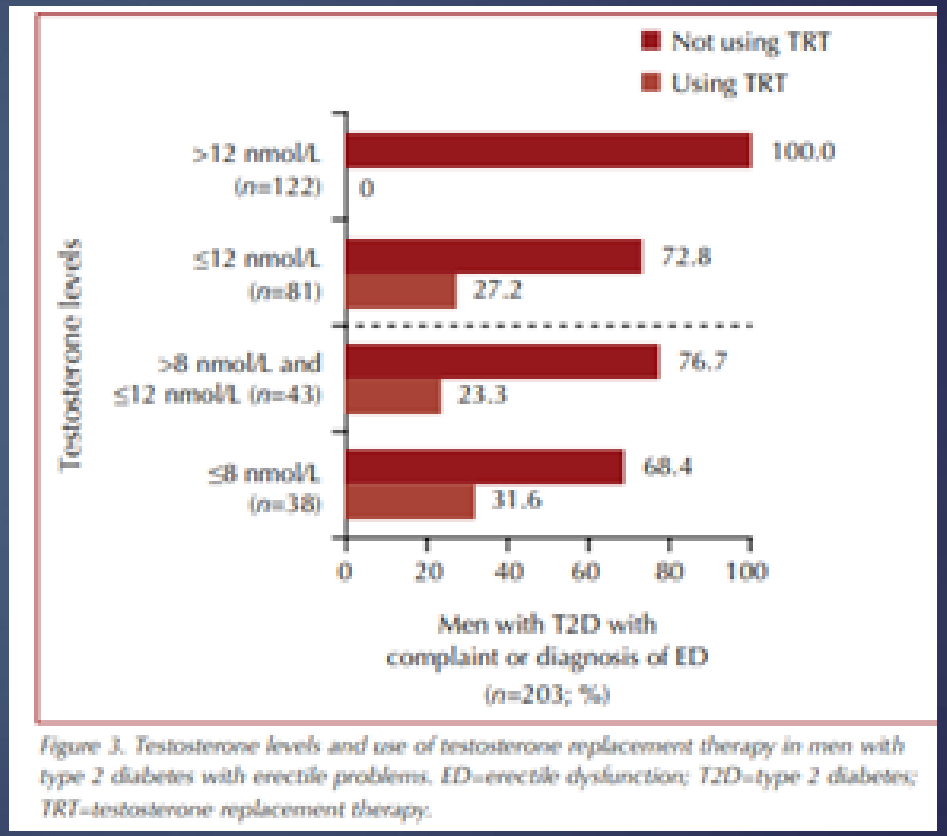
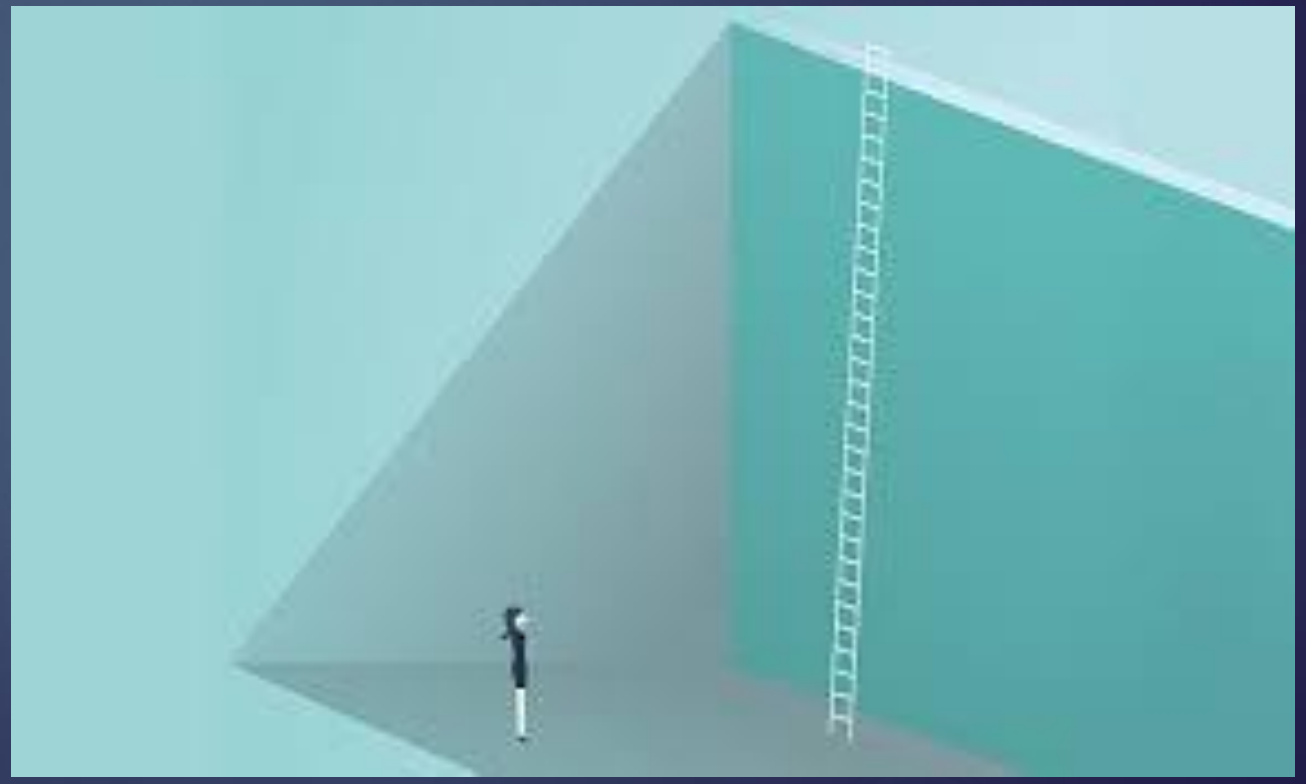


Figure 3. Testosterone levels and use of testosterone replacement therapy in men with type 2 diabetes with erectile problems. ED=erectile dysfunction; T2D=type 2 diabetes; TRT=testosterone replacement therapy.

Conclusion: Need for improvement of clinical Mx in men with and without T2DM at risk of ED/TD

What are the barriers to TD assessment and management?



- Feel not equipped to address or manage the problem
- Time pressures
- ?GPs attitudes towards TRT?

Title: Recent trends in incidence of recorded erectile dysfunction, hypogonadism, phosphodiesterase type 5 inhibitor prescriptions and testosterone replacement therapy in patients with Type 2 diabetes in a primary care setting

Aims & Methodology

- Aim: Explore the effects of QOF on ED/TD assessment, diagnoses & management in T2DM patients
- Data source: The health improvement network (THIN) UK primary care database
- Study design: Retrospective cohort study
- Study population: Cohort of males (aged ≥ 18y) diagnosed with T2DM and contributing to UK primary care electronic health records between 1999-2016
- Analysis: STATA15: Adjusted incident ratios (IRRs) using multivariate Poisson regression

Analysis (1)

N = 110,423	Mean age: 60y
ED Assesment	53,003 (48%)
ED Diagnosis	14,355 (13%)
PDE5i prescriptions	10,623 (74%)

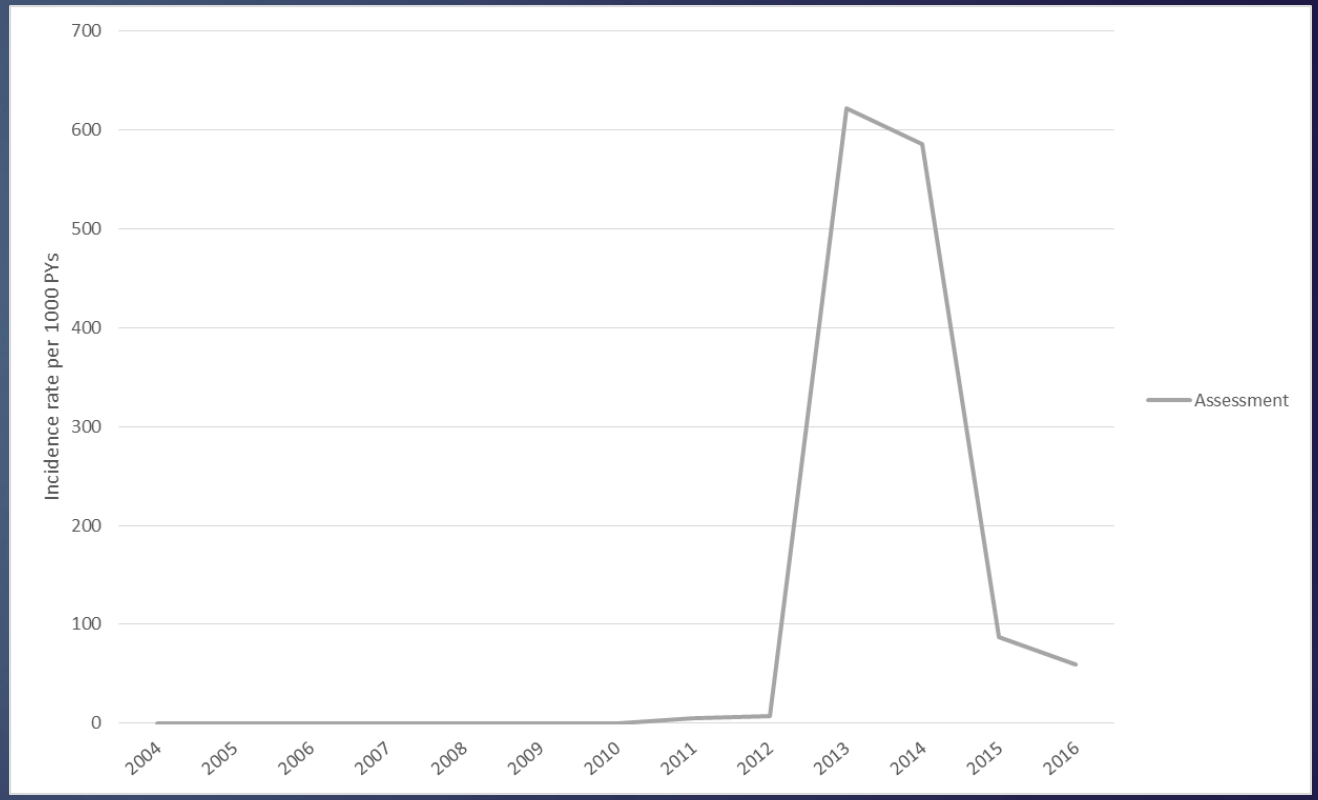


Figure 1. Time trends for ED assessment.

Analysis (2)

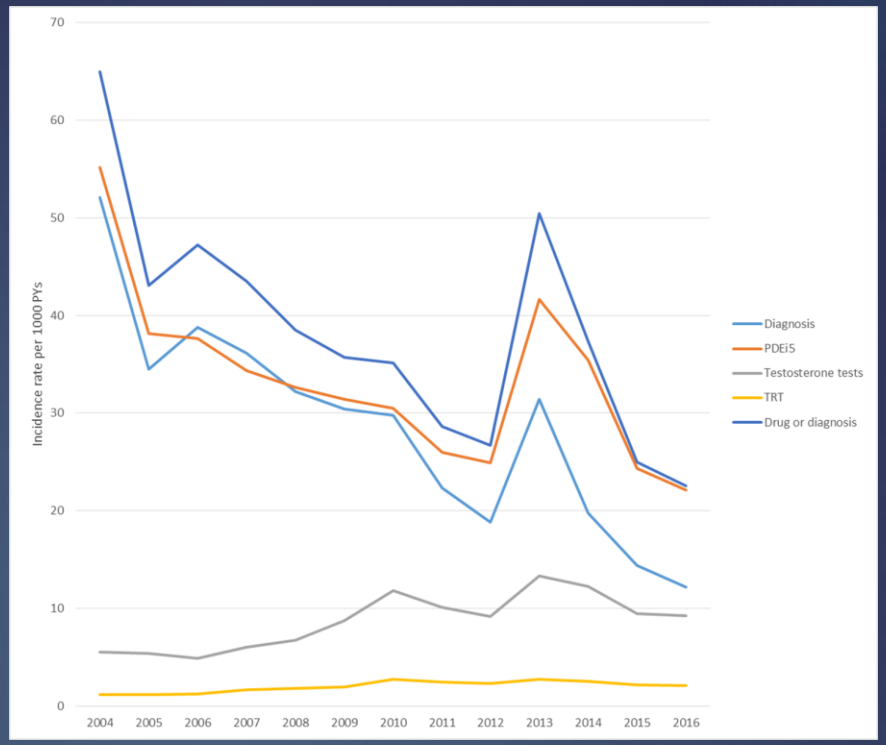


Figure 2. Time trends for ED diagnosis. testosterone testing and TRT/PDE5is prescriptions

- **ED assessment**: Adj Incident rate (IR) ↑ from 7.6 to 620 per 1000 PYAR from 2012 to 2013 (95% CI: 7.0- 8.3)
  ↓ to 54 per 1000 PYAR in 2015
- **ED diagnoses**: IR doubled from 2012 to 13 (IRR 2.0; CI: 1.8 – 2.1)

Analysis (3)- Cross-sectional and multi-variate

- **Testosterone**:
- Of 1187 men with T2DM and newly diagnosed ED in 2015, 213 (18%) had at least one testosterone measurement, 45 (21%) of these had a serum testosterone ≤ 8nmol/L, of which 9 (20%) received TRT

- Significant effect of age on ED assessment, diagnosis and PDE5i prescriptions ($p < 0.001$) with most assessments, diagnoses and PDE5is prescriptions done in the 55-60y old age group

Discussion & Conclusions

- Prevalence of recorded ED (13%) lower than reported in the literature
- ↓ PDE5i prescription rate
- Testosterone testing not common practice; ↓ TRT prescription rate
- Triad between ED, TD & CVD in pts with T2DM → early screening & treatment

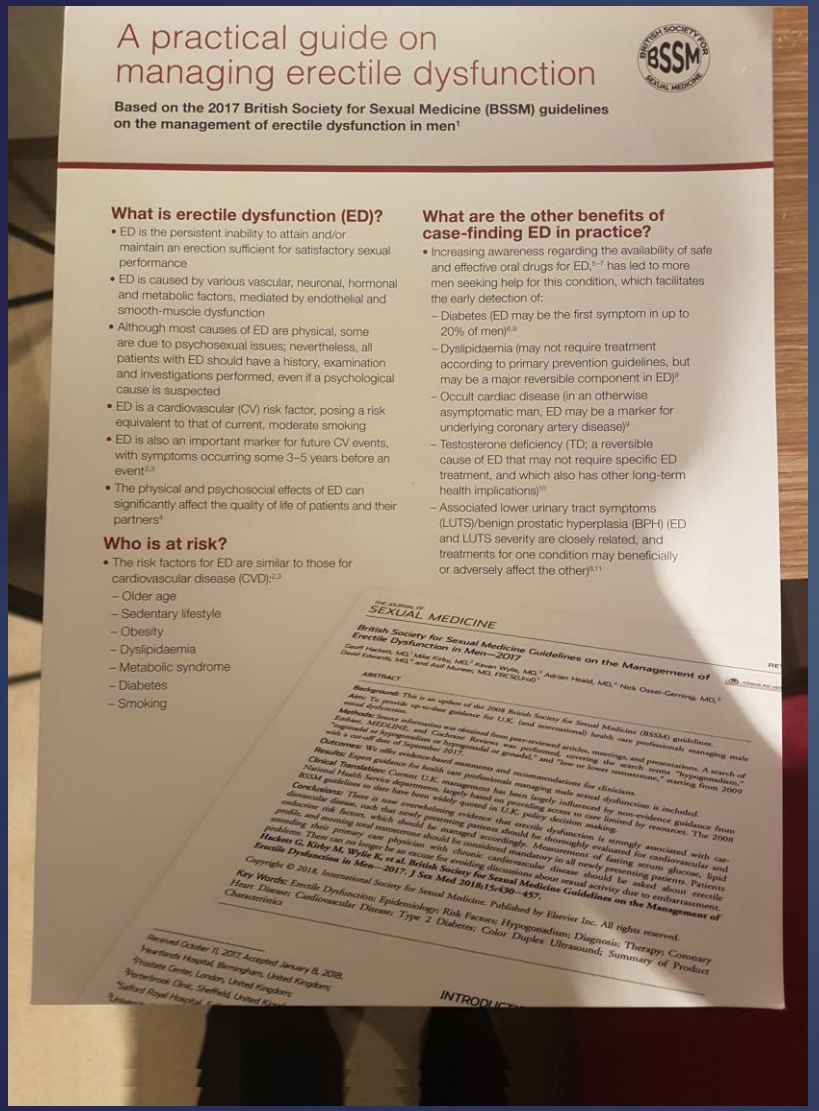
The GP and Sexual Problems – Just a matter of time?

- Overall, we are doing ok
- Time may be a factor, but not the only one
- To improve diagnosis/management of ED/TD in T2DM pts:

YES WE DID IT - obama pointing | Meme Generator

- incorporation of guidelines into GP framework
- financial incentives
- solid GP education

ED Mx:



A practical guide on managing erectile dysfunction

Based on the 2017 British Society for Sexual Medicine (BSSM) guidelines on the management of erectile dysfunction in men[1]

What is erectile dysfunction (ED)?

- ED is the persistent inability to attain and/or maintain an erection sufficient for satisfactory sexual performance
- ED is caused by various vascular, neuronal, hormonal and metabolic factors, mediated by endothelial and smooth-muscle dysfunction
- Although most causes of ED are physical, some are due to psychosexual issues; nevertheless, all patients with ED should have a history, examination and investigations performed, even if a psychological cause is suspected
- ED is a cardiovascular (CV) risk factor, posing a risk equivalent to that of current, moderate smoking
- ED is also an important marker for future CV events, with symptoms occurring some 3–5 years before an event[2,3]
- The physical and psychosocial effects of ED can significantly affect the quality of life of patients and their partners[4]

Who is at risk?

- The risk factors for ED are similar to those for cardiovascular disease (CVD):[2,3]
  - Older age
  - Sedentary lifestyle
  - Obesity
  - Dyslipidaemia
  - Metabolic syndrome
  - Diabetes
  - Smoking

What are the other benefits of case-finding ED in practice?

- Increasing awareness regarding the availability of safe and effective oral drugs for ED,[5–7] has led to more men seeking help for this condition, which facilitates the early detection of:
  - Diabetes (ED may be the first symptom in up to 20% of men)[8,9]
  - Dyslipidaemia (may not require treatment according to primary prevention guidelines, but may be a major reversible component in ED)[9]
  - Occult cardiac disease (in an otherwise asymptomatic man, ED may be a marker for underlying coronary artery disease)[9]
  - Testosterone deficiency (TD; a reversible cause of ED that may not require specific ED treatment, and which also has other long-term health implications)[10]
  - Associated lower urinary tract symptoms (LUTS)/benign prostatic hyperplasia (BPH) (ED and LUTS severity are closely related, and treatments for one condition may beneficially or adversely affect the other)[8,11]

THE JOURNAL OF SEXUAL MEDICINE

British Society for Sexual Medicine Guidelines on the Management of Erectile Dysfunction in Men—2017

Geoff Hackett, MD,[1] Mike Kirby, MD,[2] Kevan Wylie, MD,[3] Adrian Heald, MD,[4] Nick Osse-Garrino, MD,[5] David Edwards, MD,[6] and Asif Muneer, MD, FRCS(Urol)[7]

ABSTRACT

Background: This is an update of the 2008 British Society for Sexual Medicine (BSSM) guidelines.

Aim: To provide up-to-date guidance for U.K. (and international) health care professionals managing male sexual dysfunction.

Methods: Some information was obtained from peer-reviewed articles, meetings, and presentations. A search of Embase, MEDLINE, and Cochrane Reviews was performed, covering the search terms "hypogonadism," "sildenafil or hypogonadism or hypogonadal or gonadal," and "low or lower testosterone," starting from 2009 with a cut-off date of September 2017.

Outcomes: We offer evidence-based statements and recommendations for clinicians.

Results: Expert guidance for health care professionals managing male sexual dysfunction is included.

Clinical Translation: Current U.K. management has been largely influenced by non-evidence guidance from National Health Service departments, largely based on providing access to care limited by resources. The 2008 BSSM guidelines to date have been widely quoted in U.K. policy decision making.

Conclusions: There is now overwhelming evidence that erectile dysfunction is strongly associated with cardiovascular disease, such that newly presenting patients should be thoroughly evaluated for cardiovascular and endocrine risk factors, which should be managed accordingly. Measurement of fasting serum glucose, lipid profile, and morning total testosterone should be considered mandatory in all newly presenting patients. Patients attending their primary care physician with chronic cardiovascular disease should be asked about erectile problems. There can no longer be an excuse for avoiding discussions about sexual activity due to embarrassment.

Hackett G, Kirby M, Wylie K, et al. British Society for Sexual Medicine Guidelines on the Management of Erectile Dysfunction in Men—2017. J Sex Med 2018;15:430–457.

Key Words: Erectile Dysfunction; Epidemiology; Risk Factors; Hypogonadism; Diagnosis; Therapy; Coronary Heart Disease; Cardiovascular Disease; Type 2 Diabetes; Color Duplex Ultrasound; Summary of Product Characteristics

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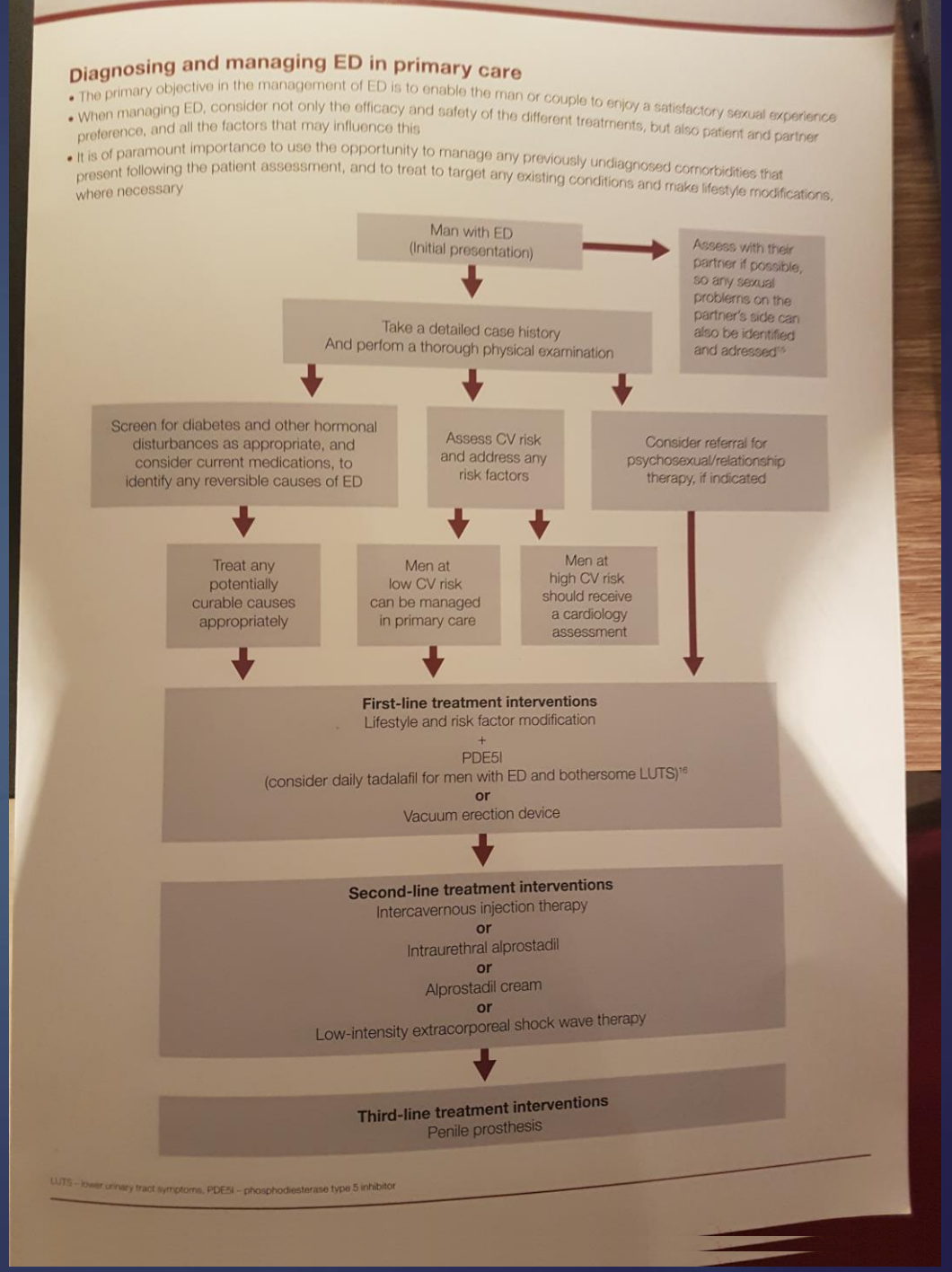
INTRODUCT



Diagnosing and managing ED in primary care

- The primary objective in the management of ED is to enable the man or couple to enjoy a satisfactory sexual experience
- When managing ED, consider not only the efficacy and safety of the different treatments, but also patient and partner preference, and all the factors that may influence this
- It is of paramount importance to use the opportunity to manage any previously undiagnosed comorbidities that present following the patient assessment, and to treat to target any existing conditions and make lifestyle modifications, where necessary

Man with ED (Initial presentation)

→ Assess with their partner if possible, so any sexual problems on the partner's side can also be identified and adressed[15]

Take a detailed case history And perfom a thorough physical examination

Screen for diabetes and other hormonal disturbances as appropriate, and consider current medications, to identify any reversible causes of ED

Assess CV risk and address any risk factors

Consider referral for psychosexual/relationship therapy, if indicated

Treat any potentially curable causes appropriately

Men at low CV risk can be managed in primary care

Men at high CV risk should receive a cardiology assessment

First-line treatment interventions
Lifestyle and risk factor modification
+
PDE5I
(consider daily tadalafil for men with ED and bothersome LUTS)[16]
or
Vacuum erection device

Second-line treatment interventions
Intracavernous injection therapy
or
Intraurethral alprostadil
or
Alprostadil cream
or
Low-intensity extracorporeal shock wave therapy

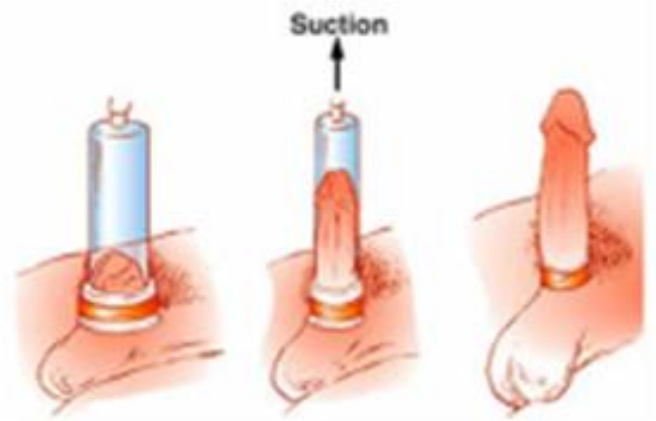
Third-line treatment interventions
Penile prosthesis

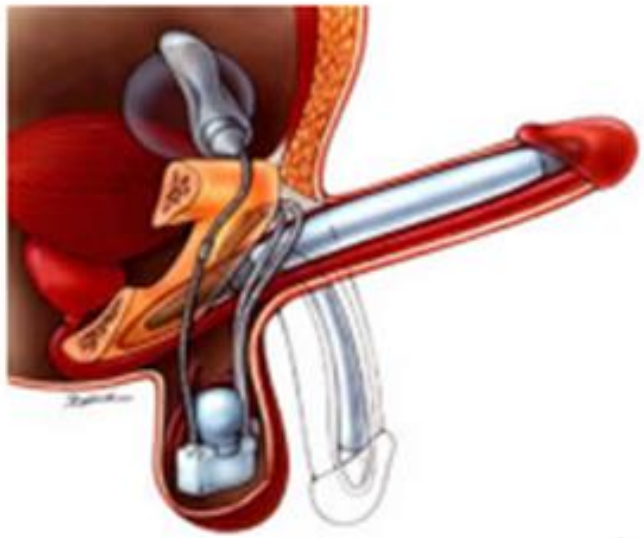
LUTS – lower urinary tract symptoms, PDE5I – phosphodiesterase type 5 inhibitor

ED Mx:

Combination therapy

- PDE5 inhibitors (daily)
- Pelvic floor exercises
- Exercise regimes
- If failure to respond to PDE5,
- **Check testosterone**
- VED
- MUSE
- IC injections
- Penile prostheses





TD Mx:

A practical guide on the assessment and management of testosterone deficiency in adult men

Based on the 2017 British Society for Sexual Medicine (BSSM) guidelines on adult testosterone deficiency, with statements for UK practice[1]

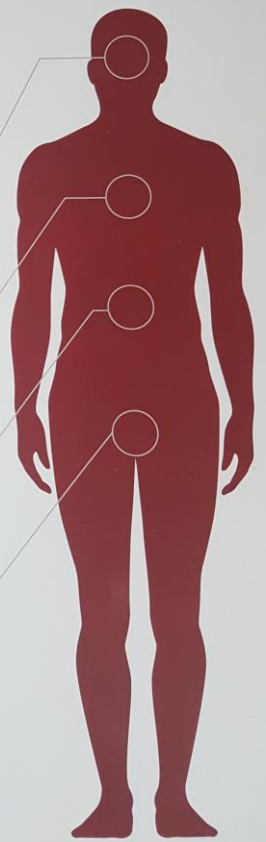
Why does it occur?

Testosterone deficiency (TD), also known as hypogonadism, may result from:[2–4]

- Problems with the testes [primary (hypergonadotropic) TD]
- Problems with the hypothalamus and pituitary gland [secondary (hypogonadotropic) TD]
- Problems with the hypothalamus/pituitary and testes (combined primary and secondary TD)
- Impaired action/suppression of testosterone

How is it diagnosed?

- The diagnosis of symptomatic TD requires the presence of characteristic signs and symptoms,[2,5–8] PLUS reduced serum concentrations of total testosterone (TT) or free testosterone (FT)[5]



Psychological

- Changes in mood (e.g. anger, irritability, sadness, depression)
- Decreased well-being/poor self-rated health
- Diminished cognitive function (including impaired concentration, verbal memory and spatial performance)

Cardiometabolic

- Increased body mass index (BMI)/obesity
- Visceral obesity
- Metabolic syndrome
- Insulin resistance and type 2 diabetes

Physical

- Decreased body hair
- Gynaecomastia
- Decreased muscle mass and strength
- Hot flushes/sweats
- Sleep disturbances
- Fatigue
- Osteoporosis/height loss/ low trauma fractures

Sexual

- Delayed puberty
- Small testes
- Infertility
- Decreased sexual desire and activity
- Decreased frequency of sexual thoughts
- Erectile dysfunction (ED)
- Delayed ejaculation
- Decreased volume of ejaculate
- Decreased or absent morning/night-time erections

- The **3** most common symptoms of TD are ED, loss of early morning erections and low sexual desire – men often present with sexual dysfunction and a desire for treatment

Diagnosing and managing TD in adult men[2,7,9,12,13]

Signs/symptoms suggestive of TD

Measure TT

Assess/exclude/optimally manage other comorbidities

TT <12 nmol/L = low or borderline

TT >12 nmol/L = normal → No TD

Repeat TT + LH and FSH + prolactin if TT <5.2 nmol/L plus low LH and FSH* + SHBG if TT borderline (8–12 nmol/L) to calculate FT → TT >12 nmol/L + FT >0.225 nmol/L

TT <8 nmol/L and/or FT <0.180 nmol/L — Confirmed TD

TT <12 nmol/L and/or FT <0.225 nmol/L — Possible TD

High LH → Primary TD

Low or normal LH → Secondary TD

Fertility not desired

Fertility desired → **Avoid** T Therapy if possible, as it may reduce spermatogenesis Possible alternatives include HCG, SERMs (e.g. clomifene) and AIs**

Perform haematological assessment
Check breasts and prostate health via DRE and PSA
Assess CV risk factors
Evaluate CV symptoms and optimise secondary prevention in men with CVD
Advise on lifestyle modification and ideal weight

Lifestyle modification and management of comorbidities unsuccessful/likely to be unsuccessful + no contraindications

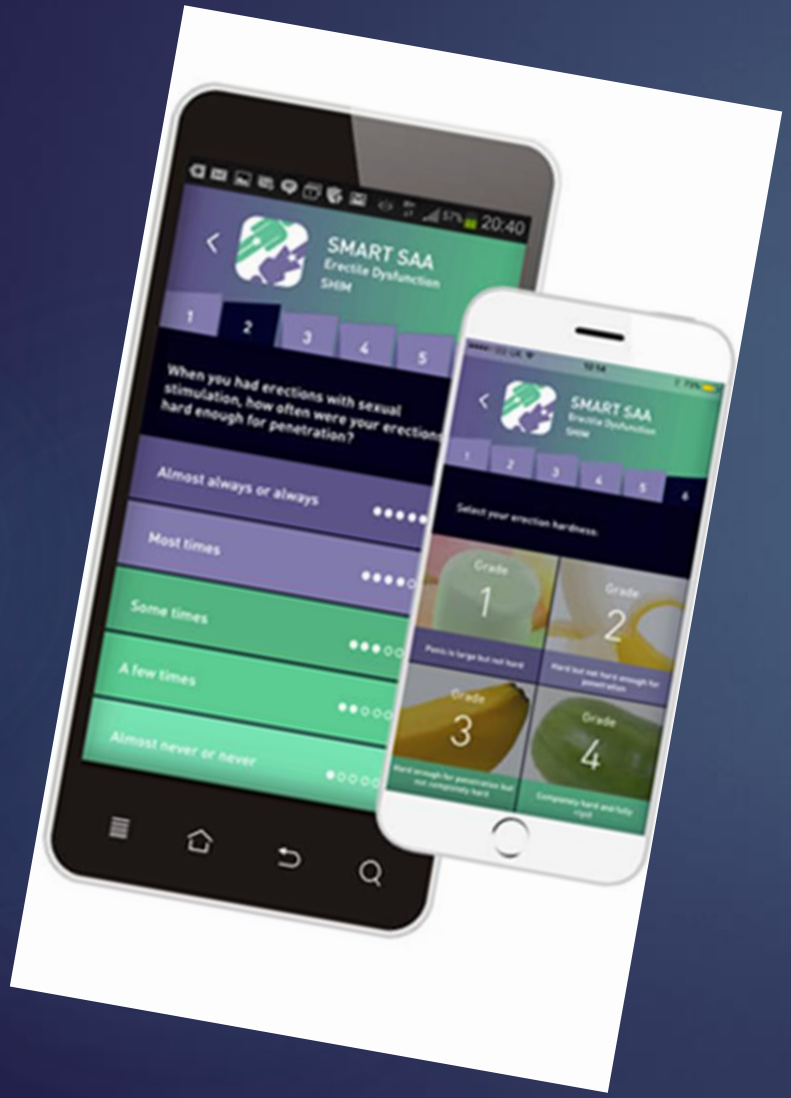
Trial of T Therapy + lifestyle modification

Evaluate patients at 3, 6 and 12 months, then every 12 months thereafter to assess serum testosterone levels (therapeutic target mid-upper range: 15–30 nmol/L), confirm symptomatic improvement and check for any changes in haematocrit (should remain <54%) and PSA (increases >1.4 ng/mL over any 1-year period or a velocity >0.4 ng/mL/year during sequential measurement over >2 years warrants urological evaluation + more intensive surveillance for prostate cancer thereafter); 3-monthly follow-up may be necessary in some patients, including those with suboptimal treatment response or safety issues

Failure to benefit within a reasonable time frame (defined as 6 months for libido, sexual function, muscle function and improved body fat) should prompt treatment discontinuation and investigation for other causes of the symptoms

Adapted from Minhas and Mulhall, 2017.[13]
AI – aromatase inhibitor, CV – cardiovascular, CVD – cardiovascular disease, FSH – follicle-stimulating hormone, FT – free testosterone, HCG – human chorionic gonadotropin, LH – luteinising hormone, MRI – magnetic resonance imaging, PSA – prostate-specific antigen, SERM – selective oestrogen receptor modulator, SHBG – sex hormone-binding globulin, T Therapy – testosterone therapy, TT – total testosterone
*For men with TT levels <5.2 nmol/L plus low LH and FSH or increased prolactin levels, refer to endocrinology or arrange a pituitary MRI scan to exclude a pituitary adenoma.[2,14]
**These drugs should not be used if pituitary function is compromised. SERMs and AIs are not currently licensed for TD.

Smart SAA: https://sexualadviceassociation.co.uk/app/



Take home message:

- ED assessment, diagnosis & management is important in relation to QoL, underlying physical health, and risk factor management
- ED is independent risk factor for cardiovascular events, risk amplified in DM
- TD is common in DM → independently predicts mortality and treatment resistant ED
- BSSM Primary Care Guidelines: For ED/TD
- Various additional options to treat ED in secondary care

Thank you!


NO pills - NO exercise
In only ONE Month
You Can do it too
Register
Now!!!
Photoshop Courses
The best tool to change your body