

Sexual dysfunction

Is erectile dysfunction also a risk factor for cancer?



Mike Cummings, Consultant Physician and Honorary Professor, Queen Alexandra Hospital, Portsmouth

It is now well established that erectile dysfunction (ED) is integrally linked as a risk marker for the development of diabetes and cardiovascular disease. This link is thought

to be due to underlying chronic inflammation. Chung et al (2011; summarised alongside) have extended this observation to argue that a state of chronic inflammation is also associated with a milieu rich in cytokines and chemokines that promote the growth of neoplastic cells. As a consequence, could ED herald underlying cancer through a common pathophysiological process?

To address this question, Chung and colleagues examined the records of 1882 people with ED and 9410 people without ED over a 5-year period following the diagnosis of impotence.

“After adjustment for established cancer risk factors, erectile dysfunction was associated with a 1.42 fold greater likelihood of developing cancer in multiple organs.”

After adjustment for established cancer risk factors, ED was associated with a 1.42-fold greater likelihood of developing cancer in multiple organs. Despite the unavailability of smoking data, cancer risk was still increased in participants with ED when adjusted for smoking-related malignancy.

Although a causative link could not be established, and there were some inherent weaknesses within the study design, this potential link is worthy of further evaluation.

JOURNAL OF SEXUAL MEDICINE

Higher risk of cancer in people with ED

Readability	✓✓✓✓✓
Applicability to practice	✓✓✓✓✓
WOW! factor	✓✓✓✓

- The authors of this population-based follow-up study aimed to examine the association between erectile dysfunction (ED) and subsequent cancer.
- The risk of cancer over a 5-year period following diagnosis of ED was compared with people without ED over the same period. Results were adjusted for socio-demographic characteristics.
- Data for 1882 people with ED and 9410 people without ED were taken for comparison from the Taiwan Longitudinal Health Insurance Database. Individuals were tracked for 5 years.

REPRODUCTIVE BIOLOGY AND ENDOCRINOLOGY

Prevalence of self-reported sexual dysfunction in Ghanaian men

Readability	✓✓✓✓
Applicability to practice	✓✓✓
WOW! factor	✓✓✓

- This study sought to assess the prevalence and determinants of sexual dysfunction in men with diabetes in Tema, Ghana.
- Sexual function in 300 consecutive men attending the diabetes clinic at Tema General Hospital was assessed using the Golombok Rust inventory of sexual satisfaction (GRISS) questionnaire between November 2010 and March 2011.
- Socio-demographic characteristics of all participants were noted as well as HbA_{1c} level, fasting blood glucose (FBG) level and serum

testosterone level. All men had a steady heterosexual relationship for 2 years prior to the study.

A total of 69.3% of participants reported sexual dysfunction due to: infrequency (79.2%); non-sensuality (74.5%); dissatisfaction with sexual acts (71.9%); non-communication (70.8%) and impotence (67.9%).

Severe sexual dysfunction was seen in only 4.7% of participants. The “adequate”, “desirable”, “too short” and “too long” intravaginal ejaculatory latency time (IELT) perceived by participants were 5–10, 5–10, 1–2 and 15–20 minutes, respectively.

There was a negative correlation observed with testosterone level and HbA_{1c} level, FBG level, perceived “desirable” and “too short” IELT, body weight and waist circumference.

The authors concluded that the rate of self-reported sexual dysfunction was high in this study but similar to that reported in other studies in Ghana.

Owiredu WK, Amidu N, Alidu H et al (2011) Determinants of sexual dysfunction among clinically diagnosed diabetic patients. *Reprod Biol Endocrinol* 9: 70

A total of 183 people had cancer within the 5-year period – 43 individuals with ED and 140 individuals without ED.

Data were adjusted for monthly income, geographical location and urbanisation of the individual’s community, hypertension, diabetes, coronary heart disease, and hyperlipidaemia.

Stratified Cox proportional hazard regression revealed that the risk of having cancer during the 5-year follow-up period was 1.42 (95% confidence interval, 1.03–2.09; $P=0.039$) times greater for people with ED than those without.

The authors concluded that the incidence of cancer was significantly higher in people with ED than people without, although data on smoking was not available and is a potential confounder.

Chung SD, Kang JH, Liao CH et al (2011) Increased risk for cancer following erectile dysfunction: a nationwide population-based follow-up study. *J Sex Med* 8: 1513–20

JOURNAL OF UROLOGY

Good glycaemic control reduced risk of ED

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓✓

1 Using data from the DCCT/EDIC (Diabetes Control and Complications Trial and Epidemiology of Diabetes Interventions and Complications) study, the authors assessed whether intensive or conventional glycaemic therapy reduces the risk of erectile dysfunction (ED) in men with T1D.

2 Participants in the intervention group were split into two cohorts: primary prevention (366 with diabetes for 1–5 years and no microvascular complications) and secondary intervention cohort (395 with diabetes for 1–15 years with microvascular complications).

3 A total of 761 men with T1D were randomised to intensive or conventional glycaemic therapy from 1983 to 1989. Participants were treated until 1993 and then followed up in the EDIC study. This analysis took place in 2003 with an assessment of ED in 571 men.

4 ED was reported in 23%. Prevalence of ED was significantly lower in the intensive versus the conventional group in the secondary intervention cohort (12.8% versus 30.8%; $P=0.001$) but not in the primary prevention cohort (12.8% versus 30.8%; $P=0.001$).

5 A direct association was found between risk of developing ED and mean HbA_{1c} level during the DCCT and EDIC studies.

6 It was concluded that a period of tight glycaemic control reduced the prevalence of ED 10 years later in those with microvascular complications.

Wessells H, Penson DF, Cleary P et al (2011) Effect of intensive glycaemic therapy on erectile function in men with type 1 diabetes. *J Urol* **185**: 1828–34

INTERNATIONAL JOURNAL OF IMPOTENCE RESEARCH

Metabolic syndrome prevalence is similar using different criteria

Readability	✓✓✓
Applicability to practice	✓✓✓
WOW! factor	✓✓✓

1 This study explored the prevalence of the metabolic syndrome (MS) using three different definitions and looked at its association with erectile dysfunction (ED).

2 The authors enrolled 254 participants with ED who were assessed for MS using three different criteria: the World Health Organization (WHO), International Diabetes Federation (IDF) and Adult Treatment Panel III (ATP III).

3 The prevalence of MS was 30.7% using WHO criteria, 34.3% using IDF criteria and 36.6% using ATP III.

4 The authors concluded that there was no difference between the prevalence of MS using different criteria.

Chang ST, Chu CM, Pan KL et al (2011) Prevalence and cardiovascular disease risk differences for erectile dysfunction patients by three metabolic syndrome definitions. *Int J Impot Res* **23**: 87–93

JOURNAL OF SEXUAL MEDICINE

Imbalanced low-grade inflammation in T2D and ED

Readability	✓✓✓✓
Applicability to practice	✓✓✓
WOW! factor	✓✓✓

1 The authors evaluated the extent to which endothelial dysfunction and the balance of pro- and anti-inflammatory mediators were associated with the presence and severity of erectile dysfunction (ED) in men with T2D.

2 In total, 190 men with T2D were assessed – 150 had ED and 40 did not. Those with ED were older and had a longer duration of diabetes.

3 ED was found to be associated with high circulating levels of E-selectin, low IL-10 and elevated TNF- α :IL-10 ratio.

4 It was concluded that ED in men with T2D and without symptomatic coronary heart disease is associated with systemic endothelial dysfunction and a predominant, imbalanced, low-grade inflammatory response.

Araña Rosainz MD, Ojeda MO, Acosta JR et al (2011) Imbalanced low-grade inflammation and endothelial activation in patients with type 2 diabetes mellitus and erectile dysfunction. *J Sex Med* [Epub ahead of print]

UROLOGY

ED is associated with severity of diabetic retinopathy

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓

1 This cross-sectional prospective study looked at the association between erectile dysfunction (ED) and diabetic retinopathy (DR) in relation to retinopathy severity.

2 The study group included 64 men with proliferative DR or with severe non-proliferative DR, and the control group included 38 men without

retinopathy or with mild non-proliferative diabetic retinopathy.

3 The mean sexual health inventory for males (SHIM) score for all participants was 11.4 \pm 6.5, and 75 (73.5%) men had significant ED. There was a higher prevalence of ED among men in the study group than in the control group (87.5% versus 50.0%; $P<0.0001$).

4 Significant ED and SHIM scores were associated with DR severity ($P=0.001$ for both) independent of other factors.

5 The authors concluded that significant ED is associated with DR severity, independent of age, diabetes duration, macrovascular comorbidities and cardiovascular risk factors.

Henis O, Shahar Y, Steinvil A et al (2011) Erectile dysfunction is associated with severe retinopathy in diabetic men. *Urology* **77**: 1133–6

“Erectile dysfunction in men with T2D and without symptomatic coronary heart disease is associated with systemic endothelial dysfunction and a predominant, imbalanced low-grade inflammatory response.”