Sexual dysfunction

Herbal approaches to treating erectile dysfunction?

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Herbal preparations for the treatment of erectile dysfunction (ED) in diabetes have long been considered remedies by herbalists, examples being Gokshur ([*Tribulus terrestris*] proposed to enhance testosterone levels in animals), *Mucuna pruriens* seeds, *Myristica fragrans* and *Orchis latifolia* (http://bit.ly/1f8l4Av [accessed 03.07.15]). Unfortunately, as is encountered with many herbal approaches, there are no robust studies that confirm their effectiveness and safety, thereby limiting their use in clinical practice. In an attempt to address this, Mohammedadzadeh-Moghadam and colleagues have investigated the use of another herbal product – topical saffron (*Crocus sativus* L) – in the treatment of ED in men with diabetes (summarised alongside).

Their premise for the study is that the crocetin content of saffron enhances nitric oxide synthase, thus promoting the production of nitric oxide (NO), a key component involved in achieving tumescence (Razavi et al, 2014). Moreover, there is limited evidence that oral saffron is effective for ED in people without diabetes (Shamsa et al, 2009; Modabbernia et al, 2012), so a gel form was used in the current study. The authors identified that, compared with placebo, topical saffron improved all indices of the International Index of Erectile Function (IIEF) Questionnaire. Surprisingly sexual desire was increased, not normally a feature of enhancing NO availability, suggesting that saffron may have additional hitherto unrecognised effects. The study is limited by the small sample size, with 25 participants in each group. However as a pilot study, it affords the opportunity to consider this herb and others in larger studies that have gained popular attention amongst practising herbalists. ■

> **"Surprisingly sexual desire was increased suggesting that saffron may have additional hitherto unrecognised effects."**

Modabbernia A, Sohrabi H, Nasehi AA et al (2012) Effect of saffron on fluoxetine-induced sexual impairment in men: randomised double blind placebo-controlled trial. *Psychopharmacology* **223**: 381–8

Razavi BM, Imenshahidi M, Abnous K and Hosseinzadeh H (2014) Cardiovascular effects of saffron and its active constituent: a review article. *J Saffron Agronomy Technol* **2**: 3–13

Shamsa A, Hosseinzadeh H, Molaei M et al (2009) Evaluation of Crocus sativus on male erectile dysfunction: a pilot study. *J Phytomed* **16**: 690–3

J Evid Based Complementary Altern Med

1% saffron gel as a topical treatment for ED?

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓✓
WOW! Factor	✓✓✓✓

1 In this randomised, parallel-group, double-blind, placebo-controlled trial, the authors investigated the use of a herbal treatment, namely topical saffron (*Crocus sativus* L), on erectile dysfunction (ED) in men with diabetes.

2 Men were recruited if they were married, 40 years and older and had ED and diabetes. There were 25 men in both the intervention and control groups.

3 The formula of the topical saffron gel contained 1% saffron and its preparation carefully followed traditional Iranian medicine. The placebo contained a yellow colouring in the ingredients.

4 All participants were trained to rub a pea-sized amount of the gel on their penis half an hour before sexual intercourse.

5 All participants completed the International Index of Erectile Function (IIEF-15) Questionnaire before the intervention and 1 month later.

6 After 1 month, the intervention group scored significantly higher IIEF-15 scores ($P<0.001$) and scored significantly better on erectile function, sexual desire, orgasmic function, intercourse and overall satisfaction.

7 The authors note that they did not assess marital satisfaction. Moreover, the participants' lifestyle was not investigated.

8 The authors conclude that saffron can be considered a treatment option for ED for men with diabetes.

Mohammadzadeh-Moghadam H, Nazari SM, Shamsa A et al (2015) Effects of a topical saffron (*Crocus sativus* L) gel on erectile dysfunction in diabetics. *J Evid Based Complementary Altern Med* 6 May [Epub ahead of print]

Diabetes Metab Syndr Obes

Sexual dysfunction in women with diabetes

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! Factor	✓✓✓✓

1 The authors sought to determine any differences in the prevalence of sexual dysfunction among women with and without diabetes, and thus what role, if any, diabetes may have in sexual dysfunction.

2 There were 49 women with T1D, 24 women with T2D and 45 healthy women acting as controls in the study.

3 Each participant completed the nine-item Female Sexual Function Index questionnaire, and sexual dysfunction was defined as a total score ≤30 on the questionnaire.

4 In this cohort, the prevalence of sexual dysfunction was higher in the T1D group than the control group (P=0.00006), and there was no difference between the T2D group and the control group (P=0.630).

5 In terms of specific questionnaire items, the mean values for arousal, lubrication, dyspareunia and orgasm were significantly lower only in the T1D group versus the control group. The mean values for desire were reduced in both T1D and T2D groups versus control group.

6 The findings suggest that the higher prevalence of sexual dysfunction in T1D could be due to neurovascular complications or the negative psychological impact of the condition, which are more prevalent in T1D.

Mazzilli R, Imbrogno N, Elia J et al (2015) Sexual dysfunction in diabetic women: prevalence and differences in type 1 and type 2 diabetes mellitus. *Diabetes Metab Syndr Obes* **11**: 97–101

> ***"The findings suggest that the higher prevalence of sexual dysfunction in T1D could be due to neurovascular complications or the negative psychological impact of diabetes, which are more prevalent in T1D."***

J Urol

A new useful surrogate marker in practice?

Readability	✓✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! Factor	✓✓✓✓✓

1 Using data from the DCCT/EDIC study, the authors of this article evaluated the association between cardiovascular autonomic neuropathy, and erectile dysfunction and lower urinary tract symptoms in 635 men with T1D.

2 Cardiovascular autonomic neuropathy was assessed by standardised cardiovascular reflex tests including changes in respiratory rate variation with deep breathing, Valsalva maneuver (Valsalva ratio) and changes in supine to standing diastolic blood pressure.

3 The authors conclude that cardiovascular autonomic neuropathy may be a useful surrogate biomarker of more generalised autonomic neuropathy that has a role in the development of erectile dysfunction and lower urinary tract syndrome in men with T1D.

Pop-Busui R, Hotaling J, Braffett BH et al (2015) Cardiovascular autonomic neuropathy, erectile dysfunction and lower urinary tract symptoms in men with type 1 diabetes: findings from the DCCT/EDIC. *J Urol* **193**: 2045–5

Diabetes Res Clin Pract

Metabolic associations with ED

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! Factor	✓✓✓

1 The authors of this Italian study evaluated the prevalence of erectile dysfunction (ED) in a group of 220 men with T2D and also investigated the levels of some adipocytokines in men with and without ED. Participants completed a range of questionnaires and metabolic tests.

2 In this cohort, 52.9% of men experienced ED. Men with a HbA_{1c} <53 mmol/mol (7%) in the 2 pervious years had a lower incidence of ED than men that had a HbA_{1c} above this threshold. Interestingly, the prevalence of ED increased with the increasing times HbA_{1c} was >53 mmol/mol (7%).

3 Men with ED had significantly higher levels of triglycerides (P<0.01), fasting plasma insulin (P<0.05) and resistin levels (P<0.05) compared to men without ED. Free testosterone was lower in men with ED (P<0.05).

4 The authors observed an association between ED and glycaemic control, hypertriglyceridaemia and elevated insulin levels although it did not imply a causal link.

Derosa G, Romano D, Tinelli C et al (2015) Prevalence and associations of erectile dysfunction in a sample of Italian males with type 2 diabetes. *Diabetes Res Clin Pract* **108**: 329–35

Diabetes Res Clin Pract

ED not associated with IFG or IGT

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! Factor	✓✓✓

1 The association between impaired fasting glucose (IFG) and impaired glucose tolerance (IGT) with erectile dysfunction (ED) is not fully understood, so the aim of the study was to evaluate the association among 926 men.

2 In this Finnish study, of 926 men included, 114 (12%) had IFG, 115 (12%) had IGT, 54 (6%) had T2D and 516 (56%) had ED.

3 After adjustments for baseline characteristics, the 2-hour glucose were similar in men with and without ED, which suggests that ED is not independently associated with increased risk of IFG, IGT or newly diagnosed T2D.

4 Therefore, the authors conclude that ED can not be used in primary screening of pre-diabetes.

Ettala OO, Korhonen PE, Syvänen KT et al (2015) Erectile dysfunction cannot be used in primary screening of pre-diabetes. *Diabetes Res Clin Pract* **108**: e60–2