



## **1. Cardiovasc Hematol Agents Med Chem. 2009 Oct;7(4):260-9.**

Female sexual dysfunction: therapeutic options and experimental challenges.

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Female sexual dysfunction (FSD) is a prevalent problem, afflicting approximately 40% of women and there are few treatment options. FSD is more typical as women age and is a progressive and widespread condition. Common symptoms associated with FSD include diminished vaginal lubrication, pain and discomfort upon intercourse, decreased sense of arousal and difficulty in achieving orgasm. Only a small percentage of women seek medical attention. In comparison to the overwhelming research and treatment for erectile dysfunction in males, specifically with the development of phosphodiesterase type 5 inhibitors, significantly less has been explored regarding FSD and treatment is primarily limited to psychological therapy.

Several cardiovascular diseases have been linked with FSD including atherosclerosis, peripheral arterial disease and hypertension, all of which are also pathological conditions associated with aging and erectile dysfunction in men.

Számos szív-érrendszeri betegségben megfigyelhető női szexuális diszfunkció (FSD). Ilyenek az érelmeszesedés, magas vérnyomás betegség. Kórtani alap emlékeztet férfiak merevedési zavaraira. Ezeknek a folyamatoknak a megelőzése, vagy visszafordítása életmód korrekcióval a női szexuális diszfunkció javítására ígéretes lehetőség.

Using animal models, we have expanded our understanding of FSD, however a tremendous amount is still to be learned in order to properly treat women suffering from FSD. The aim of this review is to provide the most current knowledge on FSD, advances in basic science addressing this dysfunction, and explore developing therapeutic options.

PMID: 19538161 [PubMed - in process]

## **2. Diab Vasc Dis Res. 2009 Jan;6(1):38-9.**

Evaluation of sexual function in women with type 2 diabetes mellitus.

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Sexual health is an important, but often neglected, component of diabetes care. In contrast to erectile dysfunction among men with diabetes, female sexual dysfunction has not been well studied among diabetic women. The aim of this study was to assess the prevalence of sexual dysfunction in women with type 2 diabetes compared to that in an age-matched control group. In all, 50 married women with type 2 diabetes attending the outpatient endocrine clinic of Ghaem Hospital between April 2007 and March 2008 were selected. Fasting plasma glucose and glycosylated haemoglobin were measured and sexual function was assessed by questionnaire. Scores in each domain of sexual function were compared with those of 40 non-diabetic controls.

Sexual function scores for the sexual drive, arousal, vaginal lubrication, orgasm and overall satisfaction domains were all lower in the diabetic women ( $p$  value  $< 0.05$ ). Duration of diabetes and age correlated negatively with all domains of sexual function.

A szexualitás minőségét leíró valamennyi indikátor, mint a késztetés, gerjedelem, hüvelyi nedvesedés, orgazmuskészség és az általános megelégedettség/kielégülés alacsonyabb szinten volt a kettes típusú cukorbeteg hölgyeknél, mint a kontroll csoportnál.



There was no significant relationship between sexual function and body mass index (BMI), glycaemic control, education or employment status. Diabetes significantly impairs the sexual performance of diabetic women. Determinants of sexual function include age and duration of diabetes.

PMID: 19156627 [PubMed - indexed for MEDLINE]

### 3. Drug Discov Today. 2007 Sep;12(17-18):757-66. Epub 2007 Aug 27.

Designing drugs for the treatment of female sexual dysfunction.

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Dysfunction of female sexual desire, arousal, or orgasm affects approximately 30% of women. Early attempts to treat female sexual dysfunction arose out of programs developed for male erectile dysfunction and have proven largely unsuccessful. A new wave of targets is now being pursued; many of these targets are postulated to modulate central pathways.

Classical neurotransmitter systems, such as dopamine and serotonin, as well as the neuropeptide melanocortin, are receiving the most attention. Early clinical data look promising; however, clinical trial methodology in female sexual dysfunction is not well developed and only further testing will determine whether these treatments meet regulatory hurdles and satisfy patient need.

A női szexuális diszfunkció kémiai, gyógyszeres javítására több próbálkozás történt. Az érdeklődés előterében a klasszikus neurotranszmitterek, mint a dopamin, szerotonin és melanocortin nevű neuropeptid áll. Mindenesetre a hatásosságot és ártalmatlanságot igazoló vizsgálatok még hátra vannak.

PMID: 17826689 [PubMed - indexed for MEDLINE]

### 4. Int J Impot Res. 2007 Sep-Oct;19(5):486-91. Epub 2007 Aug 2.

Mediterranean diet improves sexual function in women with the metabolic syndrome.

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In the present study, we tested the effect of a Mediterranean-style diet on sexual function in women with the metabolic syndrome. Women were identified in our database of subjects participating in controlled trials evaluating the effect of lifestyle changes and were included if they had a diagnosis of female sexual dysfunction (FSD) associated with a diagnosis of metabolic syndrome, a complete follow-up in the study trial and an intervention focused mainly on dietary changes. Fifty-nine women met the inclusion/exclusion criteria; 31 out of them were assigned to the Mediterranean-style diet and 28 to the control diet. After 2 years, women on the Mediterranean diet consumed more fruits, vegetables, nuts, whole grain and olive oil as compared with the women on the control diet.

Female sexual function index (FSFI) improved in the intervention group, from a mean basal value of 19.7±3.1 to a mean post-treatment value of 26.1±4.1 (P=0.01), and remained stable in the control group. C-reactive protein (CRP) levels were significantly reduced in the intervention group (P<0.02). No single sexual domain (desire, arousal, lubrication, orgasm, satisfaction, pain) was significantly ameliorated by the dietary treatment, suggesting that the whole female sexuality may find benefit from lifestyle changes. A Mediterranean-style diet might be effective in ameliorating sexual function in women with metabolic syndrome.

A női szexualitás minőségi index (FSFI) átlaga 19,7 volt, amely a mediterrán diétára való áttérés után 24 hónappal 26,1-re emelkedett. A női szexualitás minősége életmód változtatással jó eséllyel javítható.

PMID: 17673936 [PubMed - indexed for MEDLINE]



## 5. Int J Impot Res. 2007 Jul-Aug;19(4):353-7. Epub 2007 Feb 8.

Association of body weight with sexual function in women.

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Sexual difficulties in women appear to be widespread in society; the relationship between female sexual function and obesity is unclear.

This study aimed to investigate the relationship between body weight, the distribution of body fat and sexual function in women. Fifty-two, otherwise healthy women with abnormal values of female sexual function index (FSFI) score ( $\leq 23$ ) were compared with 66 control women (FSFI  $> 23$ ), matched for age and menopausal status. All women were free from diseases known to affect sexual function. FSFI strongly correlated with body mass index (BMI) ( $r = -0.72$ ,  $P = 0.0001$ ), but not with waist-to-hip ratio ( $r = -0.09$ ,  $P = 0.48$ ), in women with sexual dysfunction. Of the six sexual function parameters, desire and pain did not correlate with BMI, while arousal ( $r = -0.75$ ), lubrication ( $r = -0.66$ ), orgasm ( $r = -0.56$ ) and satisfaction ( $r = -0.56$ , all  $P < 0.001$ ) did. FSFI score was significantly lower in overweight women as compared with normal weight women, while cholesterol and triglyceride levels were higher. On multivariate analysis, both age and BMI explained about 68% of FSFI variance, with a primacy of BMI over age (ratio 4:1). In conclusion, obesity affects several aspects of sexuality in otherwise healthy women with sexual dysfunction.

A női szexualitás minőségi indexének legtöbb indikátora szoros, inverz korrelációban volt a testtömeg-indexszel. A BMI korrekciója életmóddal a szexuális minőségi score javulásának esélyével kecsegtet.

PMID: 17287832 [PubMed - indexed for MEDLINE]

## 6. Arch Sex Behav. 2008 Apr;37(2):279-85.

8-13 Hz fluctuations in rectal pressure are an objective marker of clitorally-induced orgasm in women.

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Comment in: Arch Sex Behav. 2008 Dec;37(6):855; author reply 856.

Orgasm is a subjective experience accompanied by involuntary muscle contractions. We hypothesized that orgasm in women would be distinguishable by frequency analysis of a perineal muscle-derived signal. Rectal pressure, an index of perineal muscle activity, was measured continuously in 23 healthy women during different sexual tasks: receiving clitoral stimulation, imitation of orgasm, and attempt to reach orgasm, in which case the women were asked to report whether orgasm had been reached ("orgasm") or not ("failed orgasm attempt"). We performed spectral analysis on the rectal pressure data and calculated the spectral power in the frequency bands delta (0.5-4 Hz), theta (4-8 Hz), alpha (8-13 Hz), and beta (13-25 Hz). The most significant and most important difference in spectral power between orgasm and both control motor tasks (imitation of orgasm and failed orgasm attempt) was found in the alpha band. An objective rule based on spectral power in the alpha band recognized 94% (29/31) of orgasms and correctly labeled 69% (44/64) of all orgasm attempts as either successful or failed.



Because outbursts of alpha fluctuations in rectal pressure only occurred during orgasm and not during voluntary imitation of orgasm or failed attempts, we propose that they represent involuntary contractions of muscles in the rectal vicinity. This is the first objective and quantitative measure that has a strong correspondence with the subjective experience of orgasm.

Számos próbálkozás történt, hogy az igazi orgazmus bekövetkezését objektívalják. Szerzők a végbélben mért nyomás jellegzetes változását (13 Hz frekvenciájú izom összehúzódás) alkalmas indikátornak tartják.

PMID: 17186125 [PubMed - indexed for MEDLINE]

## **7. Annu Rev Sex Res. 2004;15:173-257.**

Women's orgasm.

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An orgasm in the human female is a variable, transient peak sensation of intense pleasure, creating an altered state of consciousness, usually with an initiation accompanied by involuntary, rhythmic contractions of the pelvic striated circumvaginal musculature, often with concomitant uterine and anal contractions, and myotonia that resolves the sexually induced vasocongestion and myotonia, generally with an induction of well-being and contentment. Women's orgasms can be induced by erotic stimulation of a variety of genital and nongenital sites. As of yet, no definitive explanations for what triggers orgasm have emerged. Studies of brain imaging indicate increased activation at orgasm, compared to pre-orgasm, in the paraventricular nucleus of the hypothalamus, periaqueductal gray of the midbrain, hippocampus, and the cerebellum. Psychosocial factors commonly discussed in relation to female orgasmic ability include age, education, social class, religion, personality, and relationship issues. Findings from surveys and clinical reports suggest that orgasm problems are the second most frequently reported sexual problems in women. Cognitive-behavioral therapy for anorgasmia focuses on promoting changes in attitudes and sexually relevant thoughts, decreasing anxiety, and increasing orgasmic ability and satisfaction. To date there are no pharmacological agents proven to be beneficial beyond placebo in enhancing orgasmic function in women.

PMID: 16913280 [PubMed - indexed for MEDLINE]