# Sexual Function in Chronic Illness

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**ABSTRACT**

***Introduction.*** Direct and indirect effects of chronic disease on sexual health are frequent and complex, but guidelines for their optimal management are lacking. With improved surgical and medical treatment of the underlying disease, the numbers of men and women needing assessment and management of associated sexual dysfunction are increasing.

***Aim.*** To provide recommendations/guidelines for the clinical management of sexual dysfunction within the context of chronic illness.

***Methods.*** An international consultation in collaboration with the major sexual medicine associations assembled 186 multidisciplinary experts from 33 countries into 25 committees. Nine experts from four countries compiled the recommendations of sexual dysfunction in chronic illness and cancer with four focusing on neurological, renal, and psychiatric disease and lower urinary tract symptoms (LUTS). Searches were conducted using Medline, Embase, Lilacs, and Pubmed databases.

***Main Outcome Measures.*** Expert opinion was based on grading of evidence-based medical literature, widespread internal committee discussion, public presentation, and debate.

***Results.*** Some conclusions concerning prevalence and pathophysiology of sexual dysfunction in the context of neurological disorders, end-stage renal failure, LUTS, and psychiatric disease were made. Optimal assessment of the multiple factors affecting sexuality when one or both partners are chronically ill is outlined. Evidence-based recommendations for management are presented. Comorbid depression is frequent and independently determines prevalence of sexual dysfunction in many conditions.

***Conclusions.*** There is need for more research and scientific reporting on prevalence, pathophysiology, and optimal treatment of sexual dysfunction associated with chronic illness. Screening for and managing comorbid depression is strongly recommended. **Basson R, Rees P, Wang R, Montejo AL, and Incrocci L. Sexual function in chronic illness. J Sex Med 2010;7:374–388.**

***Key Words.*** Sexual Dysfunction; Sexual Function; Chronic Illness; Neurologic Disease; Renal Disease; Psychiatric Disease

## Introduction

Advances in surgical and medical treatment have greatly improved survival for patients with chronic illness such that their quality of life including their sexual life is important. Many factors contribute directly or indirectly to sexual dysfunction related to chronic illness as shown in Table 1.

Our objectives are to identify the prevalence and pathophysiology of sexual dysfunction associated with chronic illness and its treatment and to identify accepted and emerging treatments of dysfunction. Any means of potential prevention of dysfunction will be noted. This manuscript will address sexuality in the context of neurological, renal, and psychiatric disease and a separate manuscript will address the context of cancer.

**Table 1** Factors involved in sexual dysfunction associated with chronic disease and cancer

| Type | Mechanisms | Examples |
|---|---|---|
| Direct | Change in sexual desire from disease | Typically reduced, e.g., from high prolactin and anemia of chronic renal failure [1]. May be increased, e.g., from some brain disorders [2]. |
| | Disruption of genital response from disease | ED from multiple sclerosis [3], hypertension [4], orgasmic disorder from multiple sclerosis [5]. |
| | Disruption of genital response from surgery | Radical prostatectomy and ED [6], radical hysterectomy and reduced genital congestion/reduced lubrication [7], orgasmic disorder after radical vulvectomy [8] |
| | Disruption of genital response from radiation | ED from vascular (and also likely nerve) damage after radiotherapy for prostate cancer [9]; vaginal stenosis and friability from radiation for pelvic cancer [10] |
| | Dyspareunia and disruption of sexual desire and response from chemotherapy | Sudden ovarian failure after chemotherapy for breast cancer [11]; testicular failure after intensive chemotherapy for hematopoietic transplantation [12] |
| | Disruption of sexual desire and response from antiandrogen treatment | GnRH therapy for prostate cancer [13] |
| | Disruption of genital response from aromatase inhibitors | Loss of sexual genital sensitivity, and exacerbation of vaginal atrophy from aromatase inhibition post breast cancer [14] |
| | Disruption of sexual desire and response from pain | Pain from any chronic condition is a potent sexual distraction |
| | Disruption of sexual desire and response from nonhormonal medications | Narcotics can depress desire through gonadotropin suppression [15]; selective serotonin reuptake inhibitors reduce desire and response [16] |
| Indirect | Reduction of self-image | Reduced by disfiguring surgeries, stomas, incontinence, altered appearance (e.g., drooling and altered faces of Parkinson's, altered skin color and muscle wasting of renal failure) |
| | Depressed mood | Depression and mood lability commonly accompany chronic illness; depression major determinant of sexual function in women with renal failure [17] or multiple sclerosis [18]; strong link between ED and subsequent depression [19] |
| | Impaired mobility | Reduced ability to caress, hug, and hold a partner; to sexually self-stimulate, to stimulate a partner, to move into positions for intercourse, to pelvically thrust in spinal cord injury, Parkinson's, brain injury, postamputation |
| | Reduced energy | Fatigue may take its toll on sexuality especially desire, e.g., from renal failure or chemotherapy |
| | Partnership difficulties | Difficulties finding a partner, dysfunction in the partner who assumes a care giver role, institutionalization, fear of becoming a burden to a partner, lack of independence. Relationship discord from stressors of living with medicalized lives (e.g., three times weekly hemodialysis) |
| | Sense of loss of sexuality from imposed infertility | From surgery removing gonads or uterus, from chemotherapy or radiotherapy causing gonadal failure |
| | Fear of sex worsening medical condition | Avoiding sex fearing a further stroke |

ED = erectile dysfunction.

### Assessment

We recommend assessment and treatment from a multidisciplinary perspective given that sexual problems relating to chronic illness are multifactorial. The structured interview remains the most important assessment tool and it is optimal for patients in committed relationships to include both partners, seeing them together and individually. Table 2 outlines items requiring assessment when chronic illness is present in one or both partners.

### Sexual Dysfunction Associated with Neurological Disease

Direct effects of brain trauma and stroke mostly result from neuronal damage to the frontal and temporal lobes of the brain including the more deeply located limbic structures. Epilepsy arising in the hippocampal/amygdaloid circuitry of the temporal lobes has greatest potential to affect sexuality which can be further compromised by side effects from antiepileptic drugs. Sexual dysfunction in Parkinson's disease is linked both to depletion of central dopamine and peripheral autonomic neuropathy. Spinal autonomic pathways and ascending sensory pathways from the genitalia are selectively implicated in multiple sclerosis (MS) as well as spinal cord injury (SCI). Peripheral neuropathies (somatic and autonomic), cauda equina injury, and iatrogenic pelvic nerve plexus injury from surgery or radiation of the genital autonomic nerve supply disrupt the peripheral aspect of the genital and sexual response. Importantly, in most of these neurological disorders, comorbid depression is a major contribution to sexual dysfunction.