# The Psychosocial Outcomes of Total and Subtotal Hysterectomy: A Randomized Controlled Trial

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**ABSTRACT**

***Introduction.*** Current controversies involve the adverse effects of hysterectomy on women's psychosocial functioning and whether subtotal as opposed to total hysterectomy mitigates these effects.

***Aim.*** To investigate the psychosocial effects of hysterectomy by examining sexual, pain, and psychological outcomes of total vs. subtotal hysterectomy in a randomized controlled trial.

***Methods.*** Patients suffering from benign gynecological conditions were randomly assigned to one of two groups: (i) total hysterectomy, that is, laparoscopic assisted vaginal hysterectomy (TOT, N = 32); or (ii) subtotal hysterectomy, that is, supracervical laparoscopic hysterectomy (SUB, N = 31). Both groups were premenopausal and underwent hysterectomy without concurrent oophorectomy. Two premenopausal control groups: (i) minor gynecological surgery (SURG-CON, N = 30); and (ii) healthy nonsurgical controls (NORM-CON, N = 40), were also tested. All surgical groups were assessed 2–3 weeks before surgery and then 6–7 months afterward; the nonsurgical control group was assessed at the time of recruitment and 6–7 months later.

***Outcome Measures.*** Assessments included semistructured interviews, standardized questionnaires, and standardized gynecological examinations.

***Results.*** For the TOT group, sexual drive, arousal, and sexual behavior significantly improved postoperatively. For the SUB group, sexual behavior and overall sexual functioning significantly improved. For both TOT and SUB groups, unprovoked pain in the abdomen and pain in the abdomen during gynecological examinations was significantly reduced. For both TOT and SUB groups, overall psychological functioning did not significantly change postoperatively. Although between 3% and 16% of women undergoing hysterectomy reported adverse changes in psychosocial well-being after surgery, similar percentages of women in the control groups reported such effects.

***Conclusions.*** Hysterectomy resulted in a consistent reduction in abdominal pain, some improvement in sexual functioning, but no change in overall psychological functioning. There was no evidence supporting the idea that subtotal hysterectomy produced more favorable psychosocial outcomes than total hysterectomy nor was there any evidence that either type of hysterectomy resulted in adverse effects. **Flory N, Bissonnette F, Amsel RT, and Binik YM. The psychosocial outcomes of total and subtotal hysterectomy: A randomized controlled trial. J Sex Med 2006;3:483–491.**

***Key Words.*** Total/Subtotal Hysterectomy; Sexual; Pain; Psychological

## Introduction

Every year more than 600,000 women in North America undergo a hysterectomy, making the surgical removal of the uterus the most frequent nonobstetric surgery among reproductive-aged women [1–4]. The majority of patients undergo hysterectomy for benign gynecological conditions that often cause significant sexual problems, dyspareunia, chronic pelvic pain, and psychological difficulties [5,6]. However, the effectiveness of hysterectomy in relieving these problems has been

 

controversial [7–12]. The appropriateness of hysterectomy has been questioned as uterus-sparing treatments can be as effective as hysterectomy in improving pain and other symptoms [13–15]. In cases where hysterectomy is considered the best treatment, there is debate whether subtotal hysterectomy, in which the cervix is preserved, has any advantage over total hysterectomy, in which both the cervix and the uterus are removed [16–19]. While nonrandomized studies comparing the two surgeries found that subtotal hysterectomy was less detrimental than total hysterectomy [18,20,21], recent randomized controlled trials (RCTs) found no support for differentiated outcomes [22–25].

The available data concerning the effects of hysterectomy on sexual functioning, pain, and psychological functioning are contradictory [1,26,27]. Earlier retrospective studies suggested negative psychosocial effects of hysterectomy [28–30]; however, these typically relied on self-reports years after hysterectomy. More recent prospective studies often found positive outcomes; however, these studies may probably overestimate improvement by comparing postoperative outcomes with a "baseline" measured at the day or time of surgery [31].

Despite the generally positive psychosocial outcomes in recent prospective studies, a subgroup of women (10–20%) reported reductions in their psychosocial well-being following hysterectomy [7,8,10,11,17]. These observed changes included a variety of symptoms such as sexual dysfunctions, pain symptoms, and psychological difficulties. The inclusion of women with healthy uteri in a control group could possibly reconcile some of the contradictory results, by providing an estimate for the impact of surgery to the pelvis, the impact of uterine disease on psychosocial functioning, and an estimate for premorbid functioning of women with intact reproductive organs.

The study reported here was the first RCT to investigate the psychosocial impact of total vs. subtotal hysterectomy that included control groups of women with intact uteri. While previous RCTs included a mix of pre-, postmenopausal, and oophorectomized women [22–24], participants in our study were premenopausal and underwent hysterectomy without concurrent oophorectomy. To our knowledge, our trial was the first to compare total and subtotal procedures conducted via laparoscopy and not conventional abdominal surgery.

## Methods

### *Participants*

This study was approved by the Institutional Review Board of McGill University and St. Luc Hospital, Montreal, Canada. All participants had to meet the following inclusion criteria: 18–55 years old, premenopausal, and fluent in French language. Exclusion criteria constituted prior oophorectomy, uterine prolapse, chemotherapy, or neoplasia in the uterus/cervix. Hysterectomy patients were randomized to either total (TOT group) or subtotal (SUB group) hysterectomy; they underwent hysterectomy for benign gynecological conditions such as endometriosis, uterine fibroids, abnormal bleeding, or pelvic pain. Women in the two control groups were required to have intact uteri and not be pregnant; nonhysterectomy groups consisted of a surgical (SURG-CON group) and a healthy group (NORM-CON group). Surgical controls underwent laparoscopy for benign conditions such as tubal ligation or diagnostic purposes. The "healthy" nonsurgical control group had no acute/chronic illness, and no abdominal, pelvic, or genital pain except typical menstrual pain.

### *Procedure*

Surgeons and gynecologists screened and recruited potential study participants; in addition, healthy women were recruited via local media announcements. All surgical groups were tested 2–3 weeks before (Time 1) and then 6–7 months after surgery (Time 2). Hysterectomy patients did not receive any financial compensation for their participation; surgical and healthy controls received $60. Hysterectomy patients were assigned to either total or subtotal hysterectomy via a 50/50 computer-generated block randomization (Microsoft Excel 2000). The treatment assignment was concealed in consecutively numbered envelopes; the surgeons performing the surgery opened the envelopes at the time of surgery. Over 90% of surgeries in this trial were performed by one surgeon (F.B.). Hysterectomy patients underwent either a total hysterectomy, that is, laparoscopic assisted vaginal hysterectomy, or subtotal hysterectomy, that is, supracervical laparoscopic hysterectomy (for detailed descriptions see [33]). Surgeons preserved the ovaries in both types of surgery.

### *Outcome Measures*

Sexual functioning, pain, and psychological functioning were assessed through standardized