

# Surgical Oncology: Evolution of Postoperative Fatigue and Factors Related to Its Severity

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**Background:** Fatigue has been reported by many patients undergoing surgery and is associated with a negative prognosis. The factors associated with postoperative fatigue and its evolution during the postoperative period are unclear. Adequate fatigue measurement instruments are necessary to obtain reliable evaluations and to direct effective care to control fatigue in this patient population.

**Objectives:** This article describes the evolution of postoperative fatigue in patients with cancer as well as related factors.

**Methods:** A review of the literature using the CINAHL® and PubMed databases was undertaken.

**Findings:** The prevalence of moderate and severe fatigue varies during the postoperative period, with a reduction in the 12 months after surgery. Various factors (e.g., stress, anxiety, depression, pain, changes in sleep patterns) seem to influence the severity of fatigue. More evidence is needed to explore the relationship between immediate postoperative fatigue and the evolution of fatigue during the period following surgical treatment for cancer.

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Surgery is considered to be one of the most important treatments in oncology, despite advances in other treatment modalities. In fact, surgical interventions account for the largest number of cures after a cancer diagnosis (Rosenberg, 2011). More than 60% of patients with cancer undergo surgical intervention, which has indications for prevention, diagnosis, disease staging, cure, and palliation of symptoms (Gillespie, 2011; Rosenberg, 2011). Surgery can be used as the sole treatment strategy or in combination with radiation therapy and/or chemotherapy (Varricchio, 2004).

Even when surgical procedures have positive outcomes, they may also be accompanied by unpleasant side effects. In the perioperative period, fatigue is one of the most common side effects and is acknowledged by many patients as the primary side effect (Paddison et al., 2009). Fatigue is defined as an oppressive feeling with sustained exhaustion and decreased ability to perform physical and mental work at usual levels (Herdman, 2012). Fatigue is characterized by feelings of tiredness, lack of

energy, inability to maintain a usual routine, impaired libido, and verbalization of a constant lack of energy (Herdman, 2012).

Since the 1970s, researchers have been intrigued by the observation that some patients felt more tiredness and had more difficulty returning to normal activities following a surgical procedure than others and began investigating the recovery process (Schroeder & Hill, 1993). In addition, surgeons began to pay attention to tiredness following surgery, labeling it “postoperative fatigue.” They also noticed that this fatigue was related to a series of physiologic changes caused by surgical trauma, as well as to the duration of the operation (Christensen, Hougård, & Kehlet, 1985; Christensen & Kehlet, 1993; Rose & King, 1978).

Several studies have pointed to fatigue as a common symptom in the postoperative period (Paddison et al., 2009; Rubin, Hardy & Hotopf, 2004). However, although type of surgery seems to be the main predictor of postoperative fatigue (Paddison et al., 2009; Rubin et al., 2004), how it evolves during the postoperative period remains unclear, as does whether the factors associated with fatigue in patients undergoing surgery are the same as those