



Don't Statement: *Don't neglect to advise patients with cancer to get physical activity and exercise during and after treatment to manage fatigue and other symptoms.*

Statement of Rationale:

Fatigue is a common symptom among both adult and pediatric patients with cancer. During treatment for cancer, fatigue is seen in 25–99% of patients (Goedendorp, Gielissen, Verhagen & Bleijenberg, 2009; Kim, Dodd, Aouizerat, Jahan & Miaskowski, 2009), and it has been reported that 38% of individuals continue to experience persistent fatigue for years after completion of treatment (Carlotto, Hogsett, Maiorini, Razulis, & Sonis, 2013). Late fatigue has a significant impact on quality of life and is associated with increased unemployment (Carlotto, Hogsett, Maiorini, Razulis, & Sonis, 2013).

It is the natural tendency for people to try to get more sleep and rest when feeling fatigued. Patient-oriented internet sites emphasize saving energy rather than emphasizing exercise to combat fatigue, although exercise is shown to be one of the most effective interventions to address fatigue (American Cancer Society, 2012; National Institutes of Health, 2012). Health care providers have traditionally been educated about the importance of getting rest and avoiding strenuous activity when ill. In work done to test and validate quality measures for early breast cancer patients conducted by the Oncology Nursing Society, it was found that only 9.79% of sites involved provided any exercise recommendation as an intervention for fatigue (Fessele, Yendro, & Mallory, 2014), indicating a clear need and opportunity for improvement in management of this symptom during treatment.

In contrast to these traditional views, resistance and aerobic exercise have been shown to be safe, feasible, and effective to reduce symptoms of fatigue during multiple phases of cancer care. Exercise has also been shown to have a positive effect on symptoms of anxiety and depression.

Background:

Beliefs about and approaches to the role of being sick have traditionally incorporated the idea that when one is ill, one needs to get more rest and avoid exertion to promote healing. A couple of early studies aimed at fatigue management in cancer focused on energy conservation and activity management counseling to “save energy” for prioritized tasks or activities and plan

rest periods to accomplish this. These had a modest positive effect (Barsevik et al., 2004; Barsevick, Whitmer, Sweeney & Nail, 2002). This practice has been incorporated into multiple palliative care guidelines and patient information websites. Since that time there is extensive strong evidence that exercise is more beneficial for alleviation and reduction of fatigue as well as other symptoms in patients with cancer, during treatment, after treatment, and for those with advanced disease.

Evidence:

- Exercise has been shown to significantly reduce fatigue in multiple studies (Andersen et al., 2013; Bourke et al., 2011; Buss et al., 2010; Cantarero-Villanueva et al., 2013; Carayol et al., 2013; Chang, Mu, Jou, Wong, & Chen, 2013; Cheville et al., 2010; Cheville et al., 2013; Coleman et al., 2012; Eyigor, Karapolat, Yesil, Uslu, & Durmaz, 2010; Hayes et al., 2013; Hoffman et al., 2013; Hoffman et al., 2014; Hsieh et al., 2008; Litterini & Fieler, 2008; Oldervoll et al., 2011; Rajotte et al., 2012, Saarto et al., 2012; Schmidt, Weisser, Jonat, Baumann, & Mundhenke, 2012; Wang, Boehmke, Wu, Dickerson, & Fisher, 2011; Wenzel et al., 2013; Yang, Tsai, Huang, & Lin, 2010; Yeh, Man Wai, Lin, & Chiang, 2011; Yeo et al., 2012).
- Studies were done in patients with breast, colon, and prostate cancers; postoperative patients; patients undergoing stem cell transplantation; long-term cancer survivors; and individuals with advanced disease. Systematic reviews and meta-analyses confirm the efficacy of exercise for fatigue (Arnold & Taylor, 2010; Bradt, Goodill, & Dileo, 2011; Brown et al., 2011; Cramp & Byron-Daniel, 2012; Keogh & Macleod, 2011; Kuchinski, Reading, & Lash, 2009; McMillan & Newhouse, 2011; Mishra et al., 2012; Payne, Wiffen, & Martin, 2012; Puetz & Herring, 2012; van Haren et al., 2013; Velthuis, Agasi-Idenburg, Aufdemkampe, G., & Wittink, 2010; Wanchai, Armer, & Stewart, 2011).
- Exercise is recommended in several professional guidelines for fatigue (National Comprehensive Cancer Network, 2014; NHS Scotland, 2009; Schmitz et al., 2010).
- There is good evidence to show that exercise can reduce anxiety (Smith, Cope, Sherner & Walker, 2014) and depression (Fulcher, Kim, Smith & Sherner, 2014) among patients with cancer.

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