ABSENCE OF EXCESS BODY FATNESS

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2.2.15 Cancer of the testis

Cancer of the testis is a rare malignancy, accounting for 1% of incident cases of cancer in men, but the testis is the most common cancer site for men aged 15–44 years in developed countries. To date, the most important identified risk factor for testicular cancer is an undescended testicle. Increased risk has also been associated with family history of testicular cancer, various genetic factors, and several perinatal risk factors.

In 2001, the Working Group of the IARC Handbook on weight control and physical activity (IARC, 2002) concluded that the evidence of an association between avoidance of weight gain and testicular cancer was inadequate.

(a) Cohort studies

Since 2000, only one cohort study of excess body weight in relation to risk of testicular cancer has been published: a Norwegian cohort of approximately 600,000 men aged 14–44 years (Bjørge et al., 2006). For overweight and obesity compared with normal BMI, the relative risks were 0.89 (95% CI, 0.77–1.03) and 0.83 (95% CI, 0.58–1.17), respectively, and the relative risk per 1 kg/m² increase in BMI was 0.97 (95% CI, 0.95–1.00). There was no statistically significant heterogeneity of results between histological subtypes of testicular cancer.

(b) Case–control studies

A total of seven population- or hospital-based case–control studies published after 2000 focused on the association between BMI and weight and testicular cancer (Table 2.2.15; web only; available at: http://publications.iarc.fr/570). In four studies, there was no overall significant association with BMI for all testicular cancer cases (Dieckmann & Pichlmeier, 2002; Richiardi et al., 2003; Pan et al., 2004; McGlynn et al., 2007). Giannandrea et al. (2012) found an inverse association with all testicular cancer cases for men with BMI > 27.4 kg/m² (n = 26) compared with men with BMI ≤ 23.15 kg/m² (OR, 0.42; 95% CI, 0.24–0.75). One study showed that high BMI in men aged 18–29 years was significantly more frequent in testicular cancer cases than in controls (Dieckmann et al., 2009). In one study, analysis by subtype yielded an odds ratio of 3.66 (95% CI, 1.87–7.15) for obese men (BMI > 31 kg/m²) with non-seminoma testicular cancer (n = 11) (Garner et al., 2003).

A meta-analysis of the earlier cohort study and 10 case–control studies showed an inverse association between overweight and testicular cancer (OR, 0.92; 95% CI, 0.86–0.98), which was not significant for obesity (OR, 0.93; 95% CI, 0.75–1.15) (Lerro et al., 2010).
References


