

## Nutrient dietary patterns and the risk of colorectal cancer: a case-control study from Italy

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The role of diet on colorectal cancer has been largely investigated in terms of foods and nutrients, but rarely in terms of dietary patterns. We evaluated the relationship between major dietary patterns and colorectal cancer in an Italian case-control study including 1,225 patients with cancer of the colon, 728 patients with cancer of the rectum, and 4,154 controls, hospitalized for acute non-neoplastic diseases. Dietary habits were investigated through a validated food-frequency questionnaire. We identified dietary patterns on a selected set of nutrients through principal component factor analysis. Odds ratios (OR) and 95% confidence intervals (CI) for both cancer were estimated using unconditional multiple logistic regression models on quintiles of factor scores. We identified 4 major dietary patterns named *Animal products*, *Vitamins and fiber*, *Unsaturated fats*, *Starch-rich*. No significant association was observed between *Animal products* pattern and cancer of the colon (OR=0.97, 95% CI: 0.78-1.20, for the highest quintile of factor scores as compared to the lowest), and rectum (OR=1.26, 95% CI: 0.97-1.64). An inverse relationship was found for the *Vitamins and fiber* pattern and cancer of the rectum (OR=0.68, 95% CI: 0.52-0.88), but not for that of the colon (OR=0.90, 95% CI: 0.73-1.12). A direct association was observed between the *Starch-rich* pattern and both cancer of the colon (OR=2.10, 95% CI: 1.64-2.68) and rectum (OR=1.93, 95% CI: 1.42-2.63). An inverse association was found for the *Unsaturated fats* pattern and cancer of the colon (OR=0.89, 95% CI: 0.72-1.10), while no significant association was found for the *Unsaturated fats* pattern and rectal cancer (OR=1.33, 95% CI: 1.02-1.74).

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