



European Code against Cancer 4th Edition: Obesity, body fatness and cancer[☆]



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ABSTRACT

It is estimated that over half the population of the European Union (EU) is overweight or obese due to an imbalance between energy expenditure and energy intake; this is related to an obesogenic environment of sociocultural, economic and marketing challenges to the control of body weight. Excess body fat is associated with nine cancer sites – oesophagus, colorectum, gall bladder, pancreas, postmenopausal breast, endometrium, ovary, kidney and prostate (advanced) – and 4–38% of these cancers (depending on site and gender) can be attributed to overweight/obesity status. Metabolic alterations which accompany excess body weight are accompanied by increased levels of inflammation, insulin, oestrogens and other hormonal factors. There are some indications that intentional weight loss is associated with reduced cancer incidence (notably in postmenopausal breast and endometrial cancers). Excess body weight is also a risk factor for several other diseases, including diabetes and heart disease, and is related to higher risk of premature death.

In reviewing the current evidence related to excess body fat and cancer, the European Code against Cancer Nutrition Working Group has developed the following recommendation: 'Take action to be a healthy body weight'.

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Abbreviations: BMI, body mass index; EU, European Union; IARC, International Agency for Research on Cancer; IGF, insulin-like-growth factor; WCRF, World Cancer Research Fund; WHO, World Health Organization.

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¹ The views expressed are those of the author and not necessarily those of the OECD, or its member countries.

1. Introduction

1.1. European prevalence of overweight and obesity

In 2012 over half the population of the European Union (EU) was estimated to be overweight [1], and one person in six was obese [2]. In adults, the proportion of men who are obese is between 8% (Romania) and 26% (Hungary), and the proportion of women who are obese is between 8% (Romania) and 30% (Hungary) (Fig. 1).

1.1.1. Overweight and obesity by age group and level of education

The proportion of people who are overweight or obese is higher in older than in younger people (Fig. 2). At ages 18–24, the proportion of men who are overweight or obese is below 30% in all countries except the Czech Republic, Cyprus, Poland, Slovenia and the UK, and the proportion of women who are overweight or obese is below 20% in all countries except the UK (Figs. 3 and 4). At ages 65–74, the proportion of men who are overweight or obese is above 60% in all countries, and the proportion of women who are overweight or obese is above 60% in all countries except Belgium, France, Italy and Romania (Figs. 2 and 3).

Among adolescents (15-year-olds) in EU member states, boys report excess weight more often than girls; one in six boys and one

in 10 girls report being overweight or obese. More than 15% of adolescents in southern European countries (Greece, Italy, Portugal and Spain), as well as in Croatia, Iceland, Luxembourg and Slovenia, report being overweight or obese. Fewer than 10% of children in Latvia and Lithuania, as well as in Denmark, France and the Netherlands, report being overweight or obese (Fig. 4).

The proportion of overweight and obese people varies with educational level. In women the pattern is clear in that the proportion of obese or overweight women falls as the educational level rises (Fig. 5). In men, however, the educational level with the highest prevalence of overweight and obesity varies between countries, with some countries having the highest proportion in the least educated men, some having the highest proportion in the most educated, and some having the highest proportion in those with a medium level of education (Fig. 6).

1.2. Definition of overweight, obesity, body fatness and waist circumference

When energy intake is equal to energy expenditure, then energy balance is reached and the body neither gains nor loses weight. If excess energy intake or low energy expenditure occurs then weight gain will follow, mostly in the form of fat storage. Body fat

	Men	Women
Romania	7.6	8
Norway	11	9
Netherlands	11.2	12.8
Switzerland	11.2	9.4
Italy	11.3	9.5
Bulgaria	11.6	11.3
Sweden	11.7	11.8
Austria	12	12.7
Latvia	12	20.9
Belgium	13.1	14.4
Denmark	13.7	13.1
Turkey	13.7	20.9
France	14.5	14.6
Portugal	14.6	16.1
Germany	15.7	13.8
Finland	16.1	15.7
Poland	16.6	15.2
Cyprus	16.7	14.5
Slovak Rep.	17.1	16.7
Spain	17.5	15.6
Greece	17.7	18.5
Estonia	18.6	19.3
Czech Rep.	21	21
Slovenia	21.1	15.4
Ireland	22	24
Iceland	22.7	19.3
United Kingdom	24.4	25.1
Luxembourg	24.7	20.9
Malta	24.7	21.1
Hungary	26.3	30.4

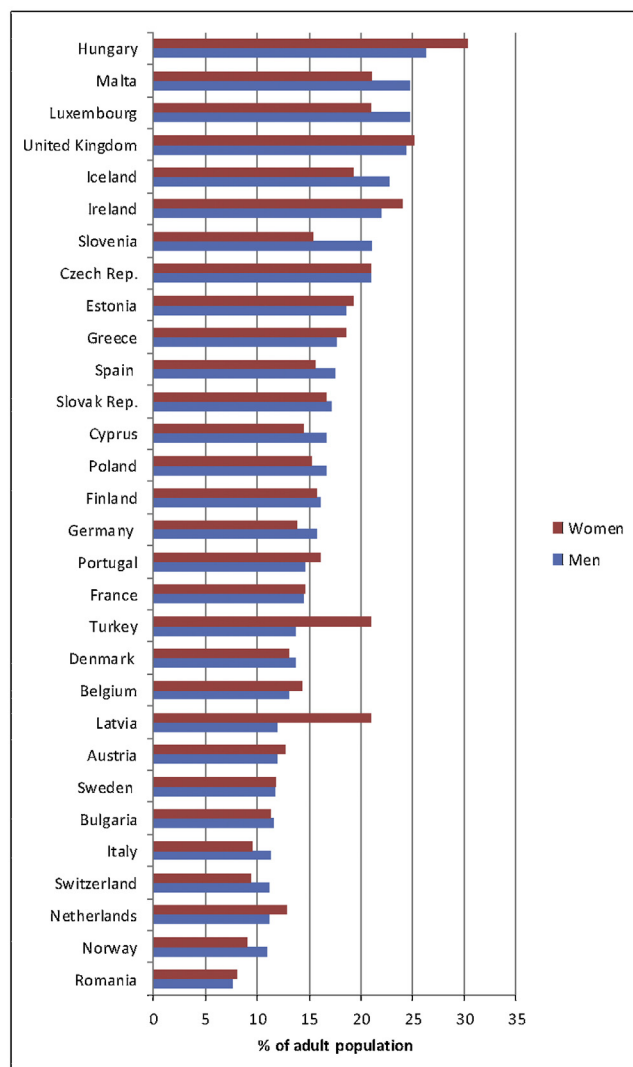


Fig. 1. Prevalence of obesity among adults in Europe, 2012 (or nearest year). Calculations provided by the OECD based on 'OECD. Health at a glance: Europe 2012. OECD Publishing' [2].

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