Infant health: Low birth weight

Low birth weight – defined as newborns weighing less than 2 500 grams – is an important indicator of infant health because of the close relationship between birth weight and infant morbidity and mortality. There are two categories of low birth weight babies: those occurring as a result of restricted foetal growth and those resulting from pre-term birth. Low birth weight infants have a greater risk of poor health or death, require a longer period of hospitalisation after birth, and are more likely to develop significant disabilities. Risk factors for low birth weight include maternal smoking, excessive alcohol consumption, poor nutrition, low body mass index, lower socio-economic status, and having had in-vitro fertilisation treatment and multiple births.

One in 15 babies born in OECD countries in 2013 – or 6.6% of all births – weighed less than 2 500 grams at birth (Figure 3.16). The proportions of low-weight births were lowest in Nordic countries (Iceland, Finland, Sweden, Norway, with the exception of Denmark) and Estonia, with less than 5% of live births defined as low birth weight. Japan, had the highest proportion of low birth weight infants among OECD countries, with rates close to 10%, followed by Greece, Hungary and Portugal.

Despite the widespread use of a 2 500 grams limit for low birth weight, physiological variations in size occur across different countries and population groups, and these need to be taken into account when interpreting differences (Euro-Peristat, 2013). Some populations may have lower than average birth weights than others because of genetic differences.

In almost all OECD countries, the proportion of low birth weight infants has increased over the past two decades, mainly due to increases in pre-term births (Euro-Peristat, 2013). There are several reasons for this rise, including a growing number of multiple pregnancies mainly as a result of the rise in fertility treatment, and a rise in maternal age (Delnord et al., 2015). Another factor which may explain the rise in low birth weight infants is the increased use of delivery management techniques such as induction of labour and caesarean delivery, which have increased the survival rates of low birth weight babies.

Korea, Greece, Spain, Portugal and Japan have seen large increases of low birth weight babies over the past two decades, although the proportions remain below the OECD average in Korea (Figure 3.17). In Japan, this increase can be explained by changes in obstetric interventions, in particular the greater use of caesarean sections, along with changes in maternal socio-demographic and behavioural factors (Yorifuji et al., 2012). In Greece, the rise in the proportion of low birth weight babies started in the mid-1990s, well before the economic crisis, and peaked in 2010. Some researchers have suggested that the high rates of low birth weight babies between 2009 and 2012 were linked to the economic crisis and its impact on unemployment rates and lowering family incomes in Greece (Kentikelenis, 2014). In 2013, the rate came down to levels observed before the crisis.

Comparisons of different population groups within countries indicate that the proportion of low birth weight infants may also be influenced by differences in education level, income and associated living conditions. In the United States, there are marked differences in the proportion of low birth weight infants among racial groups, with black infants having a rate almost double that of white infants (13% versus 7% in 2013) (NCHS, 2015). Similar differences have also been observed among the indigenous and non-indigenous populations in Australia, Mexico and New Zealand, often reflecting the disadvantaged living conditions of many of these mothers.

The proportion of low birth weight infants is also generally higher among women who smoke than for non-smokers.

Definition and comparability

Low birth weight is defined by the World Health Organization (WHO) as the weight of an infant at birth of less than 2 500 grams (5.5 pounds) irrespective of the gestational age of the infant. This threshold is based on epidemiological observations regarding the increased risk of death to the infant and serves for international comparative health statistics. The number of low weight births is expressed as a percentage of total live births.

References

Delnord, M. et al. (2015), "What Contributes to Disparities in the Preterm Birth Rate in European Countries?", *Current Opinion in Obstetrics and Gynecology*, Vol. 27, No. 2, pp. 133-142, April.

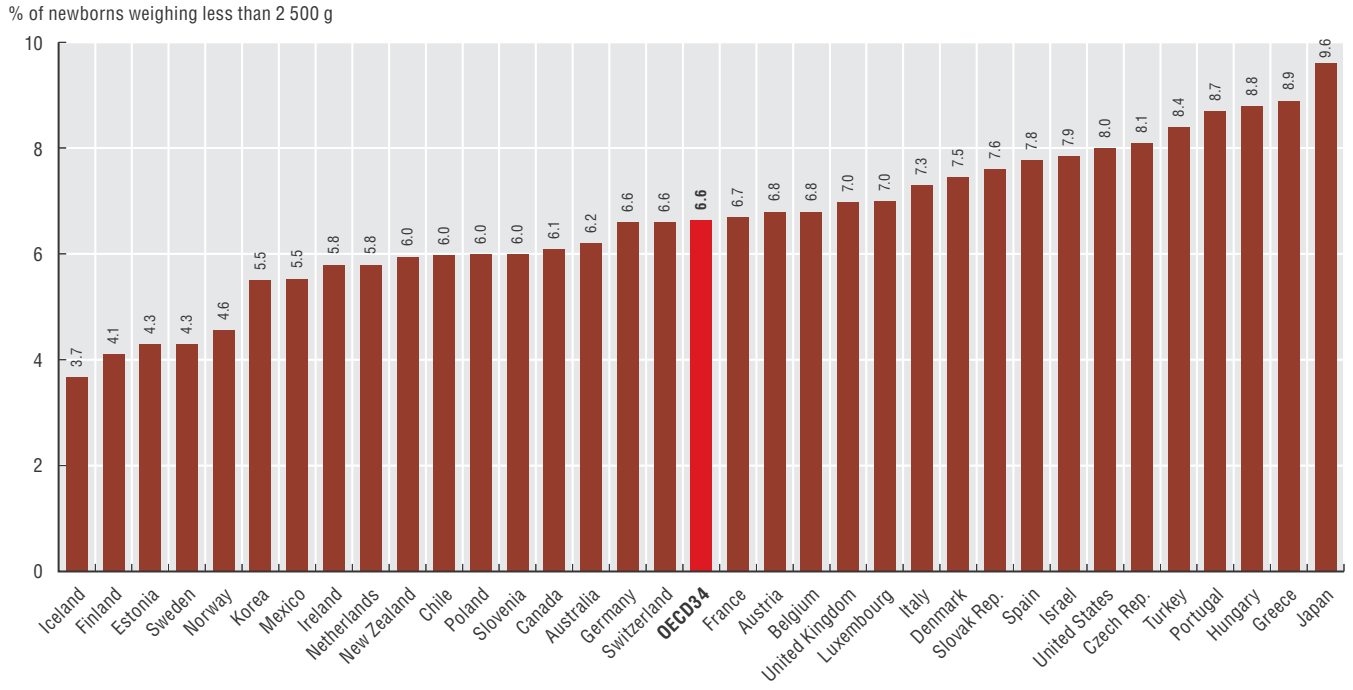
Euro-Peristat (2013), *European Perinatal Health Report: The Health and Care of Pregnant Women and their Babies in 2010*, Luxembourg.

Kentikelenis, A. (2014), "Greece's Health Crisis: From Austerity to Denialism", *The Lancet*, Vol. 383, No. 9918, pp. 748-753.

NCHS – National Center for Health Statistics (2015), *Health, United States, 2014, With Special Feature on Adults Aged 55-64*, NCHS, Hyattsville, United States.

Yorifuji, T. et al. (2012), "Trends of Preterm Birth and Low Birth Weight in Japan: A One Hospital-Based Study", BMC Pregnancy and Childbirth, Vol. 12:162.

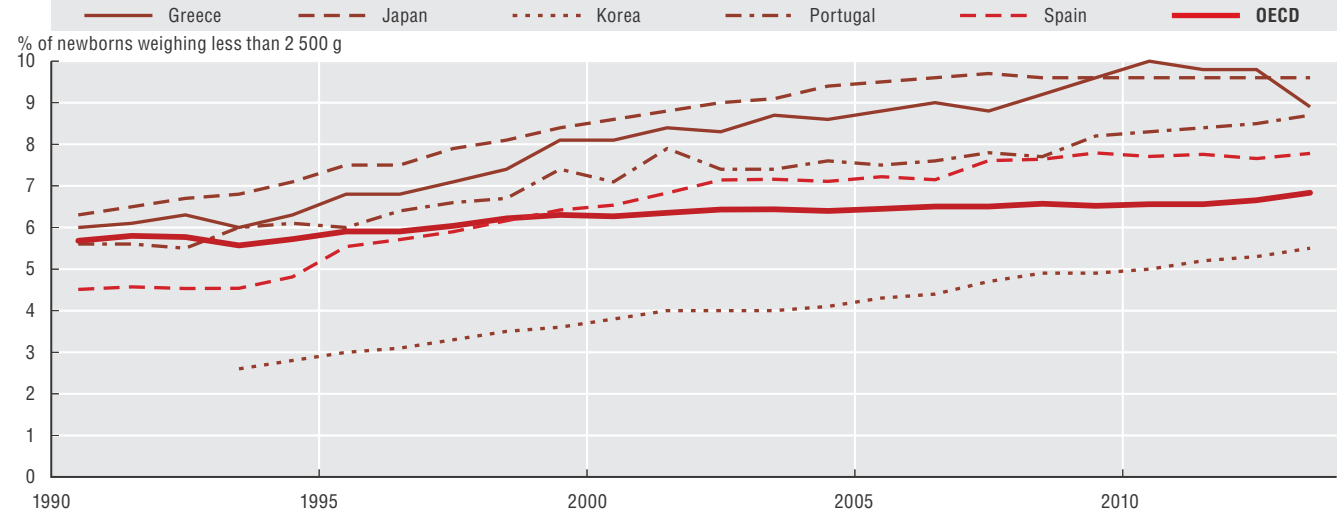
3.16. Low birth weight infants, 2013 (or nearest year)



Source: OECD Health Statistics 2015, http://dx.doi.org/10.1787/health-data-en.

StatLink http://dx.doi.org/10.1787/888933280794

3.17. Trends in low birth weight infants, selected OECD countries, 1990-2013



Source: OECD Health Statistics 2015, http://dx.doi.org/10.1787/health-data-en.

StatLink http://dx.doi.org/10.1787/888933280794

Information on data for Israel: *http://oe.cd/israel-disclaimer*