

An Official Statistics Publication for Scotland



**Scottish  
Maternal and  
Infant Nutrition  
Survey 2017**  
Summary of Key Findings



**Healthier  
Scotland**  
Scottish  
Government

## Summary of Key Findings

The diet and nutritional status of mothers before and during pregnancy and the nourishment received by infants is associated with the long term health of the population.<sup>1,2</sup> There is also increasing evidence of the importance of preconception health and the influence this has on the likelihood of an infant going on to develop chronic diseases later in life.<sup>3</sup>

As a result, the Scottish Government aims to ensure that all children have the best possible start in life and are able to live longer, healthier lives.<sup>4</sup>

To help to achieve these aims, the Scottish Government published the Maternal and Infant Nutrition Framework for Action in January 2011.<sup>1</sup> This Framework was designed to support a variety of organisations in improving maternal and infant nutrition in Scotland.

The Scottish Maternal and Infant Nutrition Survey was carried out to allow the Scottish Government to investigate the behaviours, choices and experiences of pregnant women and new parents against the recommendations in the Framework. The information obtained via the survey will be used by the Scottish Government to assist health services and other organisations to design and implement nutritional advice and support for families.

### **Three separate groups of women were invited to take part in the survey:**

- Expectant mothers who were 20+ weeks pregnant.
- Mothers of babies aged between 8 and 12 weeks.
- Mothers of babies aged between 8 and 12 months.

### **The information gathered from across these three groups provides:**

- A picture of the extent to which survey respondents made recommended nutritional and health adjustments both before and during pregnancy.
- Insights into pre-birth feeding intentions and respondents' experiences of breastfeeding, formula feeding and introducing complementary foods.
- Information on the awareness of the Healthy Start Scheme which aims to help low income families to eat a healthier diet.
- An understanding of the variations in practice amongst different population groups.

The key findings from the survey are summarised below.



## Pregnancy Planning and Maternal Nutrition

### Pregnancy planning:

- 74% of respondents “planned” to get pregnant, 22% were “ambivalent” and 3% of pregnancies were “unplanned”. Note that most respondents were more than 24 weeks pregnant.

### Folic acid and other dietary supplements before and during pregnancy:

- Just over half of respondents (53%) reported taking folic acid prior to becoming pregnant. An additional third (37%) reported starting to take folic acid as soon as they knew they were pregnant. Nearly one in ten (9%) reported that they did not take folic acid before becoming pregnant or in the first month of pregnancy.
- A large proportion of respondents (86%) indicated that they were taking a vitamin or mineral supplement during pregnancy. Of those who said they were taking a supplement, 50% were taking Healthy Start vitamins and 42% were taking another supplement specifically designed for use in pregnancy.

### Alcohol consumption:

- More than half of respondents (54%) reported that they did not stop drinking alcohol before becoming pregnant, although a quarter (25%) said they had “cut down” the amount they were drinking.
- Most respondents (88%) said they had not consumed any alcohol since they realised they were pregnant.

### Weight:

- Less than half of respondents (47%) who provided their Body Mass Index (BMI), as recorded at their maternity booking visit, were classed as having a “healthy” weight. Twenty-eight percent (28%) were classed as “overweight”, 22% as “obese” and 3% as “underweight”.

### Pregnancy planning and taking pre-pregnancy actions:

- Respondents who “planned” their pregnancy were more likely to take recommended actions to prepare for pregnancy.
- Of those who “planned” their pregnancy, over two-thirds (69%) reported that they took folic acid prior to becoming pregnant. By comparison, only a small proportion of those who were “ambivalent” about their pregnancy or whose pregnancy was “unplanned” took folic acid prior to becoming pregnant (7% and 5% respectively).

### Sources of information:

- A large proportion of respondents (63%) said they had not received any information about diet, vitamin supplements, smoking or drinking alcohol **before** becoming pregnant. By comparison, a much lower proportion (17%) reported that they did not obtain information about diet, vitamins, smoking and drinking **during** pregnancy.



## Birth and Subsequent Hospital Care

### Experiences shortly after birth:

- The majority of respondents (86%) reported that they had skin-to-skin contact with their baby within an hour of birth. However, this varied with method of delivery (normal vaginal delivery 93%; caesarean 73%).

### Extra care:

- Overall, 13% of respondents reported that their baby had spent time in extra care.
- Of these respondents, nearly two-thirds (64%) reported that they had received information about methods of expressing breast milk while their baby was still in extra care. A quarter (25%) said that this information had not been offered to them.
- Only a quarter of respondents (26%) whose baby had spent time in extra care said they had been offered an electric breast pump to take home. Another quarter (23%) said they were not offered this, but would have liked to have been.



## Infant Nutrition: Feeding Choices

### Feeding intention (prior to giving birth):

- Nearly three-quarters of respondents (74%) reported that they had intended to give breast milk to their baby (either by exclusively breast feeding (42%), combining breast feeding with expressing milk (18%), combining breast milk with formula feeding (14%) or expressing milk only (0.5%)).
- One in five respondents (20%) said they had intended to exclusively formula feed their baby.

### Strength of intention to breastfeed (prior to giving birth):

- The majority (68%) of those who intended to breastfeed (either exclusively or in combination with expressing breast milk or formula feeding) agreed they were keen to continue even if they experienced problems.
- Nearly two-thirds of respondents (63%) agreed that if they encountered problems making it harder for their baby they would not continue to breastfeed. This compared to one-fifth (20%) who agreed that they would not continue if there were problems affecting themselves.

### Intention to formula feed only (prior to giving birth):

- Half of respondents (51%) who intended to give their baby only formula milk agreed that they would breastfeed or express milk if their baby was born premature or unwell.



## Infant Nutrition: Breastfeeding

### Incidence of giving breast milk:

- Three-quarters of respondents to both postnatal surveys had “ever” breastfed and/or expressed milk for their new baby (75% of respondents to the 8-12 week survey and 76% of respondents to the 8-12 month survey).

### Giving breast milk in the early days:

- More than two-thirds of all respondents (69%) were giving breast milk to their baby when they left hospital / the maternity unit.
- Amongst respondents who had ever given breast milk to their new baby, the vast majority (92%) were doing so on leaving hospital / the maternity unit.

### Prevalence of giving breast milk:

- Three-quarters of 8-12 week survey respondents (75%) said they had given their baby breast milk at some stage. By the time infants were six weeks of age, 55% of respondents reported that they were giving breast milk (a drop of 20 percentage points from the initial rate).
- The prevalence of giving breast milk at six week was higher amongst women who had intended to breastfeed / express only (77%), those who had previously given breast milk for two months or more (2 - < 6 months 77%; 6+ months 97%), and those who had been exclusively giving breast milk when they left hospital (86%).
- Three-quarters of 8-12 month survey respondents (76%) said they had given their baby breast milk at some stage. By the time infants were six months of age, 43% of respondents reported that they were giving breast milk (a drop of 32 percentage points from the initial rate).

### Breastfeeding challenges:

- Of respondents who said they had given breast milk to their new baby, two-thirds (67%) reported that they had experienced problems while breast feeding or expressing milk. The types of problems reported varied depending on when the problem was experienced.
- While still in hospital, the most frequently reported challenges were difficulty attaching the baby to the breast (52%), concerns around milk supply (44%) and other infant issues (37%).
- When at home, within two weeks of the birth, attachment issues were still apparent (37%), but concerns around milk supply (65%) and maternal issues (65%) became more prominent.
- While at home, more than two weeks after the birth, attachment issues were much less evident (13%), but concerns around milk supply were still frequently reported (44%), as were maternal issues (38%).
- Among those who had stopped giving breast milk, the most frequently reported challenges were concerns about milk supply (86%) and attachment issues (77%).



## Infant Nutrition: Breastfeeding (continued)

### Help and information with breastfeeding / expressing challenges:

- A high proportion of respondents (89%), who had experienced problems with breastfeeding or expressing, indicated that they got help with and/or information about these problems.
- Respondents who said they got help frequently reported that they got this support from Midwives / Maternity Staff (91%) and/or their Health Visiting team (74%).

### Stopping breastfeeding / expressing milk:

- Three-quarters of respondents (75%) who had stopped giving breast milk reported that they would have liked to have given breast milk for longer.
- The most commonly reported reasons for stopping breastfeeding / expressing milk were: feeding problems (49%), thinking the baby was not getting enough milk (45%) and finding it “too difficult” (25%).
- Around a quarter of respondents who had stopped breastfeeding / expressing milk thought that access to certain types of support would have helped and encouraged them to breastfeed / express milk for longer.

### Breast fed infants who were also given formula milk:

- Two-thirds of respondents (66%) who had given breast milk reported that they had also given their baby some formula milk.
- A third (33%) said that they had first given infant formula when they were still in hospital (or within the first 48 hours if their baby was born at home). The proportions of respondents indicating that they had first given formula milk at home, either within two weeks of birth or two weeks after birth were similar (17% and 16% respectively).

### Breastfeeding in public and in the home:

- A high proportion of respondents (68%) who had given breast milk to their baby had breastfed in a public place.
- Nearly a quarter of respondents (23%) who had given breast milk said they had been made to feel uncomfortable when breastfeeding their baby.
- Over a quarter (27%) had sometimes decided not to breastfeed their baby in a certain place because they thought they would be made to feel uncomfortable.
- Since 2005 it has been illegal in Scotland to prevent a child under two years of age being fed milk (breast or formula) in a public place, providing the child is lawfully permitted to be in that place. Despite this, 3% of respondents reported that they had been asked either not to breastfeed, or stop breastfeeding, in a certain place.



## Infant Nutrition: Formula Feeding

### Use of infant formula:

- Three-quarters of respondents to the 8-12 week survey (75%) reported that their baby had been given infant formula milk at some stage. The remaining quarter (25%) indicated that their baby had never been given any formula milk.
- A higher proportion of respondents to the 8-12 month survey (83%) reported that their baby had been given infant formula milk at some stage. Sixteen percent (16%) said that their baby had never been given any formula milk.

### Making up infant formula feeds:

- A large proportion of respondents (71%) indicated that they only made one feed at a time, however one in ten (11%) reported making several feeds at a time.
- The majority of respondents who made up feeds (82%) stated that they used water that was either just boiled or that had been boiled and left to cool for 30 minutes or less (this is in line with current guidance).
- When feeding away from home, around a third (34%) did not follow current guidance; either making up a bottle before leaving the house (25%) or making formula using cold or cooled boiled water (9%).
- The vast majority of respondents (91%) reported that, when making infant formula, they put the water in the bottle first and then added the powder.

### Methods of cleaning and sterilising bottles and teats:

- Most respondents (83%) used hot soapy water to clean their infant's bottles and teats. A fifth of respondents (21%) said they rinsed their baby's bottles and teats under the tap. Only a small proportion (5%) reported using a dishwasher.
- The most popular method of sterilising bottles and teats was with a steam steriliser (59%). Microwave sterilisers were also used frequently (28%). The use of sterilising solution and boiling bottles / teats in water was less popular (13% and 8% respectively).

### Use of second milk / follow-on formula:

- Only a very small proportion of respondents to the 8-12 week survey (2%) said that their baby had been given second milk or a follow-on formula.
- Amongst respondents to the 8-12 month survey, a higher proportion (31%) reported that they had given their baby second milk or a follow-on formula.
- The majority (88%) of those who stated that their baby had been given second / follow on milk said they waited until their baby was at least six months old before giving these types of milk.





## Infant Nutrition: Complementary Foods

### Introducing complementary foods:

- The vast majority of respondents (96%) waited until their infant was at least four months old before introducing complementary foods, with 46% waiting until six months or later.

### Reasons for introducing complementary foods:

- The most common reason given for introducing complementary foods was that the respondent “thought that it was the right time” for their baby (66%).
- Other frequently given reasons were that the “baby was able to sit up and hold food” (49%); “a health care professional advised” it (39%) or “previous experience with another baby” (33%).
- Reasons for introducing complementary foods varied widely depending on when complementary foods were first introduced.

### Types of foods given:

- The majority of respondents indicated that they gave breakfast cereal / porridge (70%), whole or pureed fruit (69%), and vegetables, other than potatoes and green leafy vegetables (52%) every day.
- Of the foods listed in the survey, eggs were given least frequently; almost half of respondents (47%) said that eggs were given less than once a week or never.
- Two-fifths of respondents (41%) reported using commercial baby foods five days or more per week.

### Meals, snacks and treats:

- The majority of respondents (85%) indicated that their infants were being given three or more meals per day.
- Of those giving three or more meals per day, two-fifths (40%) indicated that they started doing so before their baby was seven months old.
- The majority of infants (74%) were receiving one or more snacks throughout the day. Around three in ten survey respondents (29%) indicated that they gave “treats” to their infant one or more times per day.

### Use of vitamin drops:

- Overall, a third of respondents (33%) reported giving their baby vitamin drops.
- Half of respondents (51%) who were still giving breast milk reported giving vitamin drops to their baby.

### Postnatal dietary supplements:

- Around a third of respondents to the 8-12 month survey (35%) indicated that they were taking a vitamin supplement at the time that they completed the survey.
- Over half of respondents (55%) who were still giving breast milk reported taking a vitamin supplement at the time of survey completion.



## The Healthy Start Scheme

### Awareness of the Healthy Start Scheme:

- Less than two-thirds of respondents were aware of the Healthy Start Scheme (61% of antenatal respondents; 64% of 8-12 month respondents).

### Sources of awareness:

- Most respondents found out about the Scheme through a healthcare professional. Half of antenatal respondents (53%) found out about the Scheme through their Midwife. Respondents to the 8-12 month survey found out about the Scheme through either their Midwife (42%) or Health Visitor (31%).
- Around a third of respondents said they found out about the Scheme via the Ready Steady Baby book (27% of antenatal respondents; 33% of 8-12 week respondents).

### Use of Healthy Start vouchers:

- The vast majority of respondents who had received Healthy Start Vouchers said they had used them (97% of antenatal respondents; 93% of 8-12 week respondents).
- Respondents to both the antenatal and 8-12 month survey frequently used Healthy Start vouchers to buy fruit and vegetables. Amongst antenatal respondents 88% reported buying fresh or frozen fruit and 74% reported buying fresh or frozen vegetables. Around two-thirds of postnatal survey respondents reported buying these food items (65% and 66% respectively).
- A high proportion of antenatal survey respondents (80%) reported using Healthy Start vouchers to buy cows' milk, with only around a quarter (28%) saying they purchased infant formula with these vouchers. By comparison, postnatal survey respondents were more likely to buy infant formula (83%) and less likely to buy cows' milk (37%).

## References

1. The Scottish Government. *Improving Maternal and Infant Nutrition: A Framework for Action*. Edinburgh: The Scottish Government, 2011. [Online] Available from: <http://www.gov.scot/resource/doc/337658/0110855.pdf> [Accessed 6 June 2017].
2. Scientific Advisory Committee on Nutrition. *The influence of maternal, fetal and child nutrition on the development of chronic disease in later life*. London: Scientific Advisory Committee on Nutrition, 2011. [Online] Available from: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/339325/SACN\\_Early\\_Life\\_Nutrition\\_Report.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/339325/SACN_Early_Life_Nutrition_Report.pdf) [Accessed 8 June 2017]
3. Davies, S.C. *Annual Report of the Chief Medical Officer, 2014 - The Health of the 51%: Women*. London: Department of Health, 2015. [Online] Available from: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/595439/CMO\\_annual\\_report\\_2014.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/595439/CMO_annual_report_2014.pdf) [Accessed 7 June 2017]
4. The Scottish Government. *The National Performance Framework*. Edinburgh: The Scottish Government, 2016. [Online] Available from: <http://www.gov.scot/Resource/0049/00497339.pdf> [Accessed 6 June 2017]

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