We are aware from an array of research that inadequate intra-uterine nutrition and thus growth is associated with an increased prevalence of cardiovascular disease, diabetes and metabolic syndrome in later life. \(^1\)

Opportunistic interventions from healthcare professionals who are in regular contact with mums-to-be are vital to ensuring that the correct information is given at the earliest possible stage in the pregnancy when the foetus is most vulnerable.

**KEY NUTRITIONAL MESSAGES**

**Folic acid**
To prevent neural tube defects 400μg of folic acid is needed for 12 weeks pre-conception until week 12 of the pregnancy. It is commonplace to advise all women of childbearing age to take folic acid whether they are planning a pregnancy or not. If there is a family history of Spine Bifida or if the mother is on anti-epilepsy medication or has diabetes then a dose of 500μg per day is recommended. \(^2\)

**WEIGHT GAIN AND HEALTHY EATING**

The following table outlines the recommended weight gain during pregnancy: \(^3\)

Healthy weight gain during pregnancy can be achieved by following the Food Pyramid which ensures a variety of foods in just the right amounts (www.indi.ie) However, there are some key differences to take into account during pregnancy. \(^4\)

**Calcium**
The recommended number of servings increases from 3 to 5 per day during pregnancy and breastfeeding in order to meet increased demands from the growing baby. The best sources of calcium include milk, hard cheese, yoghurt and soft bones of tinned fish like salmon and sardines.

<table>
<thead>
<tr>
<th>Weight status (prior to pregnancy)</th>
<th>Recommended weight gain Kg (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average weight</td>
<td>11.3-15.8</td>
</tr>
<tr>
<td>Underweight</td>
<td>12.5-18</td>
</tr>
<tr>
<td>Overweight</td>
<td>7-11.5</td>
</tr>
<tr>
<td>Adolescents</td>
<td>13.6-20.4</td>
</tr>
<tr>
<td>Average weight, Twins</td>
<td>15.8-20.4</td>
</tr>
</tbody>
</table>

**Vitamin D**
Due to Ireland’s northerly latitude we rarely get exposed to this important sunshine vitamin. Adequate biologically active vitamin D is required to increase calcium absorption and to provide sufficient supplies for the baby. Good food sources include oily fish such as herring, mackerel, sardines, egg yolks, fortified milk and margarines (check labels). Oily fish also provides **essential fatty acids** which are key nutrients involved in the development of the brain and spinal cord.

**Iron**
During pregnancy the mothers iron stores become mobilised to allow for the production of extra haemoglobin and therefore it is important to ensure that sufficient haem iron is taken in replacement. Haem iron is the most readily absorbed form of iron and red meat is the main dietary source. Normally, 2 servings from the ‘meat/fish and alternativies’ shelf of the food pyramid provide enough protein and iron. During pregnancy, this increases to 3 servings per day. Other sources of iron include fortified breakfast cereals, eggs (well cooked), dark green leafy vegetables, peas and beans. Foods rich in vitamin C such as citrus fruits, if eaten with these foods help to maximise absorption of the iron.

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**LINDA LYONS, SENIOR COMMUNITY DIETITIAN, COMMUNITY NUTRITION & DIETETIC SERVICE OF THE HEALTH PROMOTION DEPARTMENT, HSE DUBLIN NORTH EAST**
When do you consider it could be Cows’ Milk Allergy?

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- Relief of infant distress
- Treatment
- Catch-up growth

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*Neocate is the only GMS listed amino acid based hypo-allergenic formula in the Republic of Ireland.

For further information on Neocate, please Freephone 1800 923 404
FOOD SAFETY DURING PREGNANCY
Avoiding food borne illness and foods which may harm the foetus are a top priority during this vulnerable time. Parents should be advised to check expiry dates on packets, wash hands after handling raw foods, wash fruit and vegetables well before consumption, store foods correctly in the fridge and avoid reheating foods twice.
Some foods pose a particular risk during pregnancy and these are outlined below.

SURVIVING THE STORM!
We all know that the 40 weeks of pregnancy can be a stormy time for many women with many minor or major ailments cropping up from time to time. There are no hard and fast rules to overcome these but the following tips may ease the way.

MORNING SICKNESS
- Go easy on the digestive system by eating small regular meals rather than three large ones.
- Eating small regular starch based snacks, such as plain crackers or biscuits, can help keep nausea at bay.
- Ensure plenty of fluids in between meals rather than with the meals. If vomiting is a problem, try to prevent dehydration by sipping fluids throughout the day.
- Take time in the morning, avoiding sudden movements and avoid eating breakfast on the run.
- Avoid smells that trigger nausea/vomiting.
- Ginger can help to ease nausea, try small amounts of root ginger or ginger beer. Sucking something sour such as a piece of lemon may also help.

HEARTBURN/INDIGESTION
- Eat small more frequent meals throughout the day. Eat slowly and chew food well.
- Avoid caffeine containing or fizzy drinks, fried, fatty and spicy foods.
- Maintain a good upright position when eating, avoid eating late in the evening and don’t lie down straight after a meal.
- Taking some milk or yoghurt before meals may help to neutralise excess acid.

CONSTIPATION
- Choose wholegrain/wheat breads, cereals, rice and pasta. Ensure plenty of fruit and vegetables throughout the day.
- Drink at least eight to ten glasses of fluid each day and get some regular gentle exercise where possible.

References

<table>
<thead>
<tr>
<th>Foods to avoid</th>
<th>Reason</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shark/swordfish/marlin</td>
<td>High mercury levels</td>
<td>Completely avoid</td>
</tr>
</tbody>
</table>
| Tuna                            | Contains mercury – toxic to foetus at high levels. | Upper limit allowed:  

Canned: 140g/5oz (2 small tins) drained weight per week  

Fresh: 140g/5oz cooked weight per week. |
| Raw or lightly cooked eggs      | Risk of salmonella food poisoning | Ensure eggs are cooked solid and that products containing raw eggs are avoided (e.g. – homemade mayonnaises, mousse and ice-cream). |
| Raw or lightly cooked meat/poultry/fish or shellfish | As above | Avoid shellfish, smoked/cured meat and fish. Cook all other meat, fish and poultry until it is ‘well done’. |
| Excess vitamin A               | Toxic to foetus at high levels. | Avoid liver and liver products – fish liver oils, liver pate, liver sausage and supplements with high vitamin A levels. |
| Unpasteurised milk and dairy products | Risk of food borne infection | Avoid soft mould ripened cheeses (camembert, brie, ricotta and blue veined cheeses). |
| Caffeine                       | Small risk of miscarriage    | Max – 300mg/d. Check medications for caffeine, drink no more than 3 or 4 cups of caffeine containing beverages in a day (tea/coffee/cola/energy drinks) |
| Alcohol                        | Risk of harm to foetus       | Avoid completely                                   |
| Peanuts                        | Risk of allergy              | If family history of allergy – avoid completely     |