

# MY WONDEROUS GIFT

*Start today for  
their tomorrow*



BEFORE, DURING AND AFTER PREGNANCY<sup>1</sup>



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# Important Nutrients

*Pregnancy is a period of increased metabolic demand therefore, proper nutrition prior to and during pregnancy is important to optimise the health of both mother and baby<sup>1,2</sup>. Each trimester of pregnancy also presents itself with different nutritional needs for both mother and baby.<sup>2</sup> Quite often your body cannot access these nutrients solely through diet alone, therefore supplementation is recommended.<sup>3</sup>*

## NUTRITION BEFORE PREGNANCY

- **Folic acid** requirements are increased in pregnancy because of the rapidly dividing cells of the foetus.<sup>4</sup> The WHO (World Health Organisation) recommends that folic acid should be taken as early as possible, ideally before conception, to prevent neural tube defects, such as spina bifida, where the foetal spinal column doesn't close completely.<sup>4,5</sup>

## NUTRITION DURING PREGNANCY

- **B-complex Vitamins** - Contributes to normal red blood cell & tissue formation<sup>6</sup>
- **Iron** - Assists in the formation and proper functioning of red blood cell<sup>3,7</sup>
- **Calcium** - Contributes to the development and maintenance of bones and teeth<sup>2</sup>
- **Vitamin A** - Plays a role in the cell differentiation process.<sup>7</sup> Contributes to the maintenance of normal mucous membranes<sup>8</sup>

## NUTRITION AFTER PREGNANCY

- **Omega 3** - For the maintenance of good health<sup>9</sup>
- **Iron** - Assists in reducing tiredness and fatigue. Contributes to the normal functioning of the immune system<sup>10</sup>
- **Calcium** - Contributes to normal blood clotting<sup>11</sup>
- **Vitamin A** - Contributes to normal iron metabolism<sup>12</sup>



# Healthy Eating

If inadequate amounts of nutrients are not supplied through your diet, it may be essential to take a multivitamin and mineral supplement specifically designed to support each stage of your pregnancy. Nutritional supplements should be taken on the advice of your healthcare provider, and are meant to correct nutritional deficiencies that may occur, and not to replace a healthy diet.<sup>13</sup>

## A BALANCED DIET

There is sound evidence that adequate intake of micronutrients can prevent many serious birth defects, reduce the risk of premature and low-birth weight (LBW) babies, and support your own health.<sup>7</sup>

A balanced diet that contains elements from all of the essential food groups listed below is critical to your baby's growth and development.<sup>14</sup> In order to obtain the correct nutrients needed for a healthy pregnancy, you need a balanced diet that contains a variety of the basic food groups listed below.

**PROTEINS** - are an essential constituent of the body, as they form part of the muscles, tissues, and organs, and are just as important for other functions.<sup>2,14,15</sup> Some amino acids that make up proteins can only be obtained from your diet.<sup>15</sup> Your growing baby needs plenty of proteins, especially in the second and third trimesters. Iron is also found in certain proteins, which helps to carry oxygen to your muscles and to your baby.<sup>14</sup>

### Animal protein sources include:

- Meat, poultry, fish, eggs, milk and cheese as they contain a variety of amino acids<sup>15,16</sup>



### Plant protein sources include:

- Peas, beans, lentils, nuts, seeds, bread and other cereals contain certain amino acids, but in lower quantities than animal protein sources<sup>15-17</sup>

**COMPLEX CARBOHYDRATES** - are found in breads, grains, cereals, pasta, rice and potatoes. Whole grain and unrefined cereals contain fibre, which is important for digestion and can help prevent constipation. Carbohydrates are an important source of energy during pregnancy.<sup>14,18,19</sup>



**FRUITS and VEGETABLES** - contain a variety of vitamins and minerals, as well as water and fibre.<sup>14,20,21</sup>

### Fruit sources include:

- Citrus fruits (e.g. grapefruit and oranges), strawberries, kiwi fruit and guavas contain Vitamin C which boosts the absorption of dietary iron<sup>22</sup>
- Orange-flesh melons e.g. cantaloupes are a good source of beta-carotene, which can also be found in mangoes, peaches and apricots.<sup>23</sup>
- Oranges, tangerines, blackberries, raspberries and bananas contain moderate amounts of folic acid<sup>24-26</sup>



### Vegetable sources include:

- Vegetables such as broccoli, tomatoes and brussels sprouts contain Vitamin C<sup>14,22</sup>
- Green vegetables such as broccoli and spinach contain significant amounts of folic acid, Vitamin C, beta-carotene, iron and other trace elements<sup>22,25-28</sup>
- Carrots, turnips and swedes are good sources of Vitamin B1<sup>29</sup>



# Healthy Eating...

**OILS, FATS AND SUGARS** - small amounts of sugar and fats are essential for your health and your baby, as they provide energy and transport fat soluble vitamins.<sup>30-32</sup> The oils from seeds, nuts and fish supply essential fatty acids, some of which can only be obtained through your diet.<sup>9</sup>



Essential Fatty Acids (EFAs) such as Omega-3 are important not only for your health but for the development of your baby's eyes and brain, especially in the 3rd trimester when your baby's brain grows rapidly.<sup>33</sup>



### Vegetable oil sources include:

- Olive oil, canola oil as well as nuts and soybeans<sup>34</sup>

**DAIRY** - contains calcium, which is one of the most important minerals that can help your baby grow strong bones and teeth, it also helps with normal blood clotting, and muscle and nerve function. Your developing baby will take the calcium from your body, so if you do not consume enough calcium to protect your bones, this may lead to future health problems such as osteoporosis.<sup>14</sup>

### Sources of calcium are:

- Milk, cheese and yoghurt. Some calcium is also found in green vegetables, seafood, dried peas and beans<sup>14</sup>



**NB:** The above are suggestions only, as each individual's diet depends on a variety of factors, so follow the advice of your healthcare provider.

### FOODS TO AVOID

Bacterial toxins can be found in certain foods, which can pass to your baby through the placenta.<sup>35,36</sup>

### Avoid the following:<sup>36</sup>

- Raw meat (uncooked seafood and rare or undercooked beef)
- Deli meat (ham, vienna sausages)
- Fish with high mercury levels (e.g. shark, swordfish and king mackerel)
- Smoked seafood
- Raw shellfish
- Raw eggs
- Soft cheese (e.g. Brie, feta, Camembert - if made with unpasteurised milk)
- Pate
- Unpasteurised milk



# ...Exercise and Weight Gain

Contamination can also be caused by poor food preparation, so you can never be too safe when it comes to your health and especially the health of your baby.<sup>37</sup>

## The following are some basic food preparation tips:<sup>35-38</sup>

- Wash your hands well before preparing your food
- All food should be washed well and cooked thoroughly, as food poisoning while pregnant can be dangerous for you and your baby
- Never eat food that is past the best before date
- Reject any damaged packs, such as dented tins or unsealed bags
- Pack frozen items into the freezer as soon as you get home
- Store raw and cooked foods separately
- Avoid defrosting outside the refrigerator
- Don't refreeze defrosted food
- Make sure defrosted food is heated thoroughly
- Avoid unpasteurised items of food, such as milk or honey
- Avoid foods that contain uncooked eggs, such as homemade mayonnaise, mousse and ice cream



## BENEFICIAL EXERCISES DURING PREGNANCY

Try to maintain a regular schedule of exercise, 20 minutes for 3 or 4 days a week each day, to get your blood flowing.<sup>39</sup>

### Exercise may help with the following:<sup>39</sup>

- Reduces backache and improves your posture
- Improves your mood
- Promotes muscle tone, strength and endurance
- Improves sleep

Consult your healthcare provider first, whether you already have an exercise schedule, or are thinking of starting one now.<sup>39</sup>

- **Kegel exercises** - strengthen the pelvic floor muscles used during pregnancy and may increase muscle control during labour. These exercises can help to regain bladder control and strengthen pelvic floor muscles, and promotes perineal healing (the area between the anus and vagina that may be damaged during childbirth)<sup>40</sup>



- **Swimming** - keeps your body toned without adding stress to your joints. (If you swim in a heated pool, never allow your body temperature to rise above 38 °C)<sup>40,41</sup>
- **Walking** - is easier on your knees than running, remember to stretch before you begin<sup>40</sup>

- **Cycling and running / jogging** - if you already enjoy these activities, consult your healthcare provider before continuing<sup>39,40</sup>
- **Yoga** - good for relieving stress and tension<sup>40</sup>



## PRENATAL WEIGHT GAIN

Your average weight gain is made up of the following:<sup>42</sup>

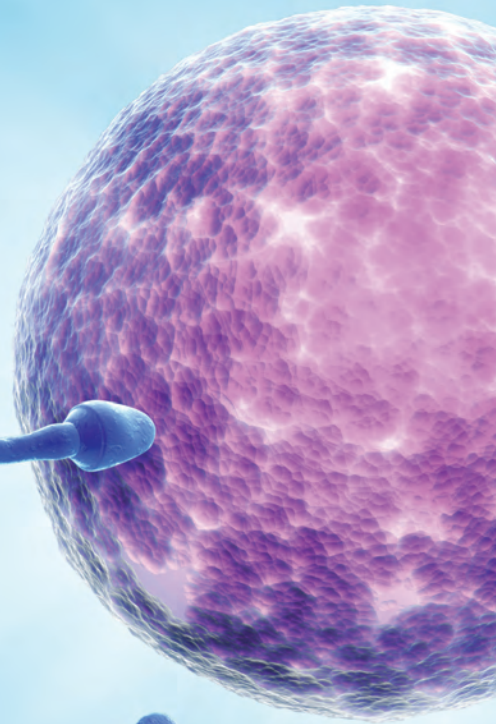
Baby	3.2-3.6 kg
Placenta	0.7 kg
Amniotic fluid	0.9 kg
Fat stores	2.7-3.6 kg
Increased blood volume	1.4-1.8 kg
Increased fluid	0.9-1.4 kg
Breasts	0.45-1.4 kg
Uterus growth	1 kg
<b>Approximate Total Gain</b>	<b>11.2-14.3 kg</b>

If you are of average height and weight, you can gain about 10-15 kg over the months of your pregnancy.<sup>43</sup>

Healthy weight gain provides nourishment for your baby and is stored for breastfeeding after your baby's arrival. How much you should gain depends on your weight before conception, and how far you are in your pregnancy. Contact your healthcare provider if you suddenly lose or gain weight, at any point during your pregnancy but especially in your 3rd trimester.<sup>44</sup>

# The moment of conception

There is a **33 %** chance of falling  
pregnant if intercourse takes place on  
the day of ovulation<sup>45</sup>



# Trying to Conceive

To work out the best time to fall pregnant, you need to know how your menstrual cycle works. Your monthly cycle is measured from the first day of your last menstrual period (LMP) until the first day of your next period, on average this cycle takes 28-32 days.<sup>46</sup>

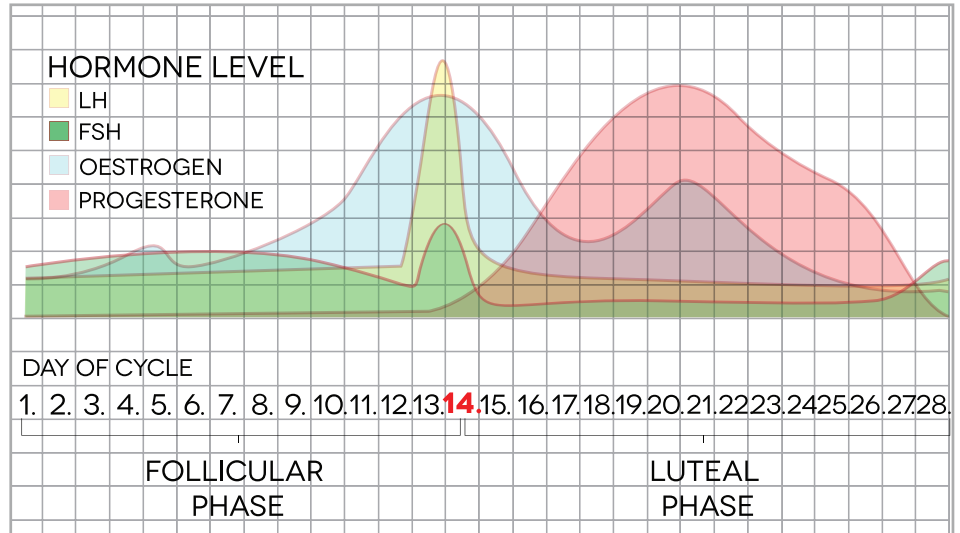
Based on a 28 day cycle, and counting from the first day of your LMP, the date of ovulation can be anywhere between day 11-21.<sup>47</sup> This is when you are the most fertile, and there is an increase in cervical mucus, which is the perfect medium as it helps to protect and nourish the sperm as it proceeds towards the egg.<sup>48</sup>

Your egg only lives for a short time after leaving your ovary (12-48 hours),<sup>46,47,49</sup> but sperm can survive between 3-5 days in your reproductive system.<sup>47</sup> Millions of sperm are ejaculated by your partner during sexual intercourse, but only a few thousand reach the fallopian tubes. However, there needs to be at least one healthy vigorous sperm to meet or waiting in a fallopian tube when the egg is released during ovulation.<sup>50,51</sup>

The best chance of conception occurring is when intercourse takes place during the 5 days before ovulation, there is a 33% chance of falling pregnant if intercourse takes place on the day of ovulation.<sup>45</sup>

## YOUR MENSTRUAL CYCLE

Each woman's menstrual cycle varies, but on average a menstrual period (the days you actually bleed) lasts for 3-7 days and the average length of a woman's cycle is 28-32 days.<sup>52</sup>



## MENSTRUAL PERIOD TO OVULATION

Your cycle is divided into two parts. The first part is called the *follicular phase*, this is from the first day of your last menstrual period (LMP) and continues until ovulation ( $\pm$ mid-way through your cycle).<sup>46</sup> This first half of the cycle may differ greatly for each woman, but on average may last approximately 16 days.<sup>46,251</sup>

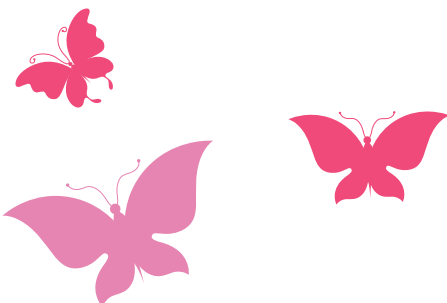
The second half of the cycle is called the *luteal phase*, which is usually only 12-16 days and is calculated from the day you ovulate, until your next period begins. This means that the day you ovulate will determine how long your cycle is. Other factors like stress, illness and disruption of your normal routine can throw off your ovulation, which in turn may affect when your next period will begin.<sup>46</sup>

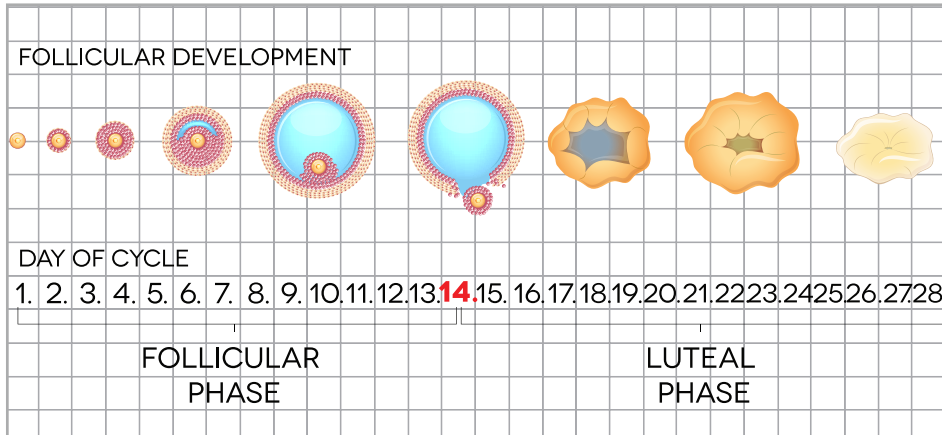
When your menstrual cycle begins, your oestrogen levels are low. A part of your brain known as the hypothalamus sends a message to your pituitary gland, which then produces *follicle-stimulating hormone* (FSH). This FSH triggers a few of your follicles to develop into mature eggs.<sup>46</sup>

The follicles in the ovaries continue to mature, but when the FSH levels decline a single dominant follicle continues to develop.<sup>51</sup>

**Oestrogen is an important part of the process, as it helps:**<sup>46,48,51</sup>

- To prepare your body for pregnancy
- Build the lining of the endometrium
- With the secretion of cervical mucus, which helps to protect and transport sperm through your reproductive system
- To trigger the production of the *luteinizing hormone* (LH), which is detected by ovulation predictor kits (OPKs)





When LH is released, the surge causes the egg to burst through the ovary wall within 24-36 hours, and begin its journey down the fallopian tube.<sup>46</sup>

The follicle from which the egg was released is called the *corpus luteum*, and it will release *progesterone* that helps to thicken and prepare the uterine lining for implantation. This will produce *progesterone* for about 12-16 days (the *luteal phase* of your cycle). If an egg is fertilised, the *corpus luteum* will continue to produce *progesterone* for the developing pregnancy, until the placenta takes over.<sup>53</sup>

If conception does not take place, the egg dissolves after 24 hours and your hormone levels will start to decrease. Your uterine lining, as well as the unfertilised egg, will be shed about 12-16 days after ovulation. This is Day 1 of your menstrual cycle, and the process starts again.<sup>53</sup>

## OVULATION

To know when you are ovulating may be a determining factor in falling pregnant.<sup>46,54</sup> However, only about 30 % of women ovulate within the estimated fertility window, even though your cycle may be regular, ovulation can be unpredictable.<sup>55</sup>

If you experience irregular periods you may have difficulty pinpointing the exact time of ovulation<sup>56</sup>, below are a few indicators to assist in determining your time of ovulation.

- **Ovulation Predictor Kits (OPKs)** - pinpoint your ovulation by measuring your levels of *luteinizing hormone* predicting ovulation 24-48 hours in advance<sup>51,56</sup>
- **Calendar** - mark the dates of your cycle on a calendar so you can track the pattern of when you ovulate, this will also provide an estimated date of conception<sup>56</sup>
- **Cervical mucus** - changes consistency to resemble 'egg whites' just before ovulation occurs<sup>56</sup>
- **Body temperature** - your body temperature changes when you begin ovulating. By tracking your basal body temperature, you will find a spike in temperature, letting you know that ovulation is occurring.<sup>56</sup>

If you have been using an oral contraceptive, you may ovulate and have your menstrual cycle within 4-6 weeks of stopping the pill. Contact your healthcare provider if your menstrual periods do not return to their normal schedule within 2-3 months after stopping the pill.<sup>59</sup>

## PREGNANCY TEST

Implantation of a fertilised egg can take place 6-12 days after ovulation<sup>53</sup>, sometimes pregnancy symptoms can be experienced as early as a week after fertilisation.<sup>46</sup>

Pregnancy tests measure the amount of *human chorionic gonadotropin* (hCG) that is produced by the cells that form the placenta. The hormone nourishes the egg after it has been fertilised and implants in your uterine wall.<sup>60,61</sup>

The rapid change in hormones is the cause of most of the pregnancy symptoms.<sup>61</sup>

- A **blood test** will measure the exact amount of hCG in your body, and it can detect hCG earlier than a urine test.<sup>61</sup> hCG can be detected in your body as early as 8 days after conception.<sup>252</sup>
- An **early detection pregnancy test** or **urine test** can indicate if you are pregnant around 10 days after conception.<sup>253</sup> Urine tests or home pregnancy tests are about 97% accurate when done correctly, so be sure to follow the instructions<sup>60,61</sup>
- Alternatively, your healthcare provider could also use an **ultrasound**.<sup>62</sup> Ultrasound uses the size of the foetus to determine the gestational age.<sup>62</sup> A Doppler Ultrasound can usually pick up the sound of the foetal heartbeat by 10-12 weeks<sup>63</sup>





JANUARY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
October/November	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7
FEBRUARY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28			
November/December	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5			
MARCH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
December/January	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5
APRIL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
January/February	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	
MAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
February/March	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	1	2	3	4	5	6	7
JUNE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
March/April	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	
JULY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
April/May	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7
AUGUST	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
May/June	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7
SEPTEMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
June/July	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	
OCTOBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
July/August	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7
NOVEMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
August/September	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	
DECEMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
September/October	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7

Below the date of your last menstrual period (LMP), your Estimated Date of Delivery (EDD) is listed in **BOLD**.<sup>64</sup>

If you did not consult with your healthcare provider before you conceived, and you have now completed a home pregnancy test and know for sure that you are pregnant, you should call and schedule a prenatal appointment.<sup>65</sup> As soon as your pregnancy has been confirmed, an estimated due date / estimated date of delivery (EDD) can be calculated.<sup>64,65</sup>

This is the date that spontaneous onset of labour is expected to occur. Generally the date is calculated from the first day of your last menstrual period (LMP).<sup>64,65</sup>

An average pregnancy will last 9 months plus 7 days, or 280 days, or 40 weeks. However, your pregnancy could last anywhere between 37-42 weeks.<sup>66</sup>

In cases where the precise date of conception is known, the EDD is calculated by adding 266 days to that date.<sup>67</sup> **A pregnancy calculator has been included so you can easily work out your EDD.** This calculator is based on your menstrual cycle being 28 days, but if you have irregular periods, this will not give you an accurate date.<sup>67</sup>

## YOUR REPRODUCTIVE HEALTH

Sometimes it is easy to forget that you are not the only one that contributes to a healthy pregnancy, but your partner's health status is just as important.<sup>68</sup> There are many things, both internal and external, that can negatively impact both male and female reproductive health. Your lifestyle, personal habits and environment also play a part in conceiving.<sup>69</sup>

Couples that haven't conceived after a year of trying may have a reproductive issue, and this can affect 1 out of every 6 couples.<sup>70</sup>



Male infertility affects approximately 30% of infertility cases, some causes include problems with the sperm (sperm count, size, shape, or motility) or ejaculation (premature, retrograde, or erection dysfunction).<sup>70</sup>

**The following examples can adversely affect male reproductive health:**

- Certain medications<sup>70</sup>
- Cycling and tight clothing can increase friction, as well as the temperature of the testicles<sup>68,70,71</sup>
- Avoid long, hot baths or saunas as this increases the temperature of the testicles<sup>68,71</sup>



Female infertility affects approximately 50% of cases, some causes include problems with ovulation, damage to fallopian tubes, uterus or cervix.<sup>72</sup>

**You may also improve your reproductive health by avoiding the following:**<sup>70,72</sup>

- Illicit drugs
- Toxic substances
- Heavy use of alcohol

**Other negative influences may include:**<sup>68,69</sup>

- Smoking
- Excessive caffeine
- Stress

Female fertility decreases naturally with age.<sup>72</sup> An important cause of female infertility is related to problems with ovulation,<sup>254</sup> but egg quality and quantity can also play a role. There are many women in their late 30's and 40's that have conceived, but there is also an increased risk of miscarriage in women aged 35-45.<sup>73</sup>

**Ways to improve your health before conceiving:**

- Regular, but not excessive exercise (this will also help you maintain an ideal weight)
- 8 hours of sleep is recommended if you are trying to become pregnant. Getting enough sleep can help relieve stress and tension.
- Follow a nutritious eating plan
- Take a nutritional supplement

# Signs of Pregnancy

Some women experience pregnancy symptoms within a week of conception, but for others it may take a little longer.<sup>75</sup> There will be many physical changes over the coming months, but your emotions will change as well while you are pregnant.<sup>76</sup>

**The following are possible signs that you are pregnant:**

## IMPLANTATION BLEED / SPOTTING

When the embryo embeds into the uterine wall you may experience some spotting as well as some cramping. This can happen a little earlier than your expected monthly bleed (or 6-12 days after conception).<sup>75</sup>

## AMENORRHOEA / MISSED PERIOD

One of the first real signs of pregnancy would be that your menstrual period fails to start when it should. However, menstruation can also be delayed or suppressed by other causes including intense emotion or stress, excessive weight loss / gain or illness.<sup>75</sup>

## BREAST TENDERNESS

Quite often women experience breast fullness and discomfort just prior to their menstrual period. If pregnancy occurs, these symptoms can continue and increase as your breasts become fuller / more tender. The skin around your nipples may also get darker.<sup>75</sup>



## FATIGUE / TIREDNESS

Fatigue and drowsiness are symptoms that you may experience as early as a week after conception.<sup>75</sup>



## NAUSEA AND VOMITING / MORNING SICKNESS

Morning sickness can begin 2-8 weeks after conception, and may last between 6-8 weeks, or may even continue through most of your pregnancy, while others are lucky enough not to experience morning sickness at all.<sup>75</sup>

## BLADDER IRRITABILITY / FREQUENT URINATION

At the beginning stages of pregnancy, around 6-8 weeks after conception, you may feel like you have to urinate more often. You are likely to experience this throughout your pregnancy due to the pressure on your bladder from your expanding uterus and growing baby.<sup>75</sup>

## CONSTIPATION

The progesterone produced during your pregnancy relaxes your bowel and slows your digestion.<sup>77</sup>

## CHANGE IN TASTE AND SMELL

Certain foods and smells may start to make you feel queasy, or you may crave some particular food.<sup>78</sup>

## BACKACHE

Lower back pain can be an early symptom of pregnancy, but it usually is experienced later as your pregnancy progresses, usually around week 27 to 34.<sup>75</sup>

## HEADACHES

Headaches may be due to the sudden rise in pregnancy hormones and/or blood flow.<sup>75</sup>

## MOOD SWINGS

Changes in hormones can make you more emotional than usual.<sup>75</sup>

## SKIN CHANGES

**Further on in your pregnancy skin changes can occur, such as:**<sup>79</sup>

- **Stretch marks** - Almost 90% of women develop these lines, which may appear on your breasts and abdomen, but usually fade to thin white lines after your baby is born
- **Pimples / acne** - the extra hormones cause your oil glands to secrete more oil
- **Varicose veins** - caused by the extra blood flow during pregnancy
- **Linea nigra** - a dark line that runs from your navel to your pubic bone
- **Melasma / chloasma / mask of pregnancy** - nearly 50% of women develop dark patches on their faces due to the pregnancy hormones that increase pigmentation

Not all of these symptoms will be experienced by every women, and most will not continue once your baby is born.<sup>79</sup> However, consult your healthcare provider if these symptoms continue, or become severe, or if you have any concerns.



# The Don'ts During Pregnancy

## AVOID THE FOLLOWING:

**Recreational drugs** - can cause complications including increasing the chance of miscarriage the chance of miscarriage.<sup>74</sup>



**Prescription medications** - there are medications that may cause problems during pregnancy, consult with your health care provider if you have concerns regarding any medication/s and ensure your healthcare provider is aware you are pregnant.<sup>74</sup>

**Caffeine** - Aside from being contained in coffee, caffeine can be found in tea, certain soft drinks and certain medications. Consuming caffeine during pregnancy may affect you, your baby and your pregnancy. Caffeine increases your blood pressure and heart rate, which is not recommended during pregnancy. It is also a diuretic, which means you urinate more often, this can lower your fluid levels and lead to mild dehydration. Consult with your health care provider about your caffeine consumption and what is best for you and your baby.<sup>74,80</sup>



Caffeine can be found in more than just coffee, it is in tea, soft drinks, chocolate and even some OTC (over the counter) medications, so pay attention to.<sup>80</sup>



**Smoking** - smoking while pregnant puts your baby at risk for certain birth defects, such as having a low birth weight. Smoking also increases the risk of delivering your baby early.<sup>74</sup>



**Alcohol** - refrain from drinking alcohol during pregnancy, as it can lead to Foetal Alcohol Syndrome.<sup>81</sup>

**Sauna** - if your body temperature rises above 38 °C for long periods during the first trimester there is an increased risk of birth defect for your baby, as overheating is associated with spinal malformations.<sup>82,83</sup>



**Tanning** - using a sun bed can also raise your temperature higher than is safe for you or your baby (with the same results as above). Tanning on a sunbed or outside in the sun, can also damage your skin, which is more sensitive to burning and chloasma during pregnancy.<sup>83</sup>

**Travel** - discuss your travel plans with your healthcare provider, as you may require immunization before leaving, or be exposed to diseases which may cause health problems for you and your baby.<sup>84</sup>

• **Motion sickness** - make sure that any medication you use is safe for pregnant women and recommended by your healthcare provider<sup>84</sup>

• **Air travel** - in general, pregnant women may travel by plane however, you should discuss any possibility of air travel with your doctor beforehand, to advise when such travel is safe to do.<sup>84,255</sup>

• **Malarial infection** - during pregnancy there is a substantial risk for you and your baby.<sup>85</sup> Pregnant women are particularly vulnerable, as pregnancy reduces your immunity to malaria.<sup>86</sup> Try to avoid malaria areas if possible<sup>87</sup>

**Exercise** - moderate exercise is good for both you and your baby, additional care should be taken further into your pregnancy, as your centre of gravity changes so will your balance and co-ordination.<sup>88</sup>

• **Running** - women who continue running tend to gain less weight and have leaner babies and a shorter labour<sup>88</sup>

• **Cycling** - a stationary bike is a good source of exercise that will increase your heart rate. Avoid off-road cycling or on wet roads<sup>88</sup>

Consult your healthcare provider before taking part in any new activities.<sup>88</sup>



# Preg Omega Plus

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their tomorrow

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References: 1. IMS: TPN Data (A11A, A11B, A11E, V6D, V3X / Constructed Class). MAT Nov 2023 (Data on file). 2. Data on file. Category D. Complementary medicine: Health supplement. This unregistered medicine has not been evaluated by SAHPRA for its quality, safety or intended use. **Scheduling status:** S0 **Proprietary name (and dosage form):** PregOmega<sup>®</sup> Plus Tablets and Soft Gel Capsules. **Composition:** Each fish oil soft gel capsule contains: 823 mg Pharmaceutical Grade Fish Oil (derived from tuna and deep marine fish oil) providing: 261 mg DHA, 92 mg EPA. Each calcium tablet contains: 500 mg Calcium, 400 IU Vitamin D3 and 125 mg Magnesium. Each vitamin & mineral tablet contains: 1000 IU Vitamin A, 3 mg Vitamin B1, 2 mg Vitamin B2, 10 mg Vitamin B3, 1 mg Vitamin B6, 2 µg Vitamin B12, 50 mg Vitamin C, 100 IU Vitamin D3, 150 mg Calcium, 150 µg Copper (from copper glycinate), 500 µg Folic Acid (active folate, from calcium 5-methyltetrahydrofolate), 24 mg Iron (from ferrous bisglycinate), 25 µg Molybdenum (from molybdenum bisglycinate), 5 mg Zinc, 65 µg Selenium (form selenium glycinate). **Name and business address:** Inova Pharmaceuticals (Pty) Ltd, Co. Reg. No. 1952/001640/07, 15E Riley Road, Bedfordview. **Tel. No.** 011 087 0000. For more information, speak to your healthcare professional or visit [www.inovapharma.co.za](http://www.inovapharma.co.za). IN2275/24

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# Your Pregnancy Week by Week

## THE MIRACLE OF LIFE

From the moment that sperm enters your vagina they begin to move through the cervical mucus, which assists their movement through the uterus towards the egg, and prepares them for fertilisation.

Of the millions of sperm inseminated during intercourse, only a few thousand may reach the fallopian tubes.<sup>48,50,89</sup>

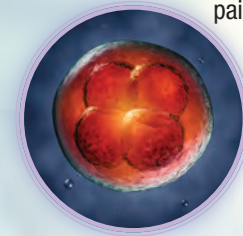
Even then, only one sperm is needed to penetrate the inner part of the egg that is present in the fallopian tube, and conception takes place.<sup>50,90</sup>

The outside of the single cell that is formed, changes its structure to prevent another sperm entering it.<sup>89,91</sup>

Inside the cell the 46 chromosomes mingle, determining your baby's eye colour, hair colour, gender and much more.<sup>92,93</sup>

At the moment of conception, both your egg and your partner's sperm contribute a single set of 23 chromosomes to the embryo, giving it the final total of 46.<sup>92</sup>

Of the 23 pairs of chromosomes only one pair are sex chromosomes – either X or Y – which determines the sex of your baby. All of your eggs contain a single X chromosome, while half the sperm carries an X and the rest contain a Y chromosome.



So it all depends on which sperm reaches and fertilises the egg first – the XX combination means you will have a girl, while the XY means it will be a boy.<sup>96</sup>

## TWINS CAN BE IDENTICAL OR FRATERNAL



**Identical twins** (monozygotic) develop from one fertilized egg that divided to form two embryos. Each embryo contains the exact same DNA, which means the identical twins will always be the same sex.<sup>97,98</sup> *Approximately 3 to 4 per 1,000 births are identical twins.*<sup>99</sup>

**Fraternal twins** (dizygotic) develop from two separate eggs that are fertilized by separate sperm. Fraternal twins will not have identical DNA, but are likely to share similar characteristics like other siblings.<sup>97,98</sup>

In some instances a multiple pregnancy can produce triplets (3), or sometimes even more.

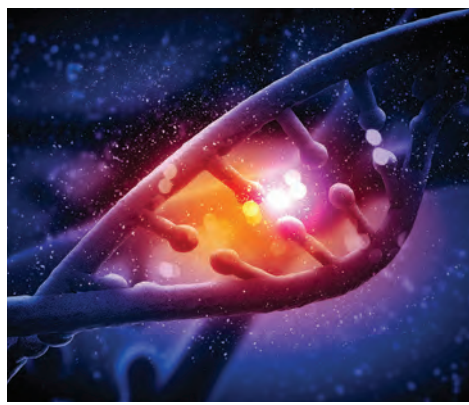
There can be any combination of identical and fraternal twins within any multiple pregnancy.<sup>101</sup>



The numbers of multiple pregnancies have increased over the last 20 years, as a third of women are having babies over the age of 30, which increases the chance of a multiple birth. While fertility medications and fertility procedures increase the chances as well.<sup>102</sup>

The genes of the chromosomes – which carry the hereditary factor – are made up of protein and DNA.<sup>103</sup> Genes form the unique “blueprint” for every physical and biological characteristic.<sup>104</sup>

The fertilised egg (or zygote) is about the size of a pinhead and moves along the fallopian tubes towards the uterus.<sup>94,106</sup>



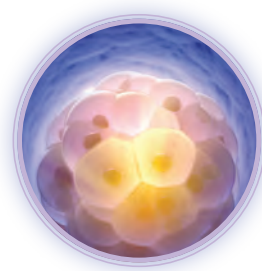
The fertilised egg floats in the uterus before it embeds itself into the uterine wall.<sup>94,106</sup>

The cells (of the fertilised egg) separate into an outer and inner layer. The outer layer will form the placenta and the inner layer forms the embryo, which will develop into your baby.<sup>94,106</sup>

The embryo sends chemical signals to your body to prevent your next menstrual period from starting.<sup>94</sup>

**THE FIRST TRIMESTER**

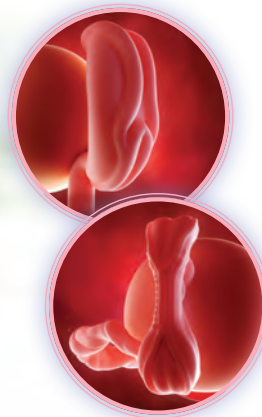
Your baby is as individual as you are, and while most babies will follow the same timetable for growth and change, there will be those that will insist on following their own schedule. Most babies are born within 10-14 days of the EDD.<sup>94,95</sup>



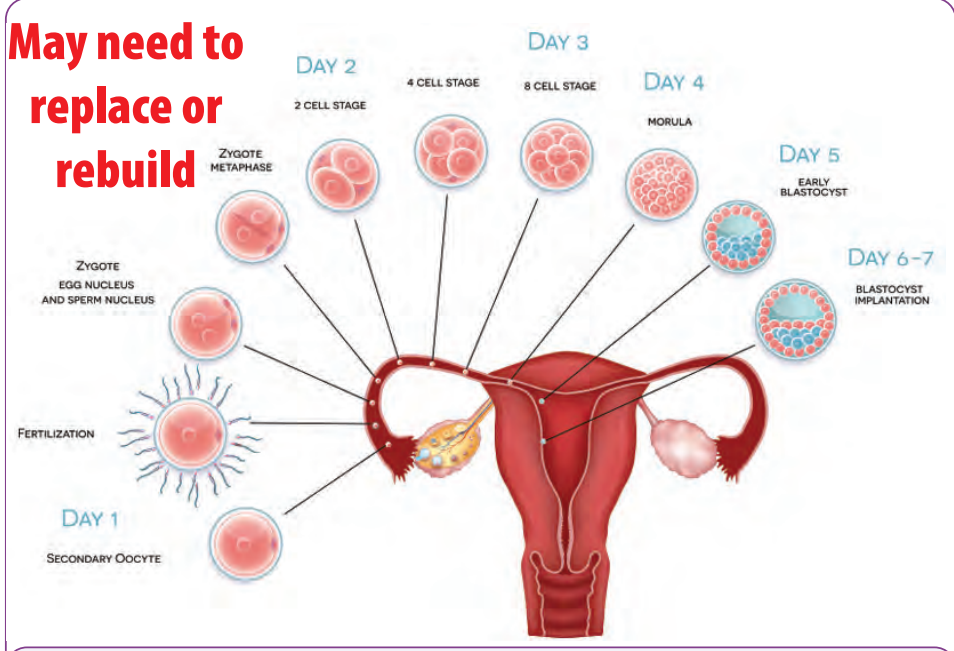
*Your baby is about the size of the head of a pin and measures about ±0,1-0,2 mm<sup>109</sup>*

Your healthcare provider will estimate your weeks of pregnancy from the first day of your last menstrual period. To work out how old your baby is, subtract two weeks from how far you are in your pregnancy.<sup>94</sup>

After implantation the embryo produces the hormone called human chorionic gonadotropin (hCG), which can be detected by pregnancy testing kits.<sup>60,106</sup>



**WEEK 5**  
*Your baby is now 3 weeks old and measures about ±1-4 mm<sup>94,259</sup>*



Graphic interpretation of the egg's development<sup>97</sup>

**Your pregnancy this week:**

- You have missed your period<sup>110</sup>
- You may experience an implantation bleed, or 'spotting', which may be confused with normal menstrual period.<sup>112</sup>
- There have been instances where some women continue to experience light spotting throughout their pregnancy, however, the cause of this is as yet unknown<sup>113</sup>
- You can begin to look for signs of pregnancy as early as a week after fertilisation, and you may experience your first bout of morning sickness<sup>46,112</sup>





- Once a test confirms your pregnancy, make an appointment to see your healthcare provider<sup>110</sup>
- There are many changes occurring in your body, but a 'baby-bump' is not likely to be visible<sup>112</sup>
- On the other hand, you may not experience any of the 'normal' symptoms of pregnancy<sup>110,112</sup>



### Your baby's growth this week:

- The cells of the embryo develop into three layers through a process called gastrulation<sup>45,97</sup>



- These three germ layers give rise to all the tissues and organs of your baby<sup>45,97,110,114,115</sup>
  - The outer layer (ectoderm) forms the nervous system (which includes the brain), sensory surface of the ear, nose and eye, skin, the hair and nails, enamel of the teeth, pituitary and sweat glands
  - The middle layer (mesoderm) develops into muscles, cartilage and bone, subcutaneous tissues of the skin, limb and body wall musculature, the heart, blood and lymph vessels, kidneys, gonads and spleen
  - The inner layer (endoderm) is the lining for the gastrointestinal and respiratory tracts, bladder, thyroid, parathyroid, liver and pancreas
- The neural tube begins to form<sup>110</sup>
- A head and tail can now be seen<sup>116</sup>
- The primitive heart tube is forming, together with blood and blood vessels<sup>45,111</sup>
- The primitive ears begin to develop<sup>45,114</sup>



### WEEK 6

**Your baby is now 4 weeks old and the crown to rump length (CRL) measures +/-4-10 mm<sup>259</sup>**

### Your pregnancy this week:

- As the blood supply increases to your breasts they may begin to feel tender. Another change you may notice is that your nipple area appears darker.<sup>117,118</sup>
- You may experience a change in your sense of smell and a metallic taste in your mouth.<sup>119</sup>
- You may be feeling tired<sup>119</sup>

### It is during week 6 that an ultrasound can be performed to:<sup>120</sup>

- Confirm the viability of your pregnancy<sup>62</sup>
- Confirm a heartbeat<sup>62,120</sup>
- Provide an EDD by confirming crown-rump length, or gestational age<sup>62,120</sup>

### Your baby's growth this week:

- The neural tube along the back is closing. The brain and spinal cord will develop from the neural tube.<sup>114</sup> If the tube fails to close or isn't formed properly, then neural tube defects (NTDs) occur, approximately 50-70% reduction of NTDs have been reported in pregnant women with increased folic acid intake. Recommendations include taking 400 mcg folic acid daily, 2-3 months prior to conception and continuing throughout the pregnancy.<sup>121</sup>
- The tail is a prominent feature<sup>117,119</sup>
- The jaw begins to develop<sup>94</sup>
- The arms begin forming and appear as little buds<sup>94,119</sup>
- The heart begins to pump blood<sup>94</sup>
- In the early weeks, the cells in the outer layer surrounding the embryo, which later becomes the placenta, provides nourishment for your developing baby.<sup>94,106</sup>





### WEEK 7

**Your baby is now 5 weeks old and CRL measures between +-11-15 mm<sup>94,259</sup>**

#### Your pregnancy this week:

- You may experience food aversions and cravings.<sup>124</sup>



- If your pre-natal supplements are making you feel even more nauseous, taking them with food, or at night may help.<sup>125</sup>
- Your metabolic rate begins to increase<sup>126</sup>
- The blood supply to your vagina and vulva will also increase, causing it to take on a purple colour.<sup>126</sup>

#### Your baby's growth this week:

- This is a vulnerable stage for your baby as all the essential organs have begun to form<sup>127</sup>
- Your baby now resembles a tadpole with the curved back and tail<sup>128</sup>
- The spinal nerves begin to grow<sup>128</sup>
- The head is much larger than the body as it begins to take shape for the rapidly developing brain, and the hemispheres of the brain develop<sup>97,128</sup>
- The eye lenses begin to form and ears appear as swellings on the sides of the head<sup>94,97</sup>
- A basic digestive tract is forming, including the stomach, liver, gallbladder and pancreas<sup>97,129</sup>
- Early stages of hand development begin<sup>130</sup>
- Lower limb buds appear<sup>114</sup>
- The formation of the lungs, jaw, nose and palate begin<sup>97,124,131</sup>



### WEEK 8

**Your baby is now 6 weeks old and CRL measures from +- 16 mm<sup>94,259</sup>**

#### Your pregnancy this week:

- Nausea could be severe at this time.<sup>134</sup> If you are unlucky enough to experience morning sickness (not only in the morning, but at other times of the day too), a supplement with vitamin B6 may help relieve nausea.<sup>133,256</sup>



- You may be urinating more frequently. This may be due to increased blood flow to your pelvic area due to the pregnancy hormone as well as the pressure of your growing uterus on your bladder.<sup>134,135</sup>





### Your baby's growth this week:

- The head is still bumpy and bent forward, though the trunk and neck begin to straighten<sup>69</sup>
- The eyes become obvious due to pigment forming in the retinas<sup>14,137</sup>
- The nose has formed<sup>94,114</sup>
- The lips and tongue are forming<sup>94,114,138</sup>
- Taste buds begin to develop on the tongue<sup>138</sup>
- The external ears are beginning to develop,<sup>114,132,133,139</sup> including the middle ear which is responsible for balance and hearing<sup>45,139</sup>
- The liver, kidneys, lungs, intestines and internal sex organs are developing (even though the embryo does not show any external sexual characteristics at this stage)<sup>130,133,137</sup>
- The arms and legs are growing and fingers begin to form<sup>94</sup>



### WEEK 9

*Your baby is now 7 weeks old and CRL measures from  $\pm 23$  mm<sup>94,259</sup>*

### Your pregnancy this week:

- Your uterus has now doubled in size since you fell pregnant, and your clothes are starting to feel a little tight around the waist<sup>141</sup>



### Your baby's growth this week:

- Eyelids begins forming<sup>114,140</sup>
- The upper limbs lengthen and elbows develop, fingers continue to grow and now toes begin to develop<sup>114,140</sup>
- Nipples and the first hair follicles form<sup>142</sup>
- Taste buds on the tongue as well as primary tooth buds in the gums are forming<sup>140</sup>
- The primitive heart continues to develop.<sup>140</sup> The heart has divided into chambers, beating between 140 and 170 beats per minute<sup>140,143</sup>
- The embryonic tail disappears during this week.<sup>130</sup>



### WEEK 10

*Your baby is now 8 weeks old and CRL measures approximately 31 mm<sup>94,259</sup>*

### Your pregnancy this week:

- You may be experiencing emotional changes from the effects of the hormones, and your waist starts to grow<sup>144</sup>

### Your baby's growth this week:

- The head is rounder in appearance<sup>114,136</sup>
- Eyelids are more developed and will close by the end of the week<sup>142,145</sup>
- External ears are more developed<sup>142,145</sup>
- Upper limbs are now longer and bent at the elbows. The fingers lose their webbing, by the end of the week they will have lengthened and separated<sup>114,136,145</sup>
- The toes are distinct and lose their webbing and will also separate by the end of the week<sup>130,136,145</sup>
- Your baby starts to physically move at this stage and will become more purposeful as they mature.<sup>146</sup>
- At the end of the week the embryo's appearance is distinctly more human, all major organ systems have begun to develop, although functioning may be minimal<sup>144</sup>





### WEEK 11

*Your baby is now 9 weeks old and CRL measures approximately 41 mm and weighs  $\pm 7$  g<sup>259</sup>*

#### Your pregnancy this week:

- You may feel warmer than normal due to the extra blood supply.<sup>147</sup>
- You may notice a change in your weight. Morning sickness during the first several weeks of pregnancy can lead to you losing weight, instead of gaining weight.<sup>148</sup>
- For many women the nausea that dominated the first weeks of pregnancy, starts to fade, but there are those less fortunate who continue to experience morning sickness for a while longer<sup>149</sup>
- You can have an ultrasound, or a nuchal translucency screening to check for Down syndrome and other chromosomal anomalies from 11-14 weeks<sup>149</sup>



#### Your baby's growth this week:

- All your baby's organs form in the embryo stage. Now in the foetal stage, your baby's organ systems will continue to grow and mature. Although your baby's head still makes up about half its length, the body will grow and catch up<sup>114,136,150</sup>
- The eyelids are closing or closed<sup>136</sup>
- The head is large and more rounded, the face is broad and the eyes widely separated, and the ears are low set<sup>136</sup>
- The eyes, nose, mouth and ears continue to take shape as your baby's face looks more human-like<sup>150</sup>
- Urine formation begins<sup>151</sup>
- External genitals are forming, but it is still difficult to determine the sex of your baby using an ultrasound scan.<sup>136,148,150</sup>



### WEEK 12

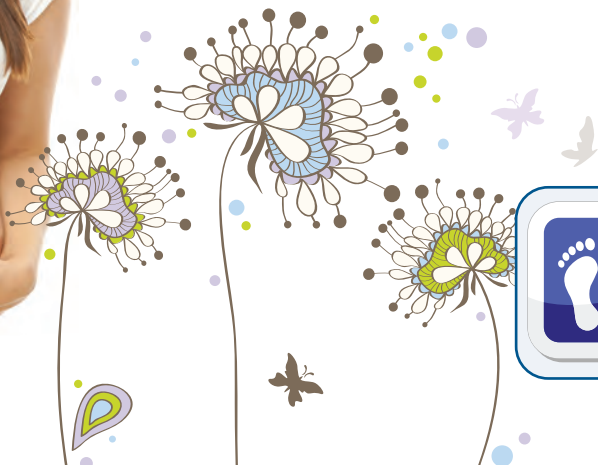
*Your baby is now 10 weeks old and CRL measures from  $\pm 54$  mm and weighs  $\pm 14$  g<sup>259</sup>*

#### Your pregnancy this week:

- You are almost at the end of the first trimester.<sup>152</sup>
- You may experience headaches which may be due to changes in your hormones.<sup>152</sup>
- Changes in hormones and blood pressure may cause you to feel dizzy.<sup>152</sup>

#### Your baby's growth this week:

- Your baby's intestines are now the abdomen.<sup>136,154</sup>
- The vocal chords are developing<sup>154</sup>
- Early fingernails are developing on your baby's fingers, which have separated<sup>152,154</sup>
- The placenta is fully functional and takes over hormone production to sustain the pregnancy<sup>154</sup>
- Blood is processed through the blood vessels, placenta and umbilical cord. The circulation of blood bypasses your baby's lungs (until birth, when your baby takes its first breath of air)<sup>155</sup>



**Your weight gain for the first trimester should be 0.5-1.8 kg<sup>156</sup>**

# The Second Trimester

You will start to  
show signs of your  
'baby bump'<sup>157</sup>



# Your Pregnancy Week by Week



## WEEK 13

*Your baby is now 11 weeks old, measures +- 74 mm (CRL) and weighs +-23g<sup>259</sup>*

### Your pregnancy this week:

- This is the beginning of the second trimester, and the risk of miscarriage has reduced<sup>157</sup>
- If you've been feeling the urge to urinate frequently, this should stop as the womb is growing upwards and away from your bladder.<sup>157</sup>
- Changes in blood pressure, blood sugar, hormonal changes, low iron levels or overheating may cause you to feel dizzy.<sup>160</sup>
- Skin may appear greasier and you may develop pimples or spots<sup>157</sup>
- You may feel an increase in libido<sup>159</sup>



### Your baby's growth this week:

- Your baby's kidneys are producing urine which becomes the main component of amniotic fluid<sup>114,159</sup>
- Some babies are able to put their thumb in their mouths<sup>157,159</sup>
- Bones are beginning to harden in your baby's skeleton<sup>158</sup>
- Skin is thin and transparent but will begin to thicken soon<sup>158</sup>



## WEEK 14

*Your baby is now 12 weeks old, measures +-87 mm (CRL) and weighs +-43g<sup>259</sup>*

### Your pregnancy this week:

- You may be experiencing some constipation, which is a side effect of the increasing progesterone levels that are slowing your digestion<sup>77,162</sup>
- Pressure from your growing uterus may also affect normal bowel function<sup>77</sup>

### Your baby's growth this week:

- Muscle tissue and bone continue to form creating a more complete skeleton<sup>94</sup>
- The limbs are now better proportioned to the rest of the body<sup>163</sup>
- Your baby's hands are moving in a more coordinated way and may even be able to wiggle their fingers.<sup>163</sup>
- Your baby now has a well-defined neck<sup>114,158</sup>
- The connection between brain, nerves and muscles allows your baby to make facial expressions<sup>94,163</sup>
- The limbs are able to move in a more coordinated way<sup>163</sup>
- Your baby's gender starts to become more apparent<sup>94</sup>



## WEEK 15

*Your baby is now 13 weeks old, measures +-101 mm (CRL) and weighs +- 70g<sup>259</sup>*

### Your pregnancy this week:

- You may notice certain skin changes such as darkened skin on your face or brown patches.<sup>167,169</sup> The area around the nipples may also change to a darker colour<sup>164,165</sup>

### Your baby's growth this week:

- The head is still much larger than the rest of the body<sup>166</sup>
- The nervous system has begun to function<sup>94</sup>
- Your baby's hearing is developing<sup>167</sup>
- Your baby's skin is now covered by a fine layer of hair called the lanugo, which is thought to help to regulate its body temperature while it is immersed in the amniotic fluid<sup>167,168</sup>
- Your baby's skin is still very thin and translucent, allowing a clear view of the blood vessels and skeleton<sup>169</sup>





## TESTS DURING PREGNANCY

**BLOOD TESTS** monitor potential problems such as anaemia, glucose levels and immunity.<sup>170</sup>

**URINE TESTS** monitor potential problems such as bladder or kidney infections, gestational diabetes, dehydration and pre-eclampsia.<sup>171</sup>

**NUCHAL TRANSLUCENCY TEST** can be performed from the 11th week, by measuring the development of the nasal bone and the amount of fluid at the back of your baby's neck. Higher than average fluid levels may indicate the presence of Down syndrome, or other chromosomal abnormalities. Test results also take your age into account.<sup>97,149,172</sup>

**CHORIONIC VILLUS SAMPLING TEST** can be performed from the 12th week, it is similar to amniocentesis but has a slightly higher risk factor.<sup>173</sup> If there are health concerns for your baby, a CVS test can be performed to check for chromosomal abnormalities and inherited disorders (such as Down syndrome, sickle cell anaemia and thalassaemia major).<sup>174</sup> The advantages of CVS over amniocentesis is that it can be performed several weeks earlier.<sup>173</sup>

**AMNIOCENTESIS** can be performed from the 15th week, and is the most accurate way of assessing your baby for any genetic, or inherited disorders.<sup>173,175</sup> There is a chance of miscarriage, (ranging from 1 in 400 to 1 in 200 cases<sup>175</sup>), so this test is only performed when necessary.<sup>173,175</sup>

Amniocentesis is a trans-abdominal sampling of amniotic fluid and fetal cells.<sup>173</sup> This test is indicated in the following situations:<sup>45,173</sup>

- Women older than 35 years of age
- A history of chromosomal abnormality
- A history of neural tube defects



### WEEK 16

Your baby is now 14 weeks old, measures +-116 mm (CRL) and weighs +-100 g<sup>259</sup>

#### Your pregnancy this week:<sup>6</sup>

- Your uterus continues to grow and your pregnancy bump becomes evident (your growing abdomen).<sup>257</sup>
- You may have the “pregnancy glow” due to hormonal changes which increase blood flow in the skin and oil production in the skin glands.<sup>257</sup>

#### Your baby's growth this week:

- Your baby's head is upright.<sup>158</sup>
- The eyes face front, but are still widely spaced. The eyes are closed, but your baby is now aware of some light<sup>173,176</sup>
- Your baby's limb movements are becoming coordinated.<sup>158</sup>



### WEEK 17

Your baby is now 15 weeks old, measures +- 130 mm (CRL) and weighs +- 140g<sup>259</sup>

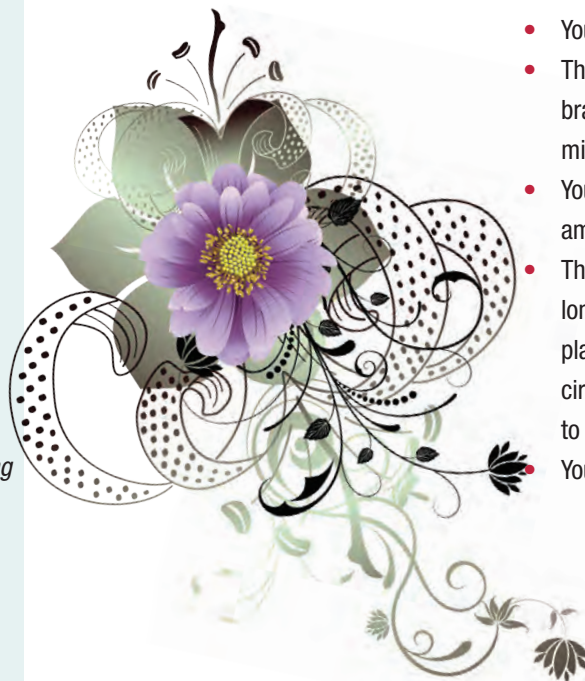
#### Your pregnancy this week:<sup>176,177</sup>

- You may begin to feel your baby's movements.<sup>177</sup>
- You may feel pains as your abdomen (baby bump) grows<sup>177</sup>
- You may experience strange food cravings<sup>177</sup>
- You may experience indigestion and heartburn<sup>177</sup>



#### Your baby's growth this week:

- A protective layer of fat is developing under the skin to keep your baby warm<sup>94,178</sup>
- Your baby is learning to suck and swallow<sup>176</sup>
- The heart beat is now regulated by the brain and is roughly 140-150 beats per minute<sup>176</sup>
- Your baby is becoming more active in the amniotic sac<sup>158</sup>
- The umbilical cord is getting thicker and longer to nourish your baby, while the placenta is expanding and increasing circulation to deliver nutrients and oxygen to the baby.<sup>178</sup>
- Your baby's toenails develop<sup>158</sup>





### WEEK 18

*Your baby is now 16 weeks old, measures +-142 mm (CRL) and weighs +-190 g<sup>259</sup>*

#### Your pregnancy this week:<sup>176</sup>

- You should start to feel your energy returning
- Achiness in the lower abdomen and along one side or the other, or sometimes on both sides (from stretching of the ligaments supporting the uterus)

#### Your baby's growth this week:

- Your baby is capable of twisting, turning and kicking as it improves its reflexes. It can also yawn and hiccup<sup>176</sup>
- By this week the external ears stand out from the head<sup>114</sup>
- The lungs are developing and begin to grow<sup>173</sup>
- Fingerprints are appearing on the surface of the fingers and toes<sup>176</sup>
- If you are having a girl, her ovaries are starting to develop and contain immature reproductive cells<sup>173</sup>



### WEEK 19

*Your baby is now 17 weeks old, measures +-153 mm (CRL) and weighs +- 240g<sup>259</sup>*

#### Your pregnancy this week:

- Your increased metabolism can have a positive effect on your hair and nails<sup>176</sup>
- Your skin (usually your face) can develop dark patches called chloasma, they can appear dark on light skin and light on dark skin. This can affect 50-75% of expecting mothers, it is usually a temporary problem caused by hormonal changes, which should clear up a few months after delivery<sup>176</sup>

#### Your baby's growth this week:

- Nerves are being coated with a substance called myelin, which insulates the nerves and allows for the rapid exchange of information necessary for co-ordinated movement<sup>179</sup>
- A thick waxy substance called vernix caseosa now covers your baby's skin, without this protection your baby would be very wrinkled and have a 'prune-like' appearance at birth. This coating sheds before your baby is born, but it may still be visible if the delivery is early<sup>158,173,176</sup>



### WEEK 20

*Your baby is now 18 weeks old, measures +-164 mm (CRL) and weighs +-300 g<sup>259</sup>*  
*The crown to heel length (CHL) of your baby is +-256 mm at this stage<sup>259</sup>*

#### Your pregnancy this week:

- **Congratulations, you are now halfway through your pregnancy!**<sup>158</sup>
- You may find your normal sleeping positions are not as comfortable as they were. It may help to sleep on your side. This allows for maximum flow of blood and nutrients to the placenta, and enhances kidney function, which means more efficient elimination of waste products and fluids, and less swelling of hands, feet and ankles<sup>176</sup>



#### Your baby's growth this week:

- You may feel your baby's movements<sup>176</sup>
- If you are having a girl, her uterus is formed and the vaginal canal is being created<sup>176</sup>
- If you are having a boy, the testicles have begun their descent from the abdomen, while testosterone has been produced since the 10th week<sup>173,176</sup>
- Your baby may be covered with a fine downy hair called lanugo, which helps to hold the vernix caseosa (a substance that protects the skin) onto the skin<sup>173</sup>





### WEEK 21

*Your baby is now 19 weeks old, measures +-26.7 mm (CHL) and weighs +-360 g<sup>259</sup>*



### WEEK 22

*Your baby is now 20 weeks old, measures +-278 mm (CHL) and weighs +-430 g<sup>259</sup>*



### WEEK 23

*Your baby is now 21 weeks old, measures +-289 mm (CHL) and weighs +-501 g<sup>259</sup>*

#### Your pregnancy this week:

- Linea nigra is a vertical line that can appear down the centre of your abdomen. Increased oestrogen causes this skin pigmentation, but it should fade with time after your baby is born<sup>176</sup>
- The pressure of your uterus on your digestive system can also cause indigestion and heartburn<sup>176,180</sup>
- You may find that the amount you perspire has increased due to the pregnancy hormones and your increased metabolism<sup>180</sup>

#### Your baby's growth this week:

- Your baby can now swallow and absorb small amounts from the amniotic fluid<sup>180</sup>
- What you eat changes the amniotic fluid daily<sup>176</sup>

- The sucking reflex is developing, enabling your baby to suck his or her thumb<sup>158</sup>
- The skin is no longer as translucent as it was previously, as the layers of fat are being laid down under the skin<sup>181</sup>

#### Your pregnancy this week:

- Your breasts are still getting bigger and may start to leak colostrum, your baby's first food<sup>182</sup>
- Your increased metabolic rate results in faster hair growth, while hair loss is reduced due to the pregnancy hormones<sup>176</sup>
- Stretch marks generally become visible from this week.<sup>182</sup>
- Backache is common. Ensure you have adequate support when you sit<sup>176</sup>

#### Your baby's growth this week:

- Your baby's senses are developing<sup>176</sup>
- Your baby has also developed a sleep routine, which can be interrupted as you go about your day<sup>182</sup>
- Your baby's hair becomes visible<sup>158</sup>

#### Your pregnancy this week:

- The blood supply to your pelvis contains pregnancy hormones to soften the ligaments of your pelvis in preparation for birth<sup>176</sup>



#### Your baby's growth this week:

- The lungs are formed but are still maturing. Your baby is practicing the movements that will be needed to breathe after birth. However, they continue to get all their oxygen from the placenta until then<sup>184</sup>
- Rapid eye movements can begin<sup>158</sup>
- The bones of the inner ear have hardened, allowing your baby to hear<sup>184</sup>
- Your baby is more proportioned<sup>185</sup>



**WEEK 24**

*Your baby is now 22 weeks old, measures +-300 mm (CHL) and weighs +-600 g<sup>259</sup>*

**Your pregnancy this week:**

- You may start thinking about attending local antenatal classes<sup>186</sup>



- Remember to practise your pelvic floor and Kegel exercises, in order to strengthen the muscles that hold your uterus, bladder and bowel in position, which will tone them in preparation for labour and delivery. These exercises may help reduce the risk of haemorrhoids, urinary and faecal incontinence, that may be experienced later in pregnancy, or after the birth of your baby<sup>176</sup>

**Your baby's growth this week:**

- Hair is growing, but has no pigmentation or colouring as yet<sup>176,185</sup>
- There is substantial weight gain in the following weeks, and your baby is starting to look more like a newborn<sup>173,176</sup>
- The skin is wrinkled and appears pink to red because the blood vessels are visible under the skin<sup>158,173</sup>

**WEEK 25**

*Your baby is now 23 weeks old, measures +-346 mm (CHL) and weighs +- 660 g<sup>259</sup>*

**Your pregnancy this week:**

- Your growing uterus is putting extra pressure on your stomach and other organs, which can lead to digestion problems or even cause constipation<sup>187</sup>
- Get plenty of rest<sup>188</sup>

**Your baby's growth this week:**

- The nostrils will start to open<sup>176</sup>
- The vocal cords are functioning, reflexes are developing and your baby may move in response to familiar sounds, like your voice<sup>176,188</sup>

**WEEK 26**

*Your baby is now 24 weeks old and CHL measures +- 356 mm and weighs +- 760 g<sup>259</sup>*

**Your pregnancy this week:**

- You may be developing stretch marks on your breasts and abdomen as the skin stretches to accommodate your growing body. Gradual weight gain and a healthy diet may lessen the chance of stretch marks. These lines should fade after the birth of your baby<sup>176</sup>
- A massage cream suitable for use in pregnancy may help to relieve the dryness and itching associated with the stretching of the skin<sup>176</sup>

**Your baby's growth this week :**

- Your baby's eyes are beginning to open<sup>173,176</sup>
- Your baby can also respond to outside stimuli (light and sound) by blinking, or startled movements.<sup>176</sup>
- Your baby's lungs begin to produce surfactant, the substance that allows the air sacs in the lungs to inflate and prevents them from collapsing and sticking together when they deflate<sup>158</sup>
- If you are having a boy, the testicles are beginning to descend into the scrotum<sup>173</sup>

**WEEK 27**

*Your baby is now 25 weeks old, measures +- 366 mm (CHL) and weighs +- 875 g<sup>259</sup>*

**Your pregnancy this week:<sup>176</sup>**

- You may be less likely to experience mood swings.
- Your abdomen has become quite prominent.

**Your baby's growth this week:**

- The taste buds are fully functioning and there are more now than there will be at birth, or afterwards. This means that your baby can taste the difference in the amniotic fluid after you have eaten different foods, and may react to it<sup>176</sup>
- Your baby's lungs are still developing. If your baby were to be born now it may be able to survive in a neonatal incubator with advanced medical attention<sup>173,188</sup>



**Your weight gain for the second trimester should be between 6.8 to 9 kg<sup>189</sup>**



# The Third Trimester

This is a demanding  
time, both mentally  
and physically<sup>190</sup>



# Your Pregnancy Week by Week



## WEEK 28

*Your baby is now 26 weeks old, measures +- 376 mm (CHL) and weighs +- 1kg<sup>259</sup>*

### Your pregnancy this week:

- Your uterus has grown over the last month and will probably be pushing even more against your rib cage, which may probably cause discomfort<sup>192</sup>
- You may begin to experience lower back pain<sup>192</sup>
- Your growing uterus may also put pressure on your veins and cause haemorrhoids (piles). This may aggravate constipation if you are experiencing it.<sup>192</sup>

### Your baby's growth this week:

- Your baby's eyelids are partially open, and eyelashes are present<sup>191</sup>
- REM (rapid eye movement) shows that your baby may be dreaming while it sleeps<sup>176</sup>
- Your baby can now do the following: blink, cough, swallow, suck, hiccup and practice breathing<sup>176</sup>
- Your baby's lungs have developed to a point where they may be able to breathe if they were to be born now, however their lungs still need to mature<sup>173,176</sup>
- Your baby's central nervous system is able to direct breathing movements and control body temperature<sup>191</sup>
- The toenails are now visible<sup>173</sup>
- Your baby now has more white fat ( $\pm 3.5\%$  of the body weight) deposited under the skin, smoothing out its wrinkled appearance<sup>173</sup>
- The lanugo (body hair) and head hair are well developed<sup>173</sup>



## WEEK 29

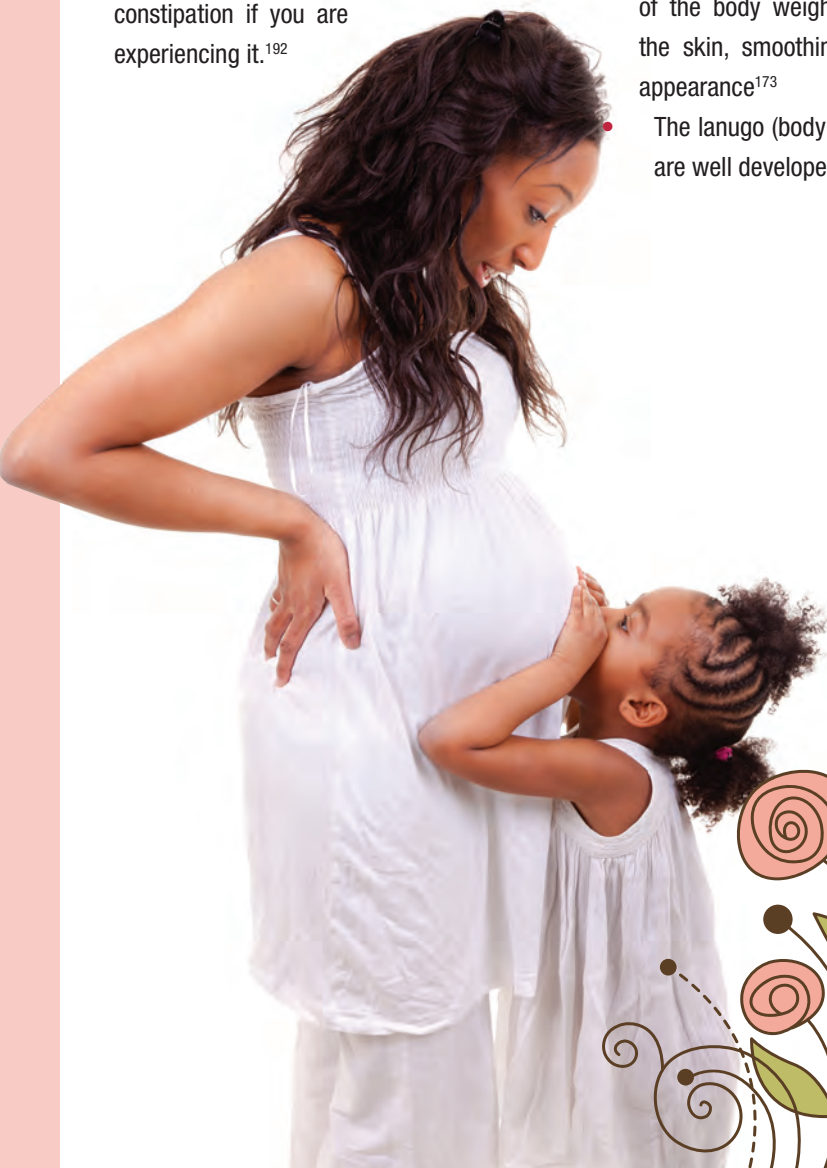
*Your baby is now 27 weeks old, measures +- 386 mm (CHL) and weighs +-1.2 kg<sup>259</sup>*

### Your pregnancy this week:

- You may feel breathless as your baby pushes up against your lungs and carrying the extra weight.<sup>193</sup> You may also have leg cramps and varicose veins<sup>176,193</sup>
- Your belly button may start to protrude, but it should return to normal after your baby is born<sup>176</sup>
- Get as much rest as you can as you may be feeling very tired<sup>193</sup>

### Your baby's growth this week:

- Your baby's weight can double, or nearly triple, in the weeks before birth, but most of the weight is from the additional fat under the skin<sup>176,193</sup>
- All the systems are maturing in preparation for life outside your womb, and even though there isn't much room, your baby can still stretch and kick<sup>191</sup>
- The brain is maturing and the head grows to accommodate the growing brain<sup>194</sup>
- The baby is quite active despite the cramped space<sup>194</sup>





**WEEK 30**  
**Your baby is now 28 weeks old, measures +-399 mm (CHL) and weighs +-1.3 kg<sup>259</sup>**

**Your pregnancy this week:**

- The effect of pregnancy hormones may cause your back to ache as well as your ribs<sup>176,190</sup>
- Rest as much as you can<sup>193</sup>
- Your growing baby and their position may make it hard for you to get comfortable.<sup>190</sup>
- Contractions known as Braxton Hicks contractions may be felt at this stage. Speak to your health care provider should they become regular or if you are concerned<sup>190,194</sup>



**Your baby's growth this week:**

- Scalp hair is present and the skin is less wrinkled in appearance<sup>173,191</sup>
- Now that the brain is controlling the body temperature (with the aid of the body fat), the lanugo (soft thin hair on the foetal body) that covered the skin is no longer needed, and begins to shed<sup>176</sup>
- The brain now has the structure and characteristics for further expansion after birth<sup>176,194</sup>
- The eyes can open wide<sup>191</sup>



**WEEK 31**  
**Your baby is now 29 weeks old, measures +-411 mm (CHL) and weighs +-1.5 kg<sup>259</sup>**

**Your pregnancy this week:**

- Make sure your diet has sufficient Omega-3 to help the growth of your baby's brain<sup>176</sup>
- When you have the urge to urinate, it is far better to follow the urge than to hold back. Prolonged delay can irritate the bladder, causing infections, which can lead to pre-term contractions<sup>176</sup>
- Your baby moves deeper into your pelvis, adding more pressure on your bladder, therefore you are likely to want to urinate more frequently<sup>190</sup>

**Your baby's growth this week:**

- The brain is still growing, making trillions of connections that will be used to process information<sup>176</sup>
- Your baby has completed most of their development and will start gaining weight rapidly<sup>191</sup>



**WEEK 32**  
**Your baby is now 30 weeks old, measures +-424 mm (CHL) and weighs +-1.7 kg<sup>259</sup>**

**Your pregnancy this week:**

- The measurement in centimetres from the top of your pubic bone to the top of your uterus roughly correlates with the number of weeks you are up to<sup>176</sup>
- You may experience mild swelling of your ankles and feet, pain in your ribs and shortness of breath<sup>176</sup>

**Your baby's growth this week:**

- Your baby is now sleeping ±90% of the day, but while awake, it practises swallowing, breathing, sucking and kicking<sup>176,196</sup>
- Your baby has been able to suck on their thumb for a while now<sup>176</sup>
- Your baby practices breathing<sup>191</sup>
- The body is filling out, and the skin is no longer translucent due to the fat that has been deposited under the skin<sup>173,176</sup>





### WEEK 33

Your baby is now 31 weeks old, measures  $\pm 437$  mm (CHL) and weighs  $\pm 1.9$  kg<sup>259</sup>

#### Your pregnancy this week:

- You may find it difficult to sleep so try and take naps during the day to feel more rested<sup>197</sup>
- Pack your bag with the essentials you will need for your stay in hospital.<sup>197</sup> (A list has been included at the end of the section.)



#### Your baby's growth this week:

- The skin looks smooth and plump<sup>173</sup>
- Your baby is able to detect and respond to light.<sup>191</sup>
- The amniotic fluid is at its highest level and will remain so until birth, so there is little room to spare for your growing baby<sup>176</sup>
- The skin is looking pinker and the fat continues to accumulate under the skin<sup>173</sup>
- The immune system continues to develop, but your baby still relies on your antibodies<sup>176</sup>



### WEEK 34

Your baby is now 32 weeks old, measures  $\pm 450$  mm (CHL) and weighs  $\pm 2.1$  kg<sup>259</sup>

#### Your pregnancy this week:<sup>22</sup>

- You may experience pain or pressure in your pelvic area, as your baby moves down the uterus<sup>199</sup>
- Your breasts are fuller and enlarged<sup>199</sup>

#### Your baby's growth this week:

- Your baby's fingernails have reached the end of the fingertip<sup>176,191</sup>
- Skin appears smooth and pink<sup>173</sup>
- The upper and lower limbs appear chubby. At this stage the white fat laid under the skin is approximately 8% of body weight<sup>173</sup>
- Your baby is too big to float in the amniotic fluid and its movements are bigger and slower<sup>199</sup>
- If your baby is a boy, his testicles should have descended by now<sup>176,199</sup>
- Your baby's digestive and intestinal systems are functioning<sup>198</sup>





### WEEK 35

*Your baby is now 33 weeks old, measures +-462 mm (CHL) and weighs +-2.4 kg<sup>259</sup>*

#### Your pregnancy this week:

- Your body has been producing relaxin for a while now. This hormone is responsible for loosening the ligaments and joints around your pelvis in preparation for labour, so your baby can fit through the birth canal. Unfortunately, this hormone doesn't just work on the pelvic area and can affect your other joints as well, but they should tighten again after your baby has been born<sup>176</sup>

#### Your baby's growth this week:

- Your baby produces their first stool (a dark-green substance called meconium) in the large intestine and is usually passed as the first stool after your baby is born<sup>173,200</sup>
- Your baby's lungs continue to develop and are producing surfactant, the substance that helps your baby's lungs function properly and be able to take in air after birth<sup>201</sup>



### WEEK 36

*Your baby is now 34 weeks old, measures +-474 mm (CHL) and weighs +-2.6 kg<sup>259</sup>*

#### Your pregnancy this week:

- You may notice a change in your weight as your baby continues to gain weight<sup>260</sup>
- You may experience Braxton Hicks contractions more often<sup>260</sup>

#### Your baby's growth this week:

- The body is usually plump as it continues to gain weight, even though the length doesn't change much. It is common for boys to weigh a little more than girls<sup>173</sup>
- Due to the limited space, your baby may be moving around less, but the movements you do feel will be stronger and more defined<sup>191</sup>



### WEEK 37

*Your baby is now 35 weeks old, measures +-486 mm (CHL) and weighs +-2.9 kg<sup>259</sup>*

#### Your pregnancy this week:<sup>176,203</sup>

- You may feel a bit more pressure on your lower abdomen which may cause pelvic pain and may make it hard to walk<sup>203</sup>
- Braxton Hicks contractions continue and you may also feel contractions similar to menstrual cramping<sup>203</sup>
- Contact your health care provider if you are concerned about the contractions you are experiencing<sup>203</sup>



#### Your baby's growth this week:

- Fat continues to accumulate under the skin, forming dimples, creases and folds in the neck and wrists<sup>176</sup>
- Your baby continues to practise for life outside the womb – inhaling and exhaling amniotic fluid, sucking its thumb in preparation for feeding, blinking and twisting from side to side<sup>176</sup>
- Up until now your baby has been receiving all of its nutrition via the umbilical cord, but once it is born, the digestive system will begin to function on its own<sup>176</sup>



**WEEK 38**

*Your baby is now 36 weeks old, measures  $\pm$ 498 mm (CHL) and weighs  $\pm$ 3.0 kg<sup>259</sup>*

**WEEK 39**

*Your baby is now 37 weeks old, measures  $\pm$ 507 mm (CHL) and weighs  $\pm$ 3.3 kg<sup>259</sup>*

**WEEK 40**

*Your baby is now 38 weeks old, measures  $\pm$ 512 mm (CHL) and weighs  $\pm$ 3.5 kg<sup>259</sup>*

**Your pregnancy this week:**<sup>204</sup>

- Anywhere between the last 4 weeks and now, your baby's head would have started to engage or settle down in your pelvis in preparation for labour, your baby bump will appear to be lying lower, this will ease the pressure on your ribs, but increase the pressure on your bladder

**Your baby's growth this week:**

- The lungs are still producing surfactant, which will prevent the air sacs in the lungs from sticking to each other when your baby begins to breath air<sup>176</sup>
- The head is about the same size as its abdomen,<sup>173</sup> the bones of the skull are not fused and can slide over each other. This allows the head to mould to the shape of your pelvis and helps it move through the birth canal and vagina<sup>205</sup>
- Your baby sheds the vernix (the greasy white substance protecting that tender new skin) and lanugo (the fine downy hair that covered your baby's body for warmth)<sup>176</sup>

**Your pregnancy this week:**

- Your weight gain is likely to slow or stop<sup>76</sup>
- You may experience more frequent and more intense Braxton Hicks contractions (some may be painful)<sup>176</sup>
- Easier breathing after baby drops but you may experience more frequent urination<sup>176</sup>

**Your baby's growth this week:**

- The external growth has slowed down, but the brain is still growing rapidly, this will continue during the first 3 years of your child's life<sup>176</sup>
- The final pigmentation of your baby's skin will take place shortly after birth<sup>176</sup>
- Approximately 16% of your baby's body weight is white fat under the skin<sup>173</sup>
- Your baby has  $\pm$ 300 bones at birth, but as your child grows, some of them fuse together, to reach the 206 of an adult<sup>206</sup>
- If you are having a boy, the testicles are usually in the scrotum at birth<sup>173</sup>

**Your pregnancy this week:**<sup>191</sup>

- The 'Big Day' has finally arrived! Or has it? It may be your EDD, but that doesn't mean your baby agrees with it



- About 30% of all pregnancies proceed past the 40-week mark and your baby may be up to two weeks late<sup>176</sup>



**Your weight gain for the third trimester should be between 4.5 and 8 kg<sup>207</sup>**



# Hospital Essentials



**Your hospital bag should be packed at least 6 weeks prior to your EDD.**

**Your bag should include the following:**<sup>176,208\*</sup>

## FOR YOU -

- A device or watch with a second hand to time contractions
- 1x comfortable pillow
- 2 / 3x front-opening sleep shirts or nighties
- 3x nursing bras
- 1x dressing gown
- Pair of slippers and socks
- 2 / 3x pairs of loose underwear
- 2x packs of maternity sanitary pads
- 1x pack of disposable zip lock plastic bags
- Toiletries including toothbrush, toothpaste, mouth wash, deodorant, make-up, and make-up remover, face and hand cream, soap, washcloth, shampoo, hair clips or elastic bands, hairbrush and/or comb, and moisturizers
- 2x towels
- 1x box of tissues
- A variety of drinks / snacks
- Cell phone / charger, phone card or change for public phone
- Books and / or device for e-books
- A device to listen to music plus earphones, loaded with soothing / favourite tunes
- Day wear and shoes to wear when you go home

## FOR YOUR PARTNER -

- Camera / video and charger/batteries
- Documentation required for admission such as certified copies of ID's, medical aid card / number and pre-admission number if necessary
- Favourite refreshments
- Change of clothes
- Toiletries
- (If this is not your first time in the labour ward), toys to keep your other children entertained
- Bag for carrying home gifts and hospital supplies

## OTHER -

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## FOR YOUR NEW BABY -

- 4x babygro's
- 4x baby vests
- 2x pairs of baby booties
- 2x baby bonnet/mittens
- 1x packet of newborn disposable diapers
- 4x baby bibs
- 3x soft towels
- 3x soft baby blankets
- 1x pair baby nail clippers
- Baby bath wash and baby body cream
- 1x packet of cotton wool
- Infant car seat preferably rear-facing and fitted into the car before you leave the hospital
- Going home outfit for your newborn

## OTHER -

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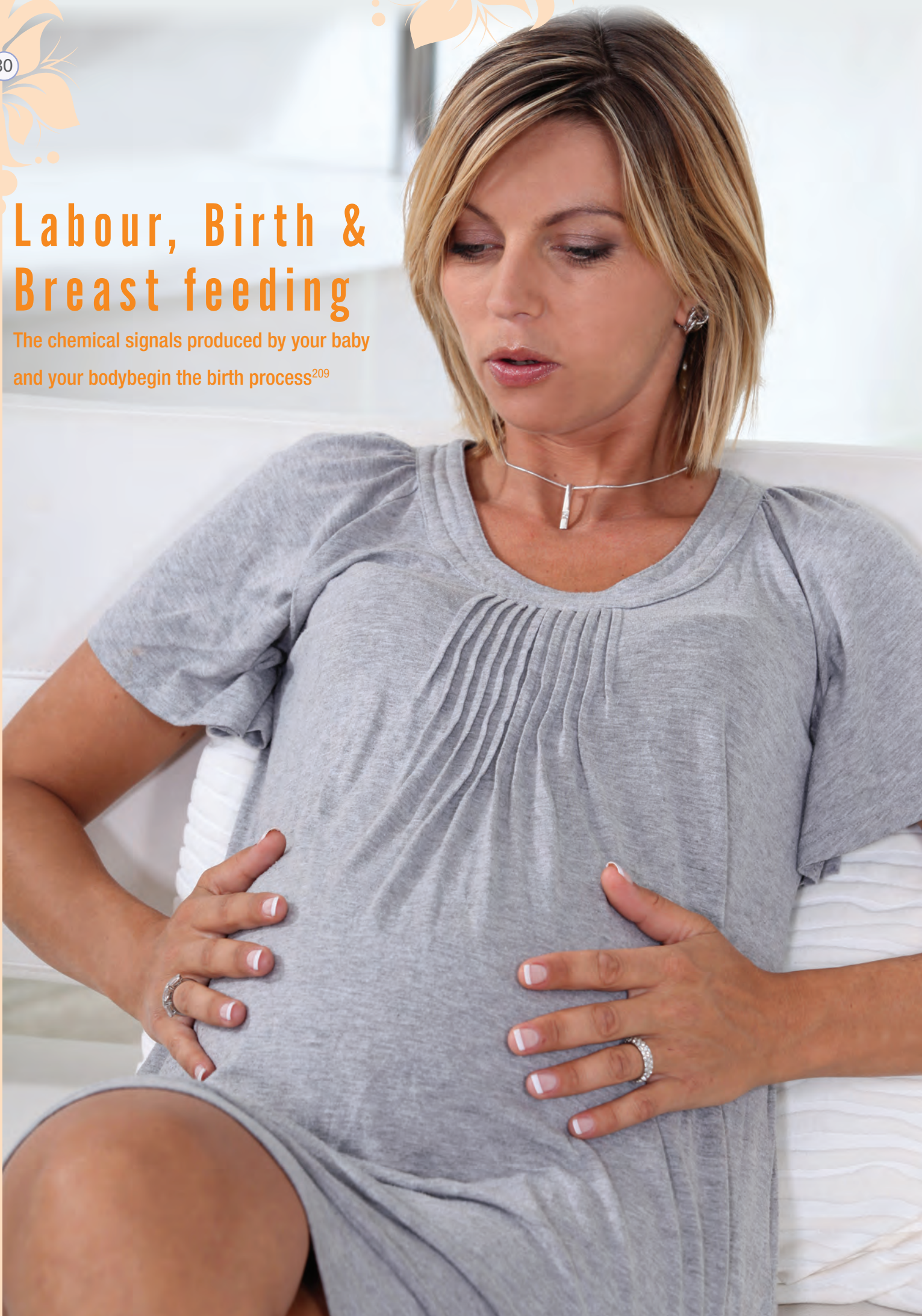


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\*Adapted

# Labour, Birth & Breast feeding

The chemical signals produced by your baby and your body begin the birth process<sup>209</sup>





# Labour and Birth

## LABOUR AND GIVING BIRTH

You and your baby have been preparing for this moment for the last 9 months, and now that certain stages have passed, the only certain sign that your baby is due to arrive is the onset of regular painful contractions, which causes your cervix to open.<sup>210</sup>

Unlike Braxton Hicks contractions which can be regular (although mostly irregular) and in general are eased by movement or change in position, real labour contractions intensify and become more frequent during the labour process.<sup>190,203,210</sup>

Labour is imminent when the mucus plug that sealed your cervix falls away as your cervix softens and begins to open. You may notice a small amount of bright red or brownish mucus.<sup>176</sup>

The amniotic sac usually ruptures, and most women go into labour within 24 hours of their waters breaking.<sup>176</sup> This, along with strong, regular contractions and pressure on the pelvis are signs that your baby is on the way.<sup>211</sup>

## REAL OR FALSE LABOUR<sup>176,212</sup>

### False labour occurs when contractions:

- Are felt in the front of the body
- Are irregular and of varying duration
- Don't intensify over time
- Ease with change of position or activity
- Are not accompanied by a dilated cervix

### True labour happens when contractions:<sup>176,212</sup>

- Start in the back and move to front
- Are regular and of equal duration
- Are progressively stronger
- Don't ease with a change of position or activity
- Are accompanied by a show of mucus / blood
- Are accompanied by a dilated cervix

## THREE STAGES OF CHILDBIRTH<sup>211</sup>

**Stage 1** - Contractions fully open the cervix (this is made up of 3 phases)<sup>210</sup>

**Stage 2** - The passage of your baby out of the uterus

**Stage 3** - Delivery of the placenta



### Stage 1

- **Phase 1 - Early labour<sup>176,210</sup>**
  - The longest phase, and generally the least intense as the cervix begins opening and thins out
  - Contractions are generally short, lasting for  $\pm 30-45$  seconds at  $\pm 20$  minute intervals, but become stronger and closer together (getting to about 5 minutes apart by the end of early labour)<sup>176</sup>
  - During this phase, the cervix dilates to 3-4 cm

### Symptoms of early labour include:<sup>176,210</sup>

- Cramps, backache, diarrhoea, pelvic pressure, increased vaginal discharge and menstrual-like cramps
- **Phase 2 - Active labour<sup>210</sup>**



- The cervix opens rapidly (dilating a further 3-4 cm) and the contractions are more intense
- Contractions are stronger, and last for  $\pm 45-60$  seconds and are 3-4 minutes apart
- **Phase 3 - Transitional labour<sup>176</sup>**
  - This stage is the most difficult and demanding as the cervix opens fully to 8-10 cm and can last  $\pm 1-2$  hours
  - Contractions are very strong, lasting for  $\pm 60-90$  seconds at 2-3 minute intervals
  - Wait for the midwife, nurse or doctor to tell you when to begin pushing. In the meantime, your uterus prepares your baby to move down the birth canal<sup>176</sup>



### Stage 2

- Now that you are fully dilated, it's time to push your baby through the birth canal<sup>176</sup>
- You may feel a tingling, stretching, burning, or stinging sensation at the vaginal opening as your baby's head crowns (it's called the "ring of fire" for good reason)<sup>176</sup>

### Stage 3

- As your baby leaves your uterus, mild contractions continue, causing the placenta to separate from the uterus wall. Further contractions push out the placenta<sup>176,210</sup>



### WHAT HAPPENS TO YOUR BABY

Once your baby's head emerges, your healthcare provider will suction your baby's nose and mouth to remove excess mucus, then ease the shoulders and body out.<sup>176</sup>

Your baby will be handed to you or placed on your belly, the umbilical cord will be clamped and cut and the midwife or nurse will give baby a rub to help get his or her breathing and crying going.<sup>176</sup>

The most profound change for your baby at birth is your baby's first breath where the lungs will now be filled with oxygen.<sup>213</sup>



Breathing triggers changes in the structure of your baby's heart and arteries, which diverts blood into the lungs.<sup>213</sup>

Your baby will immediately be assessed on its condition, using a system called the APGAR score.<sup>176</sup>

### The following is evaluated:<sup>214</sup>

- **Appearance** / skin colour
- **Pulse**
- **Grimace** / reflexes
- **Activity** / muscle tone
- **Respiration** / breathing

This test is done in order to determine your baby's health. The APGAR score is calculated at 1 minute and 5 minutes after birth.<sup>176</sup>



### WHAT HAPPENS TO YOU

After your baby is born and the placenta has been delivered, you will experience 'period-like' pains.<sup>215</sup> This is caused by the hormone oxytocin, which works to contract the uterus and decrease bleeding.<sup>176,215,216</sup>

### Over the next few weeks you may experience some of the following:

- **Lochia** - a discharge of blood and mucus, which will fade over the coming weeks<sup>176</sup>
- **Urinating** - more frequent urination and urinary tract infections (UTI) can occur<sup>176</sup>
- **Bowel movements** - you may experience constipation and discomfort with bowel movements<sup>176</sup>
- **Engorged breasts** - whether you are breastfeeding or not, your hormones will make your breasts firmer and larger as they prepare to produce milk<sup>176</sup>
- **Sore or cracked nipples** - using a lanolin cream may help to relieve this painful problem<sup>176</sup>
- **Hair loss** - now the pregnancy hormones are no longer produced, your hair should return to its previous cycles of growth / loss<sup>176</sup>
- **Back pain** - from weakened abdominal muscles and from carrying baby<sup>176</sup>



# Breastfeeding

## NUTRITION WHILE BREASTFEEDING

Your nutritional intake while you are breastfeeding is just as important as it was while you were pregnant. In most cases, eating a healthy, well-balanced diet may ensure you get the adequate amount of energy (calories) and nutrients you need to breastfeed your baby. Your healthcare provider may also recommend a supplement for you.<sup>217,261</sup>



### Breastfeeding advantages for you:

- A strong bond is formed between you and your baby as you breastfeed<sup>218</sup>
- Breastfeeding triggers and releases oxytocin, which may help you to relax and feel less stressed<sup>219</sup>
- Breastfeeding may reduce your risk of osteoporosis in later life<sup>220</sup>
- Breastfeeding promotes weight loss gained during pregnancy<sup>220</sup>
- Breastfeeding also helps your uterus to return to its normal size, and can lessen bleeding after giving birth<sup>216,220</sup>
- Breastfeeding mothers are at less risk of postpartum depression<sup>220</sup>
- Breastfeeding may delay the return of your periods, but some women have had periods while breastfeeding, so it is not a foolproof method of contraception<sup>176</sup>
- Breastfeeding may be associated with a lower risk of breast and ovarian cancer<sup>220</sup>

- Breastfeeding is convenient as it saves time spent preparing and heating formula as well as cleaning of bottles.<sup>217</sup>
- Breastfeeding is free! Even if your baby is drinking expressed breast milk and you need to buy feeding accessories, it will cost far less than you would spend on formula<sup>221</sup>
- **Breast milk can be stored for:**<sup>222</sup>
  - 6-8 hours at room temperature
  - 24 hours in an insulated bag with ice packs
  - 5 days in a refrigerator
  - 6-12 months in a freezer, (use BPA-free containers). Don't warm or thaw in a microwave, rather leave in the fridge to defrost. Once thawed, do not refreeze, but store in the fridge for 24 hours, then discard



### Breastfeeding advantages for your baby:

Global recommendations are that your baby should be exclusively breastfed for a minimum of 6 months to receive the possible benefits, and then continue for 1 year, along with the appropriate complementary foods.<sup>222</sup> Breast milk contains protein, sugar, fat, as well as other substances that are beneficial such as antibodies, immune factors, enzymes and white blood cells.<sup>220,223,224</sup> Generally, the longer you breastfeed, the greater the benefits.<sup>225</sup>

### The benefits are:

- Breast milk is the only food naturally designed for babies.<sup>224</sup>
- Breast milk contains essential nutrients such as proteins, fats, sugars and antibodies important for your baby's growth and development.<sup>224,226</sup>
- Breast milk contains immunological components that cannot be replicated by science.<sup>226</sup> These components lower the chances of:<sup>220,224,225</sup>
  - Ear infections
  - Diarrhoea, vomiting
  - Urinary tract infections
  - Atopic dermatitis and allergies
  - Respiratory infections
- Breastfeeding may support your baby's brain development<sup>227</sup>

### Breastfeeding advantages for your baby continued:

- Premature babies benefit from breast milk, as it supports their growth and helps to protect them from infections.<sup>222,228</sup>
- Breast milk contains vital substances to support brain development and promote neurodevelopmental outcomes.<sup>222,227,228</sup>
- Your first milk (colostrum) lines your baby's stomach and intestines as a defence against bacteria and viruses.<sup>223</sup>
- If your baby is unable to feed at the breast, you can express your breast milk (and colostrum) to be given to your baby via other means. If your baby is too small or unable to take it immediately, you can store it in the freezer for use at a later date as mentioned previously.<sup>222</sup>

When your baby is born, pregnancy hormones are reduced and the pituitary gland begins to increase the production of prolactin (this hormone starts the production of milk).<sup>229</sup> Initially, only colostrum is secreted, and studies have shown that babies receive immunity from a number of infections through this fluid.<sup>223</sup>

After the first few days, colostrum becomes transitional milk. Then about 10-14 days later this changes to mature breast milk.<sup>176</sup>

To start with, your baby should be encouraged to suckle  $\pm$ 8-12 times in a day. If your baby is hungry, this routine should be replaced by demand feeding.<sup>228</sup> Feeding patterns will however depend on individual preference.

Studies have shown that the longer you breastfeed, the greater the benefits for both you and your baby, a minimum of 6 months is recommended.<sup>222,225</sup>

### HOW TO BREASTFEED

You do not need to force your baby to open its mouth, just make your baby comfortable and let it nuzzle at your nipple. Once the whole nipple is in your baby's mouth, it will suck on the areola, milk is forced out of the milk glands by the milk-ejection reflex and flows down the ducts to the milk reservoirs.<sup>176,230,231</sup>

The quantity of milk will be regulated by what your baby requires, and milk will continue to flow from the nipple.<sup>231,232</sup>

If your baby takes the whole nipple and areola into its mouth, its gums will grip onto the areola, leaving the nipple free and undamaged. If your baby only latches onto your nipple, it will receive very little milk, forcing it to bite harder, causing painful, cracked nipples. At each feeding alternate which breast you start with, so that both receive equal drainage.<sup>176,228,230,233</sup>



**Incorrect method of breastfeeding with only the nipple in your baby's mouth**<sup>176</sup>



**Correct method of breastfeeding with only the whole areola and nipple in your baby's mouth**<sup>176,233</sup>

### SIGNS THAT YOUR BABY IS FEEDING WELL

<sup>233</sup>

- Your baby's mouth is open wide, with lips turned out
- The chin and nose are resting against your breast
- Your baby has taken as much of the areola as possible into its mouth
- Your baby is suckling rhythmically and deeply, in short bursts and separated by pauses
- You can hear your baby swallowing regularly
- Your nipple is comfortable after the first few suckles

### BREASTFEEDING POSITIONS

<sup>230</sup>

When you begin breastfeeding the optimal positioning is important, as an efficient position allows your baby to feed correctly.

- Be comfortable
- Position your baby close to you
- Support your breast
- Attach / latch your baby onto your breast
- It is important not to be stressed when breastfeeding, so try and relax



### HOW MUCH MILK IS ENOUGH?

It is quite common to wonder if your baby is drinking enough milk.<sup>234</sup> Even though you cannot know how much milk your newborn is taking,<sup>234</sup> a well-nourished newborn should:<sup>228,235</sup>

- Lose no more than 7% of the birth weight in the first few days, before regaining weight
- Have 1-2 bowel movements per day for the first few days
- Have 6 or more wet nappies per day
- Seem satisfied and happy for an average of 1-3 hours between feedings
- Breastfeed at least 8-12 times every 24 hours
- After breastfeeding is well established, the frequency of feeding may decrease to 8 times per 24 hours<sup>228</sup>

### Your baby may indicate that it is hungry by:<sup>228</sup>

- Showing increased alertness
- Physical activity
- Turning their head and opening their mouth as if to “look” for your breast to start feeding. This reflex is known as rooting (or mouthing). Rooting helps your baby get ready to feed.<sup>262</sup>
- Crying is usually a later signal

Non-demanding babies should be aroused and fed every 4 hours.<sup>228</sup>

There is no way to tell if the quality or quantity of milk is sufficient, but if your baby is gaining weight, happy and content, it is reasonable to conclude it is being well fed. It is recommended

that newborn breastfed infants be seen by a healthcare professional at 3 to 5 days of age for a check-up and to check their weight then again after 2 to 3 weeks.<sup>228</sup> Consult your healthcare provider if your baby remains hungry or continues to lose weight.<sup>228,234,235</sup>

### WHAT TO AVOID WHEN BREASTFEEDING?

- Breastfeeding mothers are advised to avoid smoking<sup>222,228</sup>
- Consumption of alcoholic beverages should be avoided as it easily passes into breast milk<sup>222,228</sup>
- Certain medications can, and do, pass into breast milk<sup>236</sup>
- Take any medication only when absolutely necessary. If medications have been prescribed to you, query the suitability of it with your healthcare provider before taking it while you are breastfeeding<sup>237</sup>

### BREASTFEEDING PROBLEMS

#### Sometimes you have to cope with:

- **Inverted nipples** - are not usually problematic as your baby should latch on to the areola
- **Engorgement** - occurs when too much breast milk accumulates in the milk ducts affecting the flow of milk<sup>239</sup>
- **Sore / cracked nipples** - can be caused if your baby is just sucking the nipple or latching incorrectly, using a lanolin-based cream may help to heal damaged skin.<sup>176</sup> Gently break the suction of your baby's mouth, but never pull your baby away from

your breast<sup>176</sup>



**Mastitis** - an infection in the breasts.<sup>176</sup> Contact your healthcare provider if you have a fever, red / painful / swollen breast(s), chills, or flu-like symptoms<sup>176</sup>

### PREVENTING WIND

Babies who suffer with wind may cry and be fussier than normal. They may bring their legs up to their chest and kick or have trouble to get comfortable or sleep.<sup>240</sup>

Your baby is likely to get wind if they swallow too much air when they feed.<sup>240</sup>

### To help prevent your baby from getting wind, you could try the following:

- Ensure that the nipple is correctly positioned and your baby's lips are sealed around the areola to minimise the amount of air they swallow.<sup>240</sup>
- Burp your baby during and after their feed. Although your baby may not like being interrupted during their feed, eliminating the air midway through feeding may reduce the likelihood of air being carried into their stomach.<sup>240</sup>
- Keep your baby upright after feeding so that it's easier to burp them.<sup>240</sup>
- You could lay them on their back and move their legs in a bicycle motion or alternatively, lay your baby on their stomach which should help them expel the wind.<sup>240</sup>

You should consult with your health care provider should you have any concerns.



# Baby Essentials



## NURSERY ESSENTIALS

The following are some of the things you may need in your baby's nursery:<sup>243</sup>

- **SLEEP** - cot or camp cot, mattress, fitted cot sheets, blankets, cot net / mosquito net, night-light, sound / movement monitor, mobiles and music
- **HYGIENE** - baby bath or bath seat, changing pad and cover, soft towels including a hooded towel, face cloths, safety nail scissors, brush and comb, cotton wool, ear buds, sunblock, disposable / towelling nappies, baby wipes, bum cream, nappy bin / bags
- **FEEDING** - dummies, bibs, plenty of cloths for wiping spills and messes, bottles and teats plus other equipment if you are not breastfeeding and a high chair
- **FUN AND GAMES** - activity mat, play gym, teething, rattles, blocks and games suitable for your baby's age
- **HEALTH** - a first aid kit, thermometer, medicine dropper, humidifier, as well as any medicines recommended by your paediatrician / healthcare provider
- **FASHION** - to name just a few things you might need a variety of vests, baby gro's, jerseys, coats, hats for hot days and cold, booties and socks



## NAPPY RASH

A rash (usually redness or small bumps) can develop on your baby's lower abdomen, buttocks, genitals and thigh folds.<sup>244,245</sup> It is usually caused by leaving a soiled nappy on for too long, and the various chemicals in urine and/or stools trapped within the nappy irritate your baby's sensitive skin.<sup>244,245</sup>



Chaffing or rubbing can also cause nappy rash. Once the surface of the skin is damaged, it becomes even more vulnerable to further irritation and subsequent infection.<sup>244</sup>

Using a barrier ointment / cream may prevent further irritation, if the rash doesn't improve, consult your healthcare provider as the rash may have become infected or may require medicated treatment.<sup>244,245</sup>



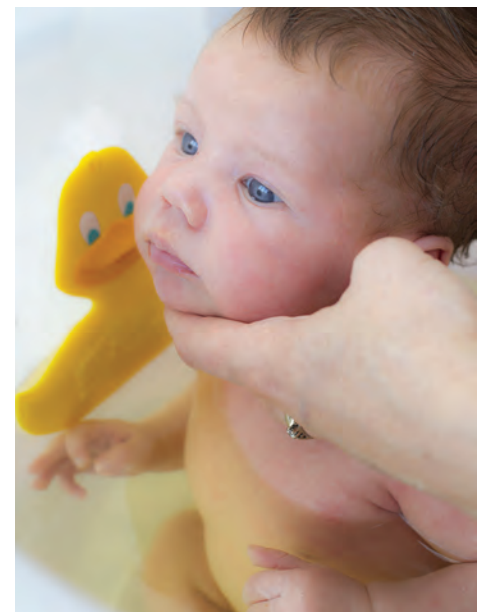
## WAYS TO HELP PREVENT NAPPY RASH

- Change soiled nappies as soon as possible<sup>244</sup>
- Clean the area with a soft cloth or cotton wool balls and water<sup>244</sup>
- Avoid using wipes (especially those with alcohol and fragrance) and perfumed toiletries that are not hypoallergenic, as they may cause further irritation<sup>244</sup>
- Pat the area, do not rub, and make sure the area is completely dry<sup>244</sup>
- Apply an ointment / cream (one with zinc oxide or petroleum jelly) to protect the skin and help the area to heal<sup>244</sup>
- Give the nappy some 'breathing' room, especially over night. By keeping the nappy loose, the soiled nappy does not rub against the skin<sup>244</sup>
- Expose your baby's bottom to air if possible<sup>244</sup>

## BATH TIME

**Never leave your baby unattended and make sure that you always have everything you need within arm's reach!**<sup>246</sup>

Keep a dry towel within reach so you can take your baby with you if you've forgotten something. Never leave your baby alone in the bath, even for an instant.<sup>246</sup>



Your baby doesn't need much bathing, especially if the nappy area is cleaned well during changes.<sup>244,247</sup>

Bathing more than 3 times a week may dry out your baby's skin, particularly if soaps are used or if moisture is allowed to evaporate from the skin.<sup>247</sup> Newborns should be cleaned using cooled, boiled water on a cotton wool ball.<sup>248</sup> Avoid harsh soaps, fragrances and chemicals that might irritate your baby's skin. Use fragrance-free, hypoallergenic soaps and moisturising lotions.<sup>247,248</sup>

Until the stump of the umbilical cord falls off, your newborn should have only sponge baths.<sup>247</sup> The stump of the umbilical cord will dry up and drop off after about one to two weeks. If the cord has not dried up and fallen off by the time the baby is two months old, contact your healthcare provider.<sup>247</sup>



- Make sure that supplies are nearby and the room is warm before undressing your baby<sup>247,248</sup>
- Have a basin of water, a washcloth, cotton wool balls and a towel within reach before you begin<sup>247</sup>
- Place your baby down on a flat comfortable surface (a changing table, bed, or counter)<sup>247</sup>
- Pad hard surfaces with a blanket / fluffy towel<sup>247</sup>

- Keep one hand on your baby at all times to prevent them from falling<sup>247</sup>
- Use water that feels lukewarm - not hot - to the inside of your wrist or elbow
- Keep your baby wrapped in a towel, and expose only the parts that you're washing<sup>247</sup>
- Use the dampened cloth first without soap to wash your baby's face, before washing the remainder of your baby's body and, finally, the diaper area<sup>247</sup>
- Pay special attention to creases under the arms, behind the ears, around the neck and especially the genital area<sup>247</sup>
- When your baby has hair, you'll need baby shampoo, too<sup>247</sup>
- Once the umbilical area is healed, you can try placing your baby directly in the water<sup>247</sup>
- First baths should be as gentle and brief as possible, if your baby protests or seems miserable, go back to sponge baths for a week or two, before trying to bath again<sup>247</sup>
- Bathing should be a very relaxing and soothing experience, so don't rush unless your baby is unhappy<sup>247</sup>
- When your infant comes out of the bath, baby towels with built-in hoods are an effective way to keep your baby's head warm when wet<sup>247,248</sup>

Bathing is a relaxing way to prepare for sleep.<sup>248</sup>

### SLEEP TIME

Recommendations include that your baby should sleep in your bedroom, but not in your bed.<sup>249</sup> Place your baby's crib / bassinet near your bed, within arm's reach, as this makes it easier for night feeds.<sup>249</sup>

- No toys or loose bedding (fluffy blankets, comforters, pillows, bumper pads and wedges) should be placed in the crib / bassinet which your baby can roll on to or against<sup>249</sup>
- The mattress should be firm and covered with a fitted sheet<sup>249</sup>
- The area should always be smoke free<sup>249</sup>
- Room temperature should be comfortable for a lightly clothed adult<sup>250</sup>

- Avoid letting your baby get too hot<sup>249</sup>
- Dress your baby lightly for sleep<sup>249</sup>
- Sleepers or wearable blankets are better than blankets<sup>250</sup>
- Your baby should sleep on their back, or as per your healthcare provider's instructions<sup>249</sup>
- Don't put your baby down to sleep on adult beds, chairs, sofas, pillows, or cushions<sup>249</sup>



Before leaving your baby with anyone, be it a caregiver, family member or friend, be sure that person knows how to keep your baby safe, and the best way to care for your baby.

*Thank you for taking the time to read My Wondrous Gift, we hope that you found the information helpful and informative. Please remember the information contained in this publication should only be used as a general guide, and is not intended to substitute a healthcare provider's medical advice / knowledge. Consult your healthcare provider prior to following any information contained herein.*



# Our Product Range

## PregOmega Plus

Pre-natal vitamins and minerals, with Omega-3, and additional Calcium, Vitamin D and Magnesium



## PregOmega

Pre-natal vitamins and minerals, with Omega-3



## Pregnavit M

Pre-natal vitamin and mineral supplement



## Pregvit MR

Pre-natal vitamins and minerals, containing iron in a chelated form



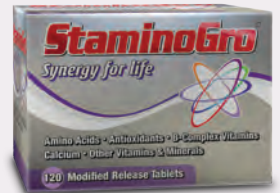
## Sinopol

Health supplement which helps to manage the symptoms of Polycystic Ovarian Syndrome



## StaminoGro

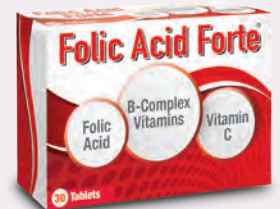
A health supplement that provides a range of amino acids, antioxidants, B-Complex vitamins and other essential vitamins and minerals to help support reproductive health in men and women



\*safety in pregnancy and breastfeeding has not been established

## Folic Acid Forte

Folic Acid, B-Complex Vitamins and Vitamin C



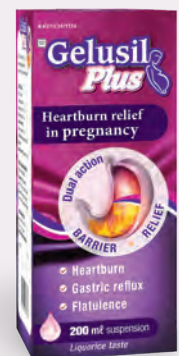
## LactOcare

Post-natal vitamins and minerals, with Omega-3



## Gelusil Plus

Indicated to relieve heartburn (including heartburn during pregnancy), acid indigestion, excessive gas in the stomach associated with acid pushing up into the oesophagus (reflux) and inflammation of the oesophagus. It is also used to treat symptoms of hiatus hernia, where the upper part of your stomach pushes upwards into the opening in your diaphragm through which the oesophagus passes.



Speak to your healthcare provider to determine which product/s may best suit your needs.



# Preg Omega Plus

Start today for  
their tomorrow

YOUR PRENATAL HEALTH: OUR PRIORITY



Specifically formulated  
**3-in-1 prenatal supplement\***



**Omega-3 capsule**  
rich in DHA and EPA\*\*



**Convenient**  
and easy to use



**Active Folate**



**Halal certified<sup>2</sup>**



\*Active Folate, Zinc, Iron, Calcium, Vitamin A, Vitamin D3 and other essential nutrients \*\*DHA (docosahexaenoic acid) and EPA (eicosapentaenoic acid)

References: 1. IMS: TPN Data (A11A, A11B, A11E, V6D, V3X / Constructed Class). MAT Nov 2023 (Data on file). 2. Data on file. Category D. Complementary medicine: Health supplement. This unregistered medicine has not been evaluated by SAHPRA for its quality, safety or intended use. **Scheduling status:** S01 **Proprietary name (and dosage form):** PregOmega<sup>®</sup> Plus Tablets and Soft Gel Capsules. **Composition:** Each fish oil soft gel capsule contains: 823 mg Pharmaceutical Grade Fish Oil (derived from tuna and deep marine fish oil) providing: 261 mg DHA, 92 mg EPA. Each calcium tablet contains: 500 mg Calcium, 400 IU Vitamin D3 and 125 mg Magnesium. Each vitamin & mineral tablet contains: 1000 IU Vitamin A, 3 mg Vitamin B1, 2 mg Vitamin B2, 10 mg Vitamin B3, 1 mg Vitamin B6, 2 µg Vitamin B12, 50 mg Vitamin C, 100 IU Vitamin D3, 150 mg Calcium, 150 µg Copper (from copper glycinate), 500 µg Folic Acid (active folate, from calcium 5-methyltetrahydrofolate), 24 mg Iron (from ferrous bisglycinate), 25 µg Molybdenum (from molybdenum bisglycinate), 5 mg Zinc, 65 µg Selenium (from selenium glycinate). **Name and business address:** Inova Pharmaceuticals (Pty) Ltd, Co. Reg. No. 1952/001640/07, 15E Riley Road, Bedfordview. **Tel. No.** 011 087 0000. For more information, speak to your healthcare professional or visit [www.inovapharma.co.za](http://www.inovapharma.co.za). IN2273/24

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**Scheduling Status:** **S0** **Proprietary name and dosage form:** **Gelusil Plus** Suspension. **Composition:** Each 10 ml suspension contains: Sodium alginate 500 mg, Sodium bicarbonate 267 mg, Calcium carbonate 160 mg. **Proprietary name (and dosage form): PregOmega® Plus** Tablets and Soft Gel Capsules. **Composition:** Each fish oil soft gel capsule contains: 822 mg Pharmaceutical Grade Fish Oil (derived from tuna and deep marine fish oil) providing: 260 mg DHA, 91 mg EPA. Each calcium tablet contains: 500 mg Calcium, 400 IU Vitamin D3 and 125 mg Magnesium. Each vitamin & mineral tablet contains: 2 666 IU Vitamin A, 3 mg Vitamin B1, 2 mg Vitamin B2, 10 mg Vitamin B3, 1 mg Vitamin B6, 2 µg Vitamin B12, 50 mg Vitamin C, 100 IU Vitamin D3, 230 mg Calcium, 0.15 mg Copper (AAC), 500 µg Folic Acid, 15 mg Iron (AAC), 0.5 mg Magnesium, 0.05 mg Manganese (AAC), 0.025 mg Molybdenum (AAC), 0.84 mg Potassium, 0.085 mg Zinc. **Proprietary name (and dosage form): PregOmega®** Tablets and Soft Gel Capsules. **Composition:** Each fish oil soft gel capsule contains: 822 mg Pharmaceutical Grade Fish Oil (derived from tuna and deep marine fish oil) providing: 260 mg DHA, 91 mg EPA. Each vitamin & mineral tablet contains: 2 666 IU Vitamin A, 3 mg Vitamin B1, 2 mg Vitamin B2, 10 mg Vitamin B3, 1 mg Vitamin B6, 2 µg Vitamin B12, 50 mg Vitamin C, 100 IU Vitamin D3, 230 mg Calcium, 0.15 mg Copper (from AAC), 500 µg Folic Acid, 15 mg Iron (from AAC), 0.5 mg Magnesium, 0.05 mg Manganese (from AAC), 0.025 mg Molybdenum (from AAC), 0.84 mg Potassium, 0.085 mg Zinc. **Proprietary name (and dosage form): Pregnavit™** Capsules. **Composition:** Each capsule contains: 2666 IU Vitamin A, 3 mg Vitamin B1, 2 mg Vitamin B2, 10 mg Vitamin B3, 1 mg Vitamin B6, 2 µg Vitamin B12, 50 mg Vitamin C, 400 IU Vitamin D3, 230 mg Calcium, 0.15 mg Copper (from AAC), 500 µg Folic Acid, 0.01 mg Iodine (from AAC), 20 mg Iron (derived from 60 mg Ferrous Fumarate), 0.5 mg Magnesium, 0.05 mg Manganese (from AAC), 0.025 mg Molybdenum (from AAC), 0.84 mg Potassium, 0.085 mg Zinc. **Proprietary name (and dosage form): Folic Acid Forte®** Tablets. **Composition:** Each tablet contains: 500 µg Folic Acid, 3 mg Vitamin B1, 5 mg Vitamin B2, 18 mg Vitamin B3, 15 mg Vitamin B5, 24 mg Vitamin B6, 24 µg Vitamin B12, 200 mg Vitamin C. **Proprietary name (and dosage form): LactOcare®** Tablets and Soft Gel Capsules. **Composition:** Each fish oil soft gel capsule contains: 822 mg Pharmaceutical Grade Fish Oil (derived from tuna and deep marine fish oil) providing: 260 mg DHA, 91 mg EPA. Each vitamin & mineral tablet contains: 2 666 IU Vitamin A, 2 mg Vitamin B1, 2 mg Vitamin B2, 20 mg Vitamin B3, 7 mg Vitamin B5, 2 mg Vitamin B6, 2.8 µg Vitamin B12, 75 mg Vitamin C, 200 IU Vitamin D3, 35 µg Biotin, 150 mg Calcium, 10.3 mg Choline, 1 mg Copper (from AAC), 500 µg Folic Acid, 15 mg Iron (from AAC), 30 mg Magnesium, 60 µg Selenium (from AAC), 20 mg Zinc. **Proprietary name (and dosage form): Pregvit MR®** Tablets. **Composition:** Each tablet contains: 2 666 IU Vitamin A, 3 mg Vitamin B1, 2 mg Vitamin B2, 10 mg Vitamin B3, 1 mg Vitamin B6, 2 µg Vitamin B12, 50 mg Vitamin C, 400 IU Vitamin D3, 230 mg Calcium, 0.15 mg Copper (from AAC), 500 µg Folic Acid, 15 mg Iron (from AAC), 0.5 mg Magnesium, 0.05 mg Manganese (from AAC), 0.025 mg Molybdenum (from AAC), 0.84 mg Potassium, 0.085 mg Zinc. **Proprietary name (and dosage form): StaminoGro®** Tablets. **Composition:** Each tablet contains: 187.5 mg L-Arginine, 150 mg L-Glutamine, 75 mg Glycine, 50 mg L-Lysine, 45 mg L-Ornithine, 450 µg Beta-carotene, 5 mg Lipic Acid, 15 µg Selenium (AAC), 75 mg Vitamin C, 5 IU Vitamin E, 5.62 mg Zinc, 125 µg Folic Acid, 0.75 mg Vitamin B1, 1.25 mg Vitamin B2, 6 mg Vitamin B3, 6 mg Vitamin B5, 6 mg Vitamin B6, 6 µg Vitamin B12, 100 mg Calcium, 75 IU Vitamin D3, 20 µg Biotin, 4.1 mg Choline, 500 µg Copper (AAC), 60 mg Magnesium, 1 mg Manganese. **Proprietary name (and dosage form): SINOPOl® him** Granules. **Composition:** Each sachet contains: Myo-inositol 500 mg, Alpha Lipoic Acid 400 mg, Coenzyme Q10 100 mg, Zinc 7.5 mg, Vitamin B2 1.4 mg, Vitamin B6 1.4 mg, Selenium 41.5 µg and Vitamin B12 2.5 µg. **Complementary Medicine: Health Supplement. Proprietary name (and dosage form): SINOPOl®** granules. **Composition:** Each sachet contains: Myo-inositol 1 000 mg, Alpha Lipoic Acid 400 mg and Folic Acid 200 µg. **Complementary Medicine: Health Supplement. D34. 12 Multiple Substance formulation.** This unregistered medicine has not been evaluated by SAHPRA for its quality, safety or intended use. Studies as part of the references were not conducted on Sinopoli®. **Name and business address:** iNova Pharmaceuticals (Pty) Ltd. Co. **Reg. No.** 1952/001640/07, 15E Riley Road, Bedfordview. **Tel. No.** 011 087 0000. [www.inovapharma.co.za](http://www.inovapharma.co.za). Further information is available on request from iNova Pharmaceuticals. IN2276/24



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