## HEALTHY WEIGHT IN PREGNANCY GUIDANCE

<table>
<thead>
<tr>
<th>Policy Reference: 020224</th>
<th>Date of issue: September 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepared by: Beverley Green RM, Health Improvement Team, Public Health.</td>
<td>Date of Review: September 2017</td>
</tr>
<tr>
<td>Lead Reviewer: Fiona Clarke RD, Senior Health Improvement Specialist, Public Health</td>
<td>Version: 1 (previous versions in Maternal and child Nutrition Best Practice Guidance)</td>
</tr>
<tr>
<td>Ratified by: NMAHP Professional Leadership Committee</td>
<td>Date Ratified: 25 August 2015</td>
</tr>
<tr>
<td>Planning for fairness: Yes</td>
<td>Date: July 2015</td>
</tr>
</tbody>
</table>

### Distribution:
- NHS Highland
  - Board Nurse Director
  - Director of Public Health
  - Head of Midwifery
  - Lead midwives
  - Lead nurses
  - Obstetricians
  - Anaesthetists
  - Lead AHPs
  - Nutrition and Dietetics
  - Physiotherapy
  - NMAHP Professional Leadership Committee
  - GPs and GP Sub Group

- Highland Council Care and Learning
  - Head of Health
  - Principal Officer Nursing
  - Principal Officer AHPs
  - Health Visitors
  - Children’s Services Network
## CONTENTS

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Page no</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Healthy Weight</td>
<td>3</td>
</tr>
<tr>
<td>Pre pregnancy – Healthy Weight Management</td>
<td>5</td>
</tr>
<tr>
<td>Pregnancy – Healthy Weight Management</td>
<td>8</td>
</tr>
<tr>
<td>Postnatal – Healthy Weight Management</td>
<td>10</td>
</tr>
<tr>
<td>Appendix 1 - BMI Statistics for Pregnant Women – NHS North Highland</td>
<td>15</td>
</tr>
<tr>
<td>Appendix 2 - Pathway Healthy Weight in Pregnancy</td>
<td>20</td>
</tr>
<tr>
<td>Appendix 3 - NHS Highland Pre pregnancy, Pregnancy and Postnatal</td>
<td>21</td>
</tr>
<tr>
<td>Appendix 4 - Schedule of Care</td>
<td>22</td>
</tr>
<tr>
<td>Appendix 5 - Eatwell Plate</td>
<td>23</td>
</tr>
<tr>
<td>Appendix 6 - List of Recommendations</td>
<td>24</td>
</tr>
<tr>
<td>Appendix 7 - Foods to Avoid in Pregnancy</td>
<td>25</td>
</tr>
<tr>
<td>Appendix 8 - Pathway for Antenatal use of low dose Aspirin</td>
<td>26</td>
</tr>
<tr>
<td>Appendix 9 - Conversation Tool for Healthy Weight</td>
<td>27</td>
</tr>
<tr>
<td>Appendix 10 - Pathway for Referral to Healthy Weight Groups</td>
<td>28</td>
</tr>
<tr>
<td>Appendix 11 - Conversation Tool for Exercise</td>
<td>29</td>
</tr>
<tr>
<td>Appendix 12 - Healthy Weight in Pregnancy Leaflet</td>
<td>30</td>
</tr>
<tr>
<td>Appendix 13 – Healthy Start: important points for midwives</td>
<td>31</td>
</tr>
<tr>
<td>Appendix 14 – Healthy Start: Check list for pregnancy</td>
<td>32</td>
</tr>
<tr>
<td>Appendix 15 – Healthy Start: Check list for family and new baby</td>
<td>33</td>
</tr>
<tr>
<td>Appendix 16- Women’s Resources</td>
<td>34</td>
</tr>
</tbody>
</table>
1. PURPOSE

This guidance outlines best practice on healthy weight for pre pregnancy, pregnancy and postnatal women in NHS Highland.

All staff involved in maternity services have a key role in nutritional care of women throughout pregnancy. Maternity services are the providers of a universal programme of health care, which includes health promotion in supporting healthy weight management for pre pregnancy, pregnancy and postnatal women.

This guidance is the revised and updated Chapter One of The Maternal and Child Nutrition Best Practice Guidance, which was last revised 2012. Through a needs assessment in 2014 it was identified that this document would be better utilised by professionals if it could be accessed as stand alone guidance for healthy weight in pregnancy.

The aim is that professionals will be able to offer advice and support to women to reduce the risks of pregnancy associated with a high BMI by improving their nutritional status, becoming physically fit and by improving access to the services they require.

The planning for fairness process has been applied to these guidelines to ensure that they address Equality and Diversity issues.

Background

In order to update and develop this document we have completed a needs assessment which has included the following:

1.1 NHS Highland Body Mass Index (BMI) statistics for pregnant women in 2014.

The BMI (kg/m²) of women is recorded at their first antenatal booking; the NHS Highland data for both north NHSH and Argyll and Bute was requested from the Scottish Birth Record (SBR) for 2014 and collated. Unfortunately it was not possible to access accurate information on the SBR for Argyll and Bute because of different recording processes in Greater Glasgow and surrounding areas. However, from 2015 the SBR is fully operational and information for future deliveries will be available.

Data from the SBR in north NHSH (figure 1) indicates that in 2014, 67 (3%) women had a low BMI and 439 (18%) women had a high BMI, which is similar to the 2012/13 Scottish data where 2.3% of women had a low BMI and 18% of women had a high BMI (1,19). Argyll and Bute have approximately 700 births per year, so estimation would give 16 women with a low BMI and 126 women with a high BMI. For breakdown of NHS North Highland please see Appendix 1.
1.2 Discussion with health professionals around healthy weight

A discussion with over 100 Health Professionals was conducted around the needs for healthy weight support for pre pregnancy, pregnancy and postnatal women. Health Professionals were from a number of different disciplines from a variety of different locations throughout NHS Highland, and included Inverness, Argyll and Bute, Wick, Golspie, Dingwall, Invergordon, Alness, Fort William and Nairn

Constraints identified: staff need quick access information, limited time to spend with women to discuss health promotion and the difficulty health professionals feel raising the subject of healthy weight due to the sensitivity of the subject.

1.3 Discussion with women about their experience

Women with a raised BMI who attended the Anaesthetic clinic and the Diabetic team between January 2014 to March 2015, were asked if they would consent to an informal discussion about their experiences. 15 women agreed.

Recurring issue raised were women felt labelled and categorised on a Red Pathway of care; they disliked being referred to as ‘obese’ and particularly ‘morbidly obese’. However, women stated that they were happy for healthy weight to be discussed and expected health professionals to raise the subject at their appointment. Using descriptive term such as large or high BMI are more acceptable.

These themes mirror those raised in a similar qualitative study with 10 pregnant women in 2012.

1.4 Reviewing the literature

A literature search was undertaken on interventions for women with a high BMI before, during and after pregnancy and has been used to inform the following guidance.
2. INTRODUCTION TO HEALTHY WEIGHT IN PREGNANCY

This guidance outlines best practice on healthy weight for pre pregnancy, pregnancy and postnatal women in NHS Highland.

Motherhood is a time of great physical, psychological and social change. It is a time when women are likely to make positive changes to their health. A pregnant woman of an unhealthy weight, with nutritional deficiencies and an inactive lifestyle can face significant health risks.

There is strong evidence that nutritional status at conception is an important determinant of foetal growth. The diet and lifestyle of a pregnant woman will continue to have impact on her growing child’s health and well being for years afterwards (2,3,4)

The nutritional status of a woman before and during pregnancy is important for a healthy pregnancy outcome. Maternal malnutrition is a key contributor to poor foetal growth, low birth weight (LBW) babies and short- and long-term infant morbidity and mortality (6). Inadequate or poor nutrition in pregnancy can lead to a child being predisposed to hypertension, diabetes and coronary heart disease in later life. Advice relating to nutritional and energy needs should be offered to women with abnormal eating behaviours to maintain a healthy stable weight (3). Also, women who over exercise should be offered advice to tailor their exercise needs to the national recommendations due to risks to the health of their baby.

The BMI of an individual is a poor indicator of nutritional status, however it may be a marker for further discussion, support or intervention.

In Vitro fertilisation (IVF) can be more challenging for women with a low or high BMI. Women who are seeking IVF will be advised that the national guidance states BMI for a female partner needs to be more 18.5kg/m² and less than 30kg/m², before they can be referred for NHS funded IVF treatment (32). Women with a low or high BMI seeking advice on accessing fertility services within NHS Highland should be encouraged to optimise their nutritional status, by responding to internal cues of hunger and fullness, recognition of emotional eating and following the national recommendation related to physical activity.

These gains are promoted within Weight Management Services provided by NHS Highland http://healthyhighlanders.co.uk/HPAC

Women with a Low BMI below 18.5

Additional support should be offered to women with a low BMI. Particular attention should be paid to vitamin and mineral status, energy intake and weight gain.

Women with a low BMI have an increased risk of preterm delivery, and of having babies who are small for dates.

Pathway Healthy Weight in Pregnancy – see Appendix 2

Schedule of Care – see Appendix 4

High BMI above 30

Additional support should be offered to women with a high BMI. A healthy nutritious diet and an active lifestyle should be encouraged.

Women with a high BMI have an increased risk of stillbirth and neonatal death (7). The fetus is at greater risk of being large for dates and suffering foetal distress and birth injury. The greater the maternal BMI, the higher the risk of congenital abnormality (8). Scanning images are more difficult to obtain resulting in reduced detection of malformations. The foetal heart rate is more difficult to monitor during pregnancy and labour.

Whilst there is an acknowledged risk associated with a high BMI, traditional dieting approaches for managing gestational weight gain in women with a high BMI have been ineffective in terms of clinical outcomes (31). Conscious restriction of dietary intake is
ineffective in terms of long term weight outcomes and also has been shown to be counter productive, promoting psychological distress and unhealthy eating behaviours (26,27). Approaches which focus on improving lifestyle behaviours in regard to diet, physical activity and stress can lead to gains in health and wellbeing.

NHS Highland Pre Pregnancy, Pregnancy and Postnatal Care Pathway for Healthy Weight - see Appendix 2
Schedule of Care - see Appendix 4

Social Influences on Weight
A woman is much more likely to have an inadequate intake of key nutrients and be less physically active if she lives in an area of multiple deprivation compared with a woman in a less deprived area. There may be obstacles facing a pregnant woman attempting to make changes to her diet. These issues may be particularly relevant for woman who experience deprivation:

- Less disposable income for healthy food and leisure facilities
- Lack of cooking skills
- Lack of cooking equipment or facilities where she lives
- Lack of access to shops selling fresh, affordable and high quality foods
- Dislike of particular foods or categories of foods. Cultural dietary preferences of the different ethnic groups

These social factors pose a significant challenge for health professionals as people most in need of dietary guidance and support may be most difficult to reach.

Health professionals must be aware of the challenges that can affect the lifestyle choices a woman makes. Giving a woman a list of foods to eat and avoid in pregnancy may not be sufficient to help her achieve a healthy diet (10). When applicable discuss support networks, Healthy Start eligibility and ensure women and families know how to access income maximisation services that are available to them in their local area.

Throughout NHS Highland there is a multi disciplinary team network promoting healthy weight. NHS North Highland has Community Food and Health Practitioners who can promote healthy affordable foods and cooking skills particularly in deprived areas. NHS Argyll and Bute pathway – see Appendix 10

A project is currently being undertaken with the Citizens Advice Bureaus and midwives to offer all women an opportunity to explore maximising their income at the very earliest stages. This project follows a successful test with the Dingwall midwifery team and the Highland Council Income Maximisation service. Work is also underway in Argyll and Bute council to link families more closely into income maximisation services.

Clinical Practice
The period before, during and after pregnancy provides an opportunity to offer women practical advice to help them to maximise their income, access services, eat healthily, become more physically active and to help them manage their weight effectively (11)

The family nurse partnership for young 1st time mums offers structured home visiting delivered by specially trained staff from early pregnancy before 28 weeks gestation until 2 years old. It aims to improve pregnancy outcomes, child health and development and the mother’s economic self sufficiency (6,12)

Pathway for Healthy Weight in Pregnancy – see Appendix 2
NHS Highland Pre Pregnancy, Pregnancy and Postnatal Care Pathway for Healthy Weight – see Appendix 3
Behaviour Change

Our needs assessment demonstrates that women want practitioners to address the issues of weight management directly and support them in a non-judgemental way. When discussing nutrition and lifestyle issues, using a Health Behaviour Change approach will support women to make suitable choices and be in control of their own health. Information and support should be personalised, relevant, realistic, practical and grounded in a relationship of trust and respect. (13). Please refer to conversation tools based on health behaviour change.

Conversation tool for healthy weight - see Appendix 9
Pathway for referral to local healthy weight programme - see Appendix 10
Conversation tool for exercise – see Appendix 11
Opportunities for free NHSH face to face training on Health Behaviour Change using Motivational interviewing can be found at: http://intranet.nhsh.scot.nhs.uk/org/CorpServ/PublicHealth/TrainingEvents/Pages/Default.afp

Compassionate Connections is a family focused online learning resource to support a health professional’s role in maternal, newborn and infant health and wellbeing. It can be accessed at http://www.knowledge.scot.nhs.uk/midwifery/learning/compassionate-connections.aspx

Access to Services

Staff reported their difficulties in raising the issue of weight. One of the main reasons is because obesity is a sensitive subject associated with societal stigma. Evidence shows that people who have a raised BMI can be stereotyped in a negative way (28). This may mean women feel stigmatised and are less likely to access services (29,30). Practical things we can do to make services more accessible are:

- ensure that suitable equipment is in place – chairs, BP cuffs etc.
- not to weigh women unless clinically indicated
- use words that women find acceptable. Terms which are descriptive, like ‘large’ or ‘high BMI’, are preferable to those that are perceived as judgemental, such as overweight and obese.
3. PRE PREGNANCY – HEALTHY WEIGHT MANAGEMENT

All women should be encouraged to enter pregnancy and childbirth in the best possible health. Whilst maternal high BMI is correlated with health risks during pregnancy it is often too simplistic and unrealistic to advocate weight loss as a solution. Approaches which prioritise improvements in health over weight loss are more likely to result in sustainable, long term changes. Many women will report successfully losing weight in the past (with compliance and willpower), but find that weight loss maintenance is unsustainable, becoming demoralised and then reverting to less healthy behaviours; this weight yo–yoing is commonly associated with health risks and undermines self esteem (27).

3.1 Healthy Diet

The nutritional status of a woman could have implications on the future health of a child (3). Women should be encouraged to develop a healthy relationship to food by;

- eating a varied, balanced diet or foods that they enjoy, based on the Eatwell plate
- learning to recognise signals of hunger and fullness as cues to eating
- recognising, when they may be eating to fulfil an emotional need and identify alternative coping mechanisms (26).

3.2 Vitamins

Folic Acid

Almost 50% of pregnancies are unplanned. Therefore, it is essential that women of childbearing age are informed of the importance of taking folic acid supplements when they are not using contraception. Folate (Folic Acid) is one of the B groups of vitamins and works with vitamin B12 to form healthy blood cells. It also helps reduce the risk of neural tube defects (NTD) such as spina bifida and encephalopathy in unborn babies. Within the first 25 days of pregnancy, the neural tube forms the spinal cord and brain. Folic acid is required pre-conceptually to ensure adequate levels are present in the earliest stages of pregnancy (3,4,5). Women thinking of having a baby or a woman who is pregnant requires a higher dose of folic acid.

**Recommendations**

At least one month prior to conception until the 12th completed week of pregnancy all women must be advised to take a 400 microgram supplement of Folic Acid.

A woman should be advised to take 5mg supplement of Folic Acid if any of the following risk factors are identified: if a woman is diabetic, taking anti-epileptic drugs, has a family history of NTD or has had a previous pregnancy affected by NTD, coeliac disease or other malabsorption state.

A woman with Sickle cell anaemia should continue to take her normal dose of 5 milligrams of Folic Acid.

Schedule of Care. See Appendix 4
3.3 Physical Activity
Getting fit for pregnancy and childbirth through being active is a key part of achieving a healthy pregnancy. The National Recommendations are at least 150 minutes of exercise spread across the week, for example 30 minutes on at least five days of the week. If women have not exercised routinely begin with at least a 10 minute session per day and build on that (14).

Highland has a whole range of different activities for a rage of different people. NHS North Highland link https://www.highlifehighland.com/
NHS Argyll and Bute link contact a leisure centre or access information at www.argyll-bute.gov.uk.

Conversation tool for exercise. See Appendix 11

3.4 Clinical Practice
Offer discussion on healthy weight with Ready Steady Book and the Eat Well Plate. If the woman needs further support offer local Healthy Weight Programme

The period from conception to birth and through to infant aged 2 years is a window of opportunity to reach women and their immediate families to help ensure a commitment to positive eating habits and healthy lifestyles throughout the course of life (10).

Before pregnancy women should be advised to identify lifestyle changes which are beneficial for their own health, rather than pursuing weight loss. Those women who exercise dietary restraint prior to conception are more likely to gain the most weight during pregnancy.

NHS Highland Pre Pregnancy, Pregnancy, Postnatal Care Healthy Weight Pathway - see Appendix 3
Pathway for referral to local healthy weight programme - see Appendix 10

Resources
Highland Information Trail.
http://forhighlandschildren.org/4-icspublication/index_138_3416564707.pdf

- Ready Steady Baby can be used around discussions of Health Behaviour www.readysteadybaby.org.uk
- Pathway for Healthy Weight - see Appendix 2
- NHS Highland Pre Pregnancy, Pregnancy and Postnatal Care – see Appendix 3
- Schedule of Care - see Appendix 4
- The Eatwell Plate – see Appendix 5
- Conversation tool for healthy weight - See Appendix 9
- Sign post Healthy Weight Programme - see Appendix 10
- Physical Activity Conversation Tool – see Appendix 11
- NHS Highlands “Healthy Weight in Pregnancy” leaflet – see Appendix 12
4. PREGNANCY – HEALTHY WEIGHT MANAGEMENT

4.1 Healthy Diet
A balanced diet encompasses eating a range of different foods, in different amounts which meets the body’s needs, and promotes a healthy pregnancy.

Healthy weight management in pregnancy includes the normal incremental weight gain. The amount of weight a woman may gain in pregnancy can vary a great deal. Only some of it is due to increased body fat – increases in foetal growth, placenta, amniotic fluid and increases in maternal blood and fluid volume all contribute (11).

There is no evidence based UK Guidance on recommended weight gain ranges during pregnancy (11). Weight maintenance in pregnancy will equate to weight loss or dieting for women.

**NOTE:** Dieting and weight management programmes which promote either weight loss or weight maintenance are not recommended during pregnancy.

Restrictive diets may increase blood ketone levels and could adversely affect the neuro cognitive development of the fetus (11).

**Indicators for a Nutritious Balanced Diet (15)**
- Lots of fruit and vegetables
- Plenty of high fibre starchy foods like potatoes, rice, pasta, bread and cereals.
- Protein rich food including at least two portions of fish per week and no more than two portions of oily fish a week.
- Plenty of fibre, including fruit and vegetables, nuts and seeds, as well as oats, brown rice, wholegrain cereals and bread
- Dairy products like plain yoghurt, semi skimmed milk and hard cheese
- Plenty of non sugary, non alcoholic fluids (keep fruit juice to meal times to reduce tooth decay).

**Foods to Avoid in Pregnancy. See Appendix 7**

Women often worry about what food to avoid and a list is included in Appendix 7. Women should be encouraged to learn to recognise signals of hunger and fullness as cues to eating; recognise when eating to fulfil an emotional need and identify alternative coping mechanisms.

Women on low income should be encouraged to apply for Healthy Start scheme. Healthy Start is the Welfare Food Scheme in the UK. This aims to support and improve nutritional uptake to low income women, and increase their fruit and vegetable intake. If women are under 18 years or in receipt of income support they are likely to be eligible for Healthy Start (2) and should be supported to apply as per Healthy Start Pathways.

Healthy Start Pathway Important points for midwives - Appendix 13
Healthy Start Pathway Checklist for pregnancy - Appendix 14
Healthy Start Pathway Check list for family with new baby - Appendix 15.

**Dental Care**
Pregnancy provides an opportunity to remind a woman to register with a dentist. Baby teeth calcification begins at five months in utero; adult teeth calcification begins just before or shortly after birth. If a woman experience any problems registering with a dentist then the NHS Dental Helpline number should be given Tel 0845 644 2271 or email nhshighland.dentalhelpline@nhs.net.

**4.2 Vitamins in Pregnancy**
i. Healthy Start Vitamins

Maternal vitamin and mineral supplements contain the recommended doses of 400 micrograms folic acid, 10 micrograms of vitamin D and 70 milligrams of Vitamin C required by pregnant and breastfeeding mothers (16).

All women eligible for Healthy Start scheme will receive a green voucher to exchange for Healthy Start vitamins at community pharmacies. As its vitamins contain all the right amounts of vitamins for pregnancy, non eligible women should be encouraged to buy these vitamins which are very inexpensive. Healthy Start is issued to all pregnant women at booking as per Highland Information Trail.

Healthy Start information and application Form: HIR 1FOO/007/L
Pathway for Healthy Start: Important points for Midwives. See Appendix 13
Pathway for Healthy Start: Check list for pregnancy. See Appendix 14

ii. Folic Acid

A pregnant woman with identified risk factors require a higher dose of folic acid during the first 12 weeks to help prevent Neural Tube Defects as discussed on page 8.

The higher dose is only available on prescription by a GP / Nurse Practitioner, as per NHS Highland pre pregnancy, pregnancy and postnatal care pathway for healthy weight.

A woman should also be encouraged to eat foods rich in folate as part of healthy diet. Folic acid can be found in green leafy vegetable, fortified cereals, lentils, oranges, berries, and potatoes.

Further information can be obtained from www.eatwell.gov.uk and www.readysteadybaby.org.uk

iii. Vitamin D

Vitamin D is a fat soluble prohormone, which is essential for skeletal growth and bone health (17). Vitamin D is needed to keep bones and teeth healthy and is particularly important in preventing newborn babies from developing rickets. Lack of Vitamin D during pregnancy may adversely affect foetal bone mineralisation and accumulation of vitamin D stores for the early years of life (8,16,18,)

**Recommendations**

All pregnant women and breastfeeding women should take a supplement of 10 microgram (400 units) of vitamin D daily. NOTE: Healthy Start Vitamins contain 10 micrograms of Vitamin D.
iii) Vitamin C
Vitamin C helps the body absorb iron and maintain a healthy immune system. Eating a healthy, balanced diet containing plenty fruit and vegetables will supply sufficient vitamin C for most people, but a supplement will help to ensure that a pregnant or breastfeeding woman is receiving enough (19)

Asprin

**IF RISK FACTORS IDENTIFIED** for pre eclampsia then advise women to take low dose Asprin 75mg orally once a day from 12 weeks gestation until delivery – see pre pregnancy, pregnancy, postnatal care healthy weight pathway, Appendix 8 (20)

Vitamin A

A pregnant woman **SHOULD AVOID** supplements containing Vitamin A as these may cause foetal abnormalities (19)

4.3 Physical Activity

Moderate intensity activity during pregnancy is safe and does not harm the growth and development of the fetus and should be encouraged for all women. Additional support and tailored advice should be offered to sedentary pregnant women with a high BMI in preparation for labour, and in order to reduce any associated risks.

Physical activity can reduce the likelihood of developing high blood pressure, diabetes, thromboses, pre-eclampsia and backache in pregnancy. It also positively affects mood, self-esteem and body image as well as promoting restful sleep and relieving stress, depression and anxiety. Regular exercise establishes good habits and encourages the whole family to become active. Swimming and brisk walking are particularly recommended in pregnancy and most women can continue their normal physical activity. If a woman exercises regularly prior to pregnancy she should be able to continue high intensity exercise activities, such as running and aerobics, with no adverse effects.

Beginning or continuing a moderate course of exercise during pregnancy is not associated with adverse outcomes. (21,22)

Highland has a whole range of different activities for a range of different people.
NHS North Highland link [https://www.highlifehighland.com/](https://www.highlifehighland.com/)
NHS Argyll and Bute link contact a leisure centre or access information at [www.argyll-bute.gov.uk](http://www.argyll-bute.gov.uk).

**Recommendations**

All pregnant women should be advised to follow the National Recommendations of 30 minutes of moderate exercise on at least 5 days a week. If a woman has not previously exercised she should be encouraged to participate in gentle activity throughout pregnancy, starting with 15 minutes aerobic activity three times a week, increasing to 30 minutes of moderate exercise on at least 5 days a week (11,23)

Fit for Pregnancy, is recommended as per Highland information Trail. HIRS ICPB/011/L
The talk test
The talk test is an aid to measure personal effort. Women can monitor their level of exercise by differentiating between moderate intensity and vigorous intensity. During recreational exercise, she should be able to hold a conversation. If she is unable to chat without taking big breaths in between and becomes breathless, then the level of exercise is probably too strenuous (14).

Contraindications
Pregnant women should be informed of the potential dangers of certain activities during pregnancy, for example contact sports, high impact sports like racquet sports that may involve the risk of abdominal trauma, falls, excessive joint stress and scuba diving which may result in foetal birth defects and foetal decompression disease (24). As per GROW it is not recommended to participate in more than 3 sessions of vigorous exercise per week.

The High Life membership offers individual and family access to a range of health and fitness opportunities in leisure centres throughout the Highlands. In addition to swimming pools and fitness suites, membership provides access to squash courts, swimming lessons and a huge range of group exercise classes for people of all abilities and interests.

Budget accesses are available for families and individuals on certain benefits.

NHS North Highland link https://www.highlifehighland.com
NHS Argyll and Bute link contact a leisure centre or access information at www.argyll-bute.gov.uk.

Conversation tool for exercise - see Appendix 11 to support discussion.

Breastfeeding

All antenatal women should receive advice and support on the benefits, initiation and maintenance of breastfeeding, but a woman with a high BMI may require additional help as evidence indicates that high BMI is associated with short breastfeeding duration (8).

NHS Highland offer antenatal women with a BMI >30kg/m² a referral to the Specialist Infant Feeding Clinic run by the Infant Feeding Advisor. Women will have an opportunity during the antenatal period to discuss the benefits of breastfeeding and the support that will be available to make a fully informed decision regarding their feeding choices.

Helpful links for women

- Facebook site: Highland Antenatal breastfeeding chat
- Twitter Account: NHSH_Breastfeed
- http://www.unicef.org.uk/babyfriendly/

Leaflet: Off to a good start HIRS 1BAB/004/L
4.4 Clinical Practice

Maternal risk factors associated with diet and exercise may be highlighted to women at booking and ongoing appointments. Risk factors are categorised using Gestational Related Optimal Weight (GROW). The protocol is also referred to as Growth Assessment Protocol (GAP) and will have an impact on their care package.

**Obstetrician**

Women with a BMI <18.5 and >35 kg/m² follow a Red Pathway of Care as per pathways for maternity care (2009). The Consultant Obstetrician will be the lead professional sharing the care of these women with the maternity team. Delivery in a Consultant led unit could reduce the risk or incidence of perinatal morbidity and mortality.

**Anaesthetists**

Women with a BMI >40 will be referred to the Anaesthetic Team by the Consultant Obstetrician. An Anaesthetic Consultation will take place in the 3rd trimester to identify and anticipate any potential difficulties with venous access, regional or general anaesthesia (8).

NHS Highland Pre pregnancy, Pregnancy and Post Natal Care Healthy Weight Pathway – see Appendix 3, will enable discussion and decisions

Conversation Tool for Healthy Weight – see Appendix 9

Resources
Highland Information Trail.
http://forhighlandschildren.org/4-icspublication/index_138_3416564707.pdf

- Off to a good start  HIRS 1BAB/004/L
- Fit for Pregnancy, HIRS ICPB/011/L
- Healthy Start information and application Form : HIR 1FOO/007/L
- Ready Steady Baby Book and App can be used around discussions re Health Behaviour www.readysteadybaby.org.uk
- The Eatwell Plate – see Appendix 5
- Aspirin Pathway - see Appendix 8
- Local healthy weight programme or referral through Dietetics - see Appendix 10
- Physical Activity Conversation Tool - see Appendix 11
- NHS Highlands “Healthy Weight in Pregnancy” leaflet - see Appendix 12
- Healthy Start Pathway Important points for Midwives - see Appendix 13
- Healthy Start Pathway Check list for pregnancy - see Appendix 14
- Healthy Start Pathway – Check list for family with new baby – see Appendix 15
5. POSTNATAL - HEALTHY WEIGHT MANAGEMENT

5.1 Healthy Diet
It is importance to embark on a subsequent pregnancy with a healthy stable weight and with good nutritional status.

Women should continue to be encouraged to maintain a healthy relationship to food by;

- eating a varied, balanced diet of foods that they enjoy, based on the Eatwell plate
- learning to recognise signals of hunger and fullness as cues to eating
- recognising when they may be eating to fulfil an emotional need and identify alternative coping mechanisms (26).

This will impact on the choices she makes when feeding herself, her baby and her family.

Conversation tool for healthy weight - see Appendix 9
Pathway for referral to local healthy weight programme - see Appendix 10

Healthy Start Vouchers

Women on low incomes who are eligible for the Healthy Start scheme can also receive vouchers for their baby. Recipients of Healthy Start must notify the issuing unit of the birth of their baby as soon as possible in order to continue to receive vouchers and ensure they are doubled up. http://www.healthystart.nhs.uk/. All women on low income who are eligible must be reminded of this and should be supported to apply as per Healthy Start Pathways.

Healthy Start Pathway Important points for midwives - Appendix 13
Healthy Start Pathway Checklist for pregnancy - Appendix 14
Healthy Start Pathway Check list for family with new baby - Appendix 15.

Leaflet - remind eligible parents of the healthy start scheme
Recommended as per Highland Information Trail. HIR 1FOO/007/L

5.2 Vitamins

Vitamin D

In newborns Vitamin D status is largely determined by the mother’s levels of vitamin D during pregnancy. Breast milk is not a significant source of Vitamin D and breastfed infants may not get enough vitamin D to meet their needs. Therefore all breastfeeding women should continue to take Healthy Start vitamins.

Leaflet: Vitamin D and you important health information for everyone
Recommended as per Highland Information Trail. HIR 1FOO/002/L.

Recommendations

All breastfeeding women should be advised to take a 10 microgram (400 units) Vitamin D supplement. Note this is in Healthy Start Vitamins (16, 18)
5.3 Physical Activity

To promote health and wellbeing women should continue to be encouraged to maintain an active lifestyle. Women can be supported to participate in physical activity with their babies. In addition pushing buggies and using a sling promote attachment and bonding. Many Leisure Centres offer mother and baby swimming sessions and other family based activities. These classes will also encourage women to meet other new mothers (2).

Highland has a whole range of different activities for a range of different people. NHS North Highland link [https://www.highlifehighland.com/](https://www.highlifehighland.com/) NHS Argyll and Bute link contact a leisure centre or access information at [www.argyll-bute.gov.uk](http://www.argyll-bute.gov.uk).

Conversation tool for exercise. See Appendix 11

Resource Leaflet: Fit for the future
Recommended as per Highland Information Trail HIRS 1CON/001/L

Breastfeeding

All women should receive advice and support to initiate and maintain breastfeeding but a woman with a high BMI may require additional ongoing support as evidence indicates that high BMI is associated with short breastfeeding duration. These reasons may include mechanical difficulties of positioning the baby at the breast and physiological difficulty such as impaired prolactin response to the baby suckling (8), which can be overcome with appropriate support.

NHS Highland offers all women information on local support options available to promote breastfeeding. Breastfeeding peer support is a service offered to all postnatal breastfeeding women, there are peer support groups throughout NHS Highland, Infant Feeding Support workers and the Specialist Infant Feeding Clinic run by the Infant Feeding Advisor all available to promote and support breastfeeding.

- Support Groups throughout NHS Highland Trail
- Facebook site: Highland Breastfeeding Support, Highland Breastfeeding Support Chat, Highland Antenatal breastfeeding chat
- Twitter Account: NHSH_Breastfeed

Recommended as per Highland Information
Leaflet: Postnatal breastfeeding leaflet HIR 1BAB/008/L
Leaflet: Breastfeeding and returning to work HIR 1CON/011/L

5.4 Clinical Practice

Advice and support around lifestyle factors and general health and wellbeing should continue to be offered following childbirth. Some women may need nutritional counselling or information regarding opportunities for physical activity such as low cost options.

Schedule of care - see Appendix 4
The Eatwell Plate - see Appendix 5
List of recommendations - see Appendix 6
There is an NHS breastfeeding peer support service provided to encourage and support Breastfeeding mums

Women with a BMI >30kg/m² at booking, who have had Gestational Diabetes should be advised and supported to attend their 6 week follow up with their General Practitioner. As this is a modifiable risk factor for long term health issues it is therefore important to emphasise the need for such screening after delivery.

**Recommendations**

**All women with a booking BMI >30 diagnosed with Gestation Diabetes should have a Glucose Tolerance Test (GTT) at approximately 6 week after giving birth with their General Practitioner (25).**

If these women have a normal GTT following childbirth, they should be advised to have regular follow up with the GP to screen for development of Diabetes. They should have annual screening for cardio-metabolic risk factors and should be offered Healthy Weight advice (25).

**Future Pregnancy**

Women should continue to be encouraged to lead a healthy and active lifestyle, which should include ensuring their baby and/or children have the best start in life. After pregnancy it is important to discuss contraception and any plans for future pregnancies. An empathetic, non judgemental approach will encourage these women to have a positive experience of maternity services and access support when required.

Resource Leaflet: your guide to contraception HIR 1CON/011/L
Resource Leaflet: your guide to contraceptive choices, after you’ve had your baby HIR 1CON/010/L

**Resources**

Highland Information Trail.
http://forhighlandschildren.org/4-icspublication/index_138_3416564707.pdf

- Remind eligible parents of the healthy start scheme HIR 1FOO/007/L
- Vitamin D and you important health information for everyone HIR 1FOO/002/L.
- Fit for the future HIRS 1CON/001/L
- Postnatal breastfeeding leaflet HIR 1BAB/008/L
- Breastfeeding and returning to work HIR 1CON/011/L
- Your guide to contraception HIR 1CON/011/L
- Your guide to contraceptive choices, after you’ve had your baby HIR 1CON/010/L
- Ready Steady Baby Book and App can be used around discussions re Health Behaviour www.readysteadybaby.org.uk
- Healthy Start web link http://www.healthystart.nhs.uk/
- Schedule of care - see Appendix 4
- The Eatwell Plate - see Appendix 5
- List of recommendations - see Appendix 6
- Local healthy weight programme or referral through Dietetics – see Appendix 10
- Physical Activity Conversation Tool – see Appendix 11
- Pathway for Healthy Start: Important points for Midwives – see Appendix 13
- Pathway for Healthy Start: Check list for family and new baby – see Appendix 15
APPENDIX

1. BMI Statistics for Pregnant Women - NHS North Highland
2. Pathway Healthy Weight in Pregnancy
3. NHS Highland Pre pregnancy, Pregnancy, Postnatal Care Pathway for Healthy Weight
4. Schedule of Care
5. Eat Well Plate
6. Summary of Recommendations
7. Foods to avoid in Pregnancy
8. Pathway for Antenatal use of low dose Aspirin for prevention of pre eclampia.
9. Conversation Tool for Healthy Weight
10. Referral to Dietetics
11. Conversation Tool for Exercise
12. Healthy Weight Leaflet
13. Healthy Start: important points for midwives
14. Healthy Start: Check list for pregnancy
15. Healthy Start: Check list for family with new baby
16. Women’s Resources
APPENDIX 1
NHS North Highland BMI statistics for pregnant women in 2014 broken down to locality

1.1.1 Raigmore, Inverness BMI Statistics in Pregnancy for 2014

<table>
<thead>
<tr>
<th>BMI kg/m²</th>
<th>NO</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;18.4</td>
<td>60</td>
<td>3</td>
</tr>
<tr>
<td>18.5-24.9</td>
<td>988</td>
<td>48</td>
</tr>
<tr>
<td>25-29.9</td>
<td>576</td>
<td>28</td>
</tr>
<tr>
<td>30-34.9</td>
<td>247</td>
<td>12</td>
</tr>
<tr>
<td>35-39.9</td>
<td>94</td>
<td>4</td>
</tr>
<tr>
<td>&gt;40</td>
<td>45</td>
<td>2</td>
</tr>
<tr>
<td>Missing data</td>
<td>63</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>2073</td>
<td>100</td>
</tr>
</tbody>
</table>

1.1.2 Belford Hospital, Fort William BMI Statistics of BMI in Pregnancy for 2014

<table>
<thead>
<tr>
<th>BMI kg/m²</th>
<th>NO</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;18.4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>18.5-24.9</td>
<td>18</td>
<td>56</td>
</tr>
<tr>
<td>25-29.9</td>
<td>10</td>
<td>32</td>
</tr>
<tr>
<td>30-34.9</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>35-39.9</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>&gt;40</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Missing data</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100</td>
</tr>
</tbody>
</table>

1.1.3 Caithness General Hospital, Wick BMI Statistics in Pregnancy for 2014

<table>
<thead>
<tr>
<th>BMI kg/m²</th>
<th>NO</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;18.4</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>18.5-24.9</td>
<td>104</td>
<td>48</td>
</tr>
<tr>
<td>25-29.9</td>
<td>59</td>
<td>27</td>
</tr>
<tr>
<td>30-34.9</td>
<td>34</td>
<td>16</td>
</tr>
<tr>
<td>35-39.9</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>&gt;40</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Missing data</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>217</td>
<td>100</td>
</tr>
</tbody>
</table>

1.1.4 MacKinnon Hospital, Skye BMI Statistics in Pregnancy for 2014

<table>
<thead>
<tr>
<th>BMI kg/m²</th>
<th>NO</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;18.4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>18.5-24.9</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>25-29.9</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>30-34.9</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>35-39.9</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>&gt;40</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Missing data</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>100</td>
</tr>
</tbody>
</table>

Statistics from January – December 2014 were obtained March 2015

Produced by: Beverley Green, Midwife. Healthy Weight in Pregnancy Guidance 2015
APPENDIX 2: PATHWAY – HEALTHY WEIGHT IN PREGNANCY
“For midwifery / obstetric guidance refer to Schedule of Care and NHS Highland Pre pregnancy, Pregnancy and Postnatal Care Healthy Weight Pathway”.

<table>
<thead>
<tr>
<th>PRE PREGNANCY</th>
<th>PREGNANCY</th>
<th>POSTNATAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Support all women to enter pregnancy with a healthy stable weight and a good nutritional status</td>
<td>1. Recommend folic acid supplementation is taken until 12th completed week of pregnancy</td>
<td>1. Promote how important Healthy Start Vitamins are and advise all Breastfeeding mothers to take vitamin D</td>
</tr>
<tr>
<td>2. Raise awareness with women of childbearing age that some health risks in pregnancy and childbirth associated with a BMI &gt;30 and how to minimise them.</td>
<td>2. Follow pre pregnancy / pregnancy / postnatal Clinical Care Healthy Weight Pathway if BMI&gt;30.</td>
<td>2. If a history of gestational diabetes arrange a postnatal 6 week follow up and screening for diabetes and cardio metabolic risk factors</td>
</tr>
<tr>
<td>3. Recommend all women to commence folic acid supplements 400mcg daily</td>
<td>3. GROW – Implement by 22 weeks by Midwife</td>
<td>3. Support Women to achieve a healthy stable weight and a good nutritional status.</td>
</tr>
<tr>
<td>NOTE: standard dose Folic Acid 5mg daily: If Diabetic, family history of NTD, on epileptic drug, sickle cell anaemia, coeliac or any other mal absorption state</td>
<td>4. Give Healthy Start application form at booking highlight the importance of vitamin supplementation in pregnancy and availability of Healthy Start vitamins.</td>
<td>4. Raise awareness of contraception</td>
</tr>
<tr>
<td>4. Raise the issue of physical activity</td>
<td>5. Encourage discussion around healthy weight at antenatal class or with midwife.</td>
<td>5. Encourage women to keep active</td>
</tr>
<tr>
<td>5. All antenatal contacts offer an opportunity to discuss the important benefits which breastfeeding offers mum and baby. Highlight Infant Feeding Support Worker and antenatal Peer Buddy Scheme. Complete antenatal conversation tool.</td>
<td>6. Support Women to achieve a healthy stable weight and a good nutritional status.</td>
<td></td>
</tr>
<tr>
<td>7. Encourage participation in physiotherapy class if available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

RESOURCES

1. Offer Healthy Weight Leaflet
2. Discuss Healthy Start Vitamins
3. Encourage a healthy diet using Eat Well Plate, Ready Steady Book / App
4. Encourage Physical Exercise – See Appendix 4
5. Signpost to local Healthy Weight Programme or refer through Dietetics if necessary
Intranet Link: Internet Link: http://nhshighland.scot.nhs.uk/yourhealth/pages/healthyweight.aspx

“USE A HEALTH BEHAVIOUR CHANGE APPROACH”
Any Additional intensive needs identified and addressed using GIRFEC, KCND

Beverley Green, Midwife. Version 2 - issued 2015
## APPENDIX 3: NHS HIGHLAND PRE PREGNANCY, PREGNANCY, POSTNATAL CARE PATHWAY FOR HEALTHY WEIGHT

**Pre-pregnancy:**
- Raise the issue of Healthy weight preve
- Offer information and advice about physical activity and nutrition
- ‘Managing our weight in pregnancy’ leaflet
- Commence 400mcg of folic acid daily prior to conception (5mg if additional risk factors)

**Booking visit:**
- Measure weight and height, calculate and document BMI in SWHMR and summary sheet
- Use appropriate size BP cuff
- Continue daily folic acid supplement to 12 weeks
- Advise 10mg Vitamin D daily throughout pregnancy
- Assess and document thrombophrophylaxis risk - thromboprophylaxis if indicated
- Offer information and about risks of high BMI and pregnancy and how to minimize them. Offer ‘Healthy Weight in Pregnancy’ leaflet.
- Consider referral to local dietetic service.

**Throughout pregnancy:**
- Community midwife generate customized growth chart by 22 Weeks Gestation
- Assess and document thrombophrophylaxis risk – thromboprophylaxis if indicated
- Use appropriate size BP cuff

**Third trimester**
- Give advice and support regarding benefits, initiation and maintenance of breastfeeding (inform of local support options). Offer referral to Specialist Breast feeding clinic
- Individual assessment for presentation and foetal wellbeing - ultrasound scan as required

**Labour and delivery**
- Strongly recommend active management of third stage of labour
- Ensure single dose of prophylactic antibiotic given at C/S
- Encourage to mobilise as early as practicable
- Assess thromboembolism risk - thromboprophylaxis if indicated
- Give advice and support regarding benefits, initiation and maintenance of breastfeeding (inform of local support options)
- Refer to primary care for ongoing weight management advice and support
- If gestational diabetes
  - glucose tolerance test at 6 weeks postnatal
  - refer to GP for annual screening for diabetes and cardiovascular metabolic risk factors
  - offer lifestyle and weight management advice

**Following childbirth**
- If no contraindications commence thromboprophylaxis for 7 days regardless of delivery mode

### Care for all women with BMI ≥ 30

**As above**

### Additional care for women with BMI ≥35

**As above plus:**
- Refer for specialist care (KCND Red Pathway)
- Consider pre-eclampsia risk and aspirin 75 milligrams daily from 12 weeks until delivery.
- Consultant Obstetrician to document management plan in SWHMR if one or more additional risk factors present
- Book for glucose tolerance test at 24-28 weeks

**As above plus:**
- Schedule antenatal care and monitoring of blood pressure as per individual needs based on pathways for maternity care
- Glucose tolerance test 24-28 weeks

**As above plus:**
- Advise birth in consultant-led obstetric unit which has adult and neonatal intensive care facilities (Raigmore and RAH)
- Alert theatre staff if weight > 120kg and requires operative intervention

**As above plus:**
- Arrange antenatal Anesthetic Review
- Anesthetic review
  - re-measure maternal weight if necessary and record in SWHMR
  - risk assessment for manual handling requirements
  - Review by Consultant Obstetrician by 36 weeks

**As above plus:**
- Inform Anaesthetist on admission to labour suite
- Establish early venous access
- Consider early epidural in labour
- Senior Obstetrician and Anaesthetist informed and available to attend operative vaginal or abdominal delivery as required

**As above**

### Additional care for women with BMI ≥40

**As above**

### APPENDIX 3: NHS HIGHLAND PRE PREGNANCY, PREGNANCY, POSTNATAL CARE PATHWAY FOR HEALTHY WEIGHT

- *HIGH RISK*: Hypertensive disease during previous pregnancy, chronic kidney disease, diabetes type 1 or type 2, chronic hypertension, auto immune disease such as Antiphospholipid syndrome/SLE.
- *MODERATE RISK*: first pregnancy Age 2,40yrs, BMI≥35 at booking, pregnancy interval>10yrs, family history of pre eclampsia, multiple pregnancy pre-existing hypertension, renal disease or diabetes, at least 1 high risk or 2 moderate risk factors then advise prescription for low dose aspirin.

Aspirin prescription may be requested from GP on “notification of treatment” form.


Beverley Green, Midwife. Version 2 - issued 2015
### APPENDIX 4

#### 4. SCHEDULE OF CARE

**Pre Pregnancy**
- Raise awareness of the risks and challenges of raised BMI in pregnancy
- Encourage women to achieve a good nutritional status and to be physically active regardless of their weight.
- If BMI >30 offer “Healthy Weight Leaflet” to support discussion regarding healthy weight in pregnancy.
- Encourage women to enter pregnancy with a healthy stable weight. If women have a history of dieting or weight cycling and require additional support signpost to a Well Now Programme or Dietetic referral as per Appendix 9.
- Raise awareness of possible reduction in accuracy of scanning and monitoring of foetal wellbeing.
- Consider screening for diabetes if BMI >35
- Recommend a 400 microgram supplement of folic acid to women of childbearing age who are not using contraception
- Recommend a 5 milligram supplement for women who are diabetic, taking anti-epileptic drugs, family history of NTD, Coeliac or any other mal absorption state.
- Women with Sickle cell disease should continue to take their normal dose of 5 milligrams of daily throughout pregnancy.
- Previous gestational diabetes – screen annually for diabetes and cardio metabolic risk factors
- Raise awareness of healthy food choices and food safety issues.

**Pregnant First Point of Contact (optional 2nd booking)**
- Discuss the importance of continuing folic acid supplement until the 12th completed week of pregnancy.
- Measure height, weight and BMI and record in Scottish Woman Held Maternal Record (SWHMR).
- Record thromboprophylaxis risk score in SWHMR as per NHS Highland Thromboprophylaxis Protocol. Review thromboprophylaxis risk score throughout pregnancy.
- If BMI>30 offer “Healthy Weight Leaflet” signpost to NHS Highland groups detailed on leaflet
- Discuss how a healthy nutritious diet and an active lifestyle will benefit mother and baby using Ready Steady Baby to support discussion
- Discuss Healthy Start scheme. Give application Form (P11 – stamp sign and estimate date of delivery by midwife).
- Raise awareness of the importance of vitamins in pregnancy and the availability of Healthy Start Vitamins. Discuss the importance of vitamin D supplements during pregnancy and breastfeeding
- Ensure BP is taken with appropriately sized cuff. Measure arm if applicable, to determine size of cuff.
- If BMI>30 follow NHS Highland “Pre-pregnancy, Pregnancy, Postnatal Pathway for Healthy Weight”.
- Referral by Consultant for Anaesthetic Review in 3rd trimester if BMI >40
- Raise awareness of the importance of dental care during Pregnancy. Ask if Registered with Dentist. Give (P10) Issue with FW8 form for exception certificate.
- Opportunistic discussions re diet and lifestyle using a health behaviour change approach
- Raise awareness of local options for exercise to promote healthy weight for pregnant women
- Assess if eligible and in receipt of Healthy Start vouchers
- Check if taking Healthy Start Vitamins and minerals. Emphasis relevance of vitamin D
- CMW will generate customised Growth Chart by 22 weeks gestation and update risk factors throughout pregnancy
- Check gestational glucose. Offer oral glucose tolerance test (OGTT) if BMI >35 or any other factors for gestational diabetes are present.
- Offer Bump to Breastfeeding DVD and information as per Highland Information Trail. Offer contact with Breastfeeding Peer Support Worker
- Offer discussion around leaflets

**15 – 16 Weeks**
- Offer oral glucose tolerance test (OGTT) if BMI >35 or any other factors for gestational diabetes are present.

**22 Weeks**
- Offer Bump to Breastfeeding DVD and information as per Highland Information Trail. Offer contact with Breastfeeding Peer Support Worker
- Offer discussion around leaflets

**28 Weeks**
- Offer Bump to Breastfeeding DVD and information as per Highland Information Trail. Offer contact with Breastfeeding Peer Support Worker
- Offer discussion around leaflets

**32 Weeks**
- Offer Bump to Breastfeeding DVD and information as per Highland Information Trail. Offer contact with Breastfeeding Peer Support Worker
- Offer discussion around leaflets

*Produced by: Beverley Green, Midwife. Healthy Weight in Pregnancy Guidance 2015*
34 Weeks

• Ensure breastfeeding antenatal conversation tool has been completed by 34 weeks

35 Weeks

• Assess risk factors for GROW Chart \ Ensure women with BMI <18 or >35 at booking have been reviewed by Obstetric Maternity Team.

• If BMI >40 at booking re measure weight and record in SWHMR.

• Ensure women with BMI>40 at booking have been reviewed by Anaesthetic Team

• Assess Risk factors for GROW Chart

38 - Term

• If BMI>35 advise birth in consultant led obstetric unit which has adult and neonatal intensive care facilities.

• If BMI>40 inform Anaesthetic Team on admission to Labour Ward and document in notes.

• Establish early venous access in women with BMI >40

• Continuous midwifery care for women in established labour with a BMI >40

• Recommend active management of 3rd stage of labour if BMI>30

• Ongoing thromboprophylaxis assessment

Intrapartum

• If BMI>35 advise birth in consultant led obstetric unit which has adult and neonatal intensive care facilities.

• If BMI>40 inform Anaesthetic Team on admission to Labour Ward and document in notes.

• Establish early venous access in women with BMI >40

• Continuous midwifery care for women in established labour with a BMI >40

• Recommend active management of 3rd stage of labour if BMI>30

• Ongoing thromboprophylaxis assessment

Postnatal

• Assess thromboprophylaxis risk assessment score and give thromboprophylaxis as indicated.

• Encourage early mobility in women with BMI>30

• If receiving Healthy Start Vouchers advise to phone Issuing Unit to inform of birth of baby. The national insurance number is needed when the call to the Healthy Start unit is made on 0345 607 6823. (Vouchers will double following baby’s birth until one year).

• Discuss Healthy Start vitamins for eligible breastfeeding mothers until baby is one year old and support with Vitamin D Leaflet as per Highland Information Trail.

• Offer contact with Breastfeeding Peer Support service offered by NHS Highland and offer breastfeeding information as per Highland Information Trail

• If history of Gestational Diabetes advise OGTT at 6 weeks postnatal and annual screening for diabetes and cardio metabolic risk factors by primary care team

• Raise awareness of Well Now / Counterweight Programmes offered by NHS Highland and the availability of local support options to achieve a healthy weight and improve nutritional status.

• Raise awareness on local options for exercise and activity

• Raise awareness of contraception choices and the importance of planning for a future pregnancy – encourage achieving health stable weight and optimum nutritional status prior to conception.
A healthy balance diet means eating a range of different types of food to make sure you have all the nutrients you and your baby needs.

The eatwell plate shows the differences types of food we need to eat and in what proportions to have a varied balanced and healthy diet.
**APPENDIX 6**

**SUMMARY OF RECOMMENDATIONS**

<table>
<thead>
<tr>
<th>1. PRE-PREGNANCY RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DIET Recommendations</strong></td>
</tr>
<tr>
<td>Before pregnancy women should be encouraged to develop a healthy relationship with food by: eating a varied, balanced diet of foods that they enjoy, based on the Eatwell plate; learning to recognise signals of hunger and fullness as cues to eating; recognise when eating to fulfil an emotional need and identify alternative coping mechanisms. Women should be advised to identify lifestyle changes which are beneficial for their own health, rather than pursuing weight loss.</td>
</tr>
<tr>
<td><strong>FOLIC ACID Recommendations</strong></td>
</tr>
<tr>
<td>At least one month prior to conception until the 12th completed week of pregnancy all women must be advised to take a 400 microgram supplement of Folic Acid. A woman should be advised to take 5mg supplement of Folic Acid if any of the following risk factors are identified. If a woman is diabetic, taking anti-epileptic drugs has a family history of NTD or has had a previous pregnancy affected by NTD, coeliac disease or other mal absorption state. A woman with Sickle cell anaemia should continue to take her normal dose of 5 milligrams of Folic Acid.</td>
</tr>
<tr>
<td><strong>PHYSICAL ACTIVITY Recommendations</strong></td>
</tr>
<tr>
<td>Getting fit for pregnancy and childbirth through being active is a key part of achieving a healthy pregnancy. The National Recommendations are at least 150 minutes spread across the week, for example 30 minutes on at least five days of the week. If women have not exercised routinely begin with at least a 10 minute session per day and build on that</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. PREGNANCY RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A balanced diet encompasses eating a range of different foods, in different amounts which meets the body’s needs, and promotes a healthy pregnancy.</td>
</tr>
<tr>
<td><strong>DIETING Recommendations</strong></td>
</tr>
<tr>
<td>NOTE: Dieting and weight management programmes which promote either weight loss or weight maintenance are not recommended during pregnancy. Restrictive diets may increase blood ketone levels and could adversely affect the neuro cognitive development of the fetus. See recommended foods on page 10 and foods to avoid Appendix 7</td>
</tr>
<tr>
<td><strong>VITAMINS Recommendations</strong></td>
</tr>
<tr>
<td><strong>Healthy Start Vitamins</strong></td>
</tr>
<tr>
<td>Maternal vitamin and mineral supplements contain the recommended doses of 400 micrograms folic acid, 10 micrograms of vitamin D and 70 milligrams of Vitamin C required by pregnant and breastfeeding mothers</td>
</tr>
<tr>
<td><strong>Vitamin D Recommendations</strong></td>
</tr>
<tr>
<td>All pregnant women and breastfeeding women should take a supplement of 10 microgram (400 units) of vitamin D daily. NOTE: Healthy Start Vitamins contain 10 micrograms of Vitamin D.</td>
</tr>
</tbody>
</table>

Produced by: Beverley Green, Midwife. Healthy Weight in Pregnancy Guidance 2015
APPENDIX 6 Continued

LIST OF RECOMMENDATIONS

2. PREGNANCY RECOMMENDATIONS CONTINUED

**Asprin Recommendations**

IF RISK FACTORS IDENTIFIED for pre eclampsia then advise women to take low dose Asprin 75mg orally once a day / from 12 weeks gestation until delivery – see pre pregnancy, pregnancy, post natal care healthy weight pathway, Appendix 7

**Vitamin A**

A pregnant woman SHOULD AVOID supplements containing Vitamin A as these may cause foetal abnormalities

**PHYSICAL ACTIVITY Recommendations**

All pregnant women should be advised to follow the National Recommendations of 30 minutes of moderate exercise on most days. If a woman has not previously exercised she should be encouraged to participate in gentle activity throughout pregnancy, starting with 15 minutes aerobic activity three times a week, increasing to 30 minutes of moderate exercise on most days

3. POSTNATAL RECOMMENDATIONS

**DIET Recommendations**

Women should continue to be encouraged to develop a healthy relationship with food by eating a varied, balanced diet of foods that they enjoy, based on the Eatwell plate (Appendix 4), and learn to recognise signals of hunger and fullness as cues to eating; recognise eating to fulfil an emotional need and identify alternative coping mechanisms. Women should be advised to identify lifestyle changes which are beneficial for their own sake, rather than pursuing weight loss.

**VITAMIN D Recommendations**

All breastfeeding women should be advised to take a 10 microgram (400 units) supplement. Note this is in Healthy Start Vitamins.

**BREAST FEEDING Recommendations**

All women should receive advice and support to initiate and maintain breastfeeding but a woman with a raised BMI may require additional help as evidence indicates that raised BMI is associated with short breastfeeding duration.

**PHYSICAL ACTIVITY Recommendations**

To promote health and wellbeing women should continue to be encouraged to maintain an active lifestyle. Women can be supported to participate in physical activity with their babies. The National Recommendations are at least 150 minutes spread across the week, for example 30 minutes on at least five days of the week. If women have not exercised routinely begin with at least a 10 minute session per day and build on that

**GESTATIONAL DIABETIC Women BMI>30 Recommendations**

All women with a booking BMI >30 diagnosed with Gestation Diabetes should have a Glucose Tolerance Test (GTT) at approximately 6 week after giving birth with their General Practitioner.

Produced by: Beverley Green, Midwife. Healthy Weight in Pregnancy Guidance 2015
APPENDIX 7

Foods To Avoid in Pregnancy

- Raw or uncooked meat – especially burgers, sausages and chicken – cured meats such as salami
  Risk of toxoplasmosis and Salmonella. Always wash hand after touching raw meat

- Liver and supplements with Vitamin A
  Too much vitamin A can be harmful to the baby

- Unpasteurised milk or soft mould ripened cheeses (Brie, Camembert) or soft blue cheese.
  Risk of listeria – can be harmful to the baby.

- Undercooked Ready Meals
  Risk of Listeria a type of bacteria can be harmful to baby

- Raw Shellfish
  e.g. Sushi can contain harmful bacteria/ viruses that can cause food poisoning

- Shark, swordfish or marlin
  Avoid due to high mercury content. At high levels, mercury can harm the baby’s developing nervous system.

- More than two fresh tuna steaks or more than four medium cans of canned tuna a week
  Two much canned tuna can also be dangerous because of levels of mercury in fish can be harmful to babys nervous system.

- More than two portions of oily fish a week (such as salmon, mackerel, sardines or trout).
  No more than two portions of oily fish per week, as more could be harmful to baby (it contains pollutants). You should try to eat at least one portion of oily fish a week as it contains omega 3 oils, which help brain development of developing fetus.
  White fish such as cod or haddock are safe.

- Raw eggs such as homemade mayonnaise tiramisu and uncooked cheesecake.
  Risk of salmonella food poisoning. Eggs to be cooked till white and yoke solid

- Pate. All type including vegetable pate
  Risk of listeria, high levels of Vitamin A should be avoided

- Caffeine
  Risk of miscarriage or low birth weight. Don’t drink >200mg a day – around 2 cups of tea or coffee (DOH 2009)

- Alcohol
  Increases the risk of miscarriage or may lead to foetal alcohol syndrome. Alcohol crosses placenta into foetal blood stream and could affect how baby grows and develops

- Smoking
  Maternal smoking during pregnancy increases the risk of stillbirth, premature birth ad sudden infant death syndrome (ASH,2013)
APPENDIX 8
ANTENATAL USE OF LOW DOSE ASPIRIN FOR PREVENTION OF PRE ECLAMPSIA

Risk Factors for Pre Eclampsia

**HIGH RISK**

- Hypertensive disease during previous pregnancy
- Chronic Kidney disease
- Diabetes Type 1 or Type 2
- Chronic Hypertension
- Auto Immune Disease such as Antiphospholipid syndrome / SLE

**MODERATE RISK**

- First Pregnancy
- Age ≥ 40 yrs
- BMI >35 at booking
- Pregnancy interval > 10 years
- Family history of Pre Eclampsia
- Multiple pregnancy

At least 1 high risk or 2 moderate risk factors for Pre Eclampsia then advise women to take low dose Asprin 75mg orally once a day from 12 weeks until delivery.

**Contraindications**

Previous or active peptic ulceration, haemophilia, severe cardiac failure

**Hypersensitivity**

Asprin and other NSAIDs are contraindicated with patients with a history of hypersensitivity to Asprin or other NSAIDs which include those who are Asthmatic, Angioedema, Urticarial or Rhinitis have been precipitated by Asprin of any NSAID

Pathway produced by: Dr Bingham Consultant and Beverley Green Midwife, Healthy Weight in Pregnancy Guidance
adopted for NHS Highland from NICE Public Health Guidance 107, Hypertension pregnancy 2011
APPENDIX 9
Conversation Tool for Healthy Weight

What do you know about weight in pregnancy

So you are not very sure or So you have heard about some of the risks

Can I tell you more about it?

Some of the risks are………………… we can reduce these risks by monitoring you and your baby and

…..you may be able to reduce these risks through diet, activity and reducing stress

What might work for you?

From what you’ve told me, you’re not sure or you could……………

Can I suggest some ideas that other women have found helpful?

Being more active (list)
en eating a balanced diet (list)

can help you maintain a healthy weight, sleep better, feel more energised, improve general Health and wellbeing, and much more.

What do you think?

Would you like some more information on this?

Yes - provide Healthy Weight in Pregnancy Leaflet and highlight NHS Highland web link: www.nhshighland.scot.nhs.uk/healthandwellbeing/healthyweight

No – That’s fine please get in touch if you have any questions

Pathway produced by: Fiona Clarke, Beverley Green, Healthy Weight in Pregnancy Guidance 2015
APPENDIX 10
Pathway for referral to local healthy weight programme or refer through Dietetics

Access on Intranet and Internet
http://www.nhshighland.scot.nhs.uk

Click on Health and Wellbeing

Click on Healthy Weight

For suggestions for making small changes to your daily life

Highland

Argyll and Bute

You can join a local Well Now Course, to Promote healthy choices as per Adult Pathway for Healthy Weight. List of available courses listed. http://www.nhshighland.scot.nhs.uk/YourHealth/Pages/HealthyWeight.aspx

You can refer to Nutrition and Dietetic Service. Telephone 01631 789 041 or Email high-UHB.DietitiansDirect@nhs.net as per Adult pathway for Healthy Weight

If Well Now Programme not available refer to dietitian as per Adult Pathway for Healthy Weight

Pathway produced by: Beverley Green, Midwife. Healthy Weight in Pregnancy Guidance 2015
One of the best things we can do to stay healthy is to be active. What do you know about keeping physical activity in pregnancy?

So you are not very sure or you have heard about some of the benefits or you have heard about some of the risks or you have an active lifestyle

Can I tell you more about it?

We know that being more active can help people... eg sleep well, feel more energised, socialise, improve general health and wellbeing and maintain a healthy weight and much more

National guidelines recommend that pregnant women should try and be moderately active for at least 150 minutes per week, which is the same as being active for 30 minutes on most days.

What do you think?

From what you’ve told me, you’re not sure. or you think you are achieving this. Well Done keep it up

Would you like some more information on this?

Yes - provide leaflet
No – That’s fine please get in touch if you have any questions
Healthy weight in pregnancy

Having a healthy diet and being active will increase your chances of becoming pregnant, and having a healthy pregnancy. Once pregnant, everything you eat and drink reaches your baby in some way. This may affect your baby’s health.

Some weight gain in pregnancy is normal. It includes the weight of your baby, the placenta and fluid.
APPENDIX 13

Healthy Start: Important points for midwives

Healthy Start (HS) is a simple way to support women on benefits / low income to access healthy food and vitamins. Offer every woman the HS Leaflet as detailed in Highlands Information Trail (HIRS FOO/007/L).

1. You don’t need an ultrasound to complete a Healthy Start application
   The fact that the woman has consulted you about her pregnancy is enough.
   Women can receive vouchers from 10 weeks gestation.

2. You can complete the professional section of the form (part B) at the booking visit
   Check that the details about other children are correct (section 5 of part A) before signing the form.
   The woman can complete the rest later. It can be posted from 8/9 weeks.

3. Recording Healthy Start eligibility is important
   It is the only record of family poverty that is routinely recorded by practitioners.

4a. The midwife does not need to check benefits status
   You’re just confirming that the woman has consulted about her pregnancy. See pregnancy checklist for women to use.

4b. All women should be offered referral for a financial health check. Your midwife will speak to you about this.
   Officers are based throughout the Highlands and can help women access other support around entitlements during pregnancy.

5. A woman receiving vouchers during pregnancy needs to phone the Healthy Start help line (0345 607 6823) after the birth of the child (ASAP)
   Otherwise the vouchers will stop.

6. More families will be eligible following birth, once in receipt of Child Tax Credit
   See new baby flowchart to check details.

Adapted with thanks from NHS Lothian pathway.

Healthy Weight in Pregnancy Guidance 2015
APPENDIX 14
Healthy Start: Check list for pregnancy

Are you under 18 years old?

Yes

Apply for Healthy Start

Complete the Healthy Start application form given by your midwife at booking (part B for midwife, part A for you).
Post after 8 weeks of pregnancy
See also www.healthystart.nhs.uk

No

Are you on income support? (*)

Yes

No

Do you have other children?

No

Do you receive Child Tax Credit, and is your household income less than £16,190?

Yes

You are entitled to a financial health check and referral to local advice teams in your area. There may be other sources of financial support they can help you access. The Officer will need evidence of family income and you should ensure you have pay slips/P60s/ benefit & tax credit awards etc. to assess entitlement to additional benefits. The service is free, impartial and confidential

(*) Income support in this context means that you receive:
- Income Support or
- Income-based Jobseeker’s Allowance or
- Income-related Employment and Support Allowance?
Call the Healthy Start helpline if you change address 0345 607 8823

See advice about Income Maximisation below Call 0800 090 1004

No

You should still check your Child Tax Credit entitlement Call 0345 300 3900 or www.hmrc.gov.uk/leaflets/wtc2.pdf

Adapted with thanks from NHS Lothian pathway.
APPENDIX 15
Healthy Start: Check list for family with new baby

Did you receive Healthy Start vouchers during pregnancy?

Yes

No

Are you on income support? (*)

Yes

Applying for Healthy Start vouchers
Applying for Child Tax Credit

No

Is your household annual income less than £16,190?

Yes

Applying for Child Tax Credit (CTC)

Once in receipt of CTC apply for Healthy Start vouchers

No

You may still be eligible for Child Tax Credit

Notify the Healthy Start helpline of the birth of your child so that vouchers continue
0345 607 6823

Also consider making a referral to your Income Maximisation Team (tel: 0800 090 1004) or local Citizens Advice Bureau. There may be other sources of financial support they can help you access. The officer will need details of family income and you should have evidence - payslips/P60s/ benefit & tax credit awards etc. to assess entitlement to additional benefits. The service is free, impartial and confidential.

(*) Income support in this context means that you receive:
• Income Support or
• Income-based Jobseeker’s Allowance or
• Income-related Employment and Support Allowance?

Adapted with thanks from NHS Lothian pathway.

Healthy Weight in Pregnancy Guidance 2015
Women Resources

- Active Scotland is a website to identify physical activity opportunities in your local area, from the easy to the extreme:  [www.activescotland.org.uk](http://www.activescotland.org.uk)
- 23.5 hrs. Narrated by Dr Mike Evans, 23.5 hours is short video on the benefits physical activity can have on our health and wellbeing  [www.paha.org.uk/Feature/23.5-hours](http://www.paha.org.uk/Feature/23.5-hours)
- National childbirth trust  [www.nct.org.uk](http://www.nct.org.uk)
  Support parents on all aspects of antenatal and postnatal care.
- A young woman’s guide to pregnancy  [www.tommys.org](http://www.tommys.org)
- [23.5 hrs.](http://www.paha.org.uk/Feature/23.5-hours) Narrated by Dr Mike Evans, 23.5 hours is short video on the benefits physical activity can have on our health and wellbeing  [www.paha.org.uk/Feature/23.5-hours](http://www.paha.org.uk/Feature/23.5-hours)
- [www.bestbeginings.org.uk/ntpmn](http://www.bestbeginings.org.uk/ntpmn)
  aims to improve outcomes for teenagers to develop maternity services
- [www.nhs.uk/pages/homepage.aspx](http://www.nhs.uk/pages/homepage.aspx)
  choices and advice for a healthy diet during pregnancy
- First Steps Nutrition Trust  [www.firststepsnutrition.org](http://www.firststepsnutrition.org)
  Lots of advice and information on healthy eating from pregnancy and birth
- [www.nhshighland.scot.nhs.uk/healthandwellbeing/healthyweight](http://www.nhshighland.scot.nhs.uk/healthandwellbeing/healthyweight)

APPS

- NHS Health Scotland, Ready Steady Baby  [www.readysteadybaby.org.uk](http://www.readysteadybaby.org.uk)
- Healthier Scotland Scottish Government, information on eating healthier,  [www.EatBetterFeelBetter.co.uk](http://www.EatBetterFeelBetter.co.uk)
- Facebook.com/eatbetterscotland

Reference List


29 Heslehurst N. Russell S Brandon H Johnston C Summerbell C Rankin J. (2013) Women’s perspectives are required to inform the development of maternal obesity services: a qualitative study of obese pregnant women’s experiences. Health Expectations


Useful Information

* www.healthscotland.com


Nutrition

* Food Standards Agency. Available www.food.gov.uk/about-us/publicaitons/safetyandhygiene


Exercise


* Active Scotland is a website to identify physical activity opportunities in your local area, from the easy to the extreme. Available www.activescotland.org.uk


Training Opportunities

* Opportunities for free NHSH face to face training on Health Behaviour Change using Motivational interviewing. Available http://intranet.nhsh.scot.nhs.uk/org/CorpServ/PublicHealth/TrainingEvents/Pages/Default.afpx

* Compassionate Connections is a family focused online learning resource to support a health professional’s role in maternal, newborn and infant health and wellbeing. Available http://www.knowledge.scot.nhs.uk/midwifery/learning/compassionate-connections.aspx