MINOR SYMPTOMS OR DISORDERS IN PREGNANCY

This guideline includes information on the following disorders:

- Gastro-oesophageal reflux
- Varicose veins and leg oedema
- Haemorrhoids
- Nausea and vomiting
- Vaginal discharge
- Pelvic Girdle and Low back pain
- Carpel tunnel syndrome
- Leg cramps

Note: Click on the above individual subjects; the hyperlink will then take you to that section in the document. For Constipation see Clinical Guideline Management of Constipation in Pregnancy.

GASTRO-OESOPHAGEAL REFLUX / HEARTBURN

Gastro-oesophageal reflux is common in pregnancy, and occurs in two-thirds of women by the third trimester. Elevated levels of progesterone cause the lower oesophageal sphincter to become more relaxed allowing gastric reflux. Progesterone may also act upon the smooth muscle affecting gut motility and lead to delayed gastric clearance, however the American Society for Anesthesiologists believe gastric emptying to be normal during pregnancy. The oesophagus contains no protective lining to prevent the corrosive effects of gastric acids, therefore reflux leads a burning or painful sensation around the sternum and can extend up into the throat.

MANAGEMENT

Clinical History

- Obtain a current history of symptoms and any previous history of reflux-type symptoms.
- Exclude diagnosis of pre-eclampsia – check blood pressure and perform urinalysis.

Dietary and other modifications

- Eat small frequent meals
- Avoid eating and drinking at the same time to reduce stomach volume
- Decrease fat in the diet, and increase protein consumption
- Avoid gastric irritants e.g. chocolate, coffee, citrus juices, tomato products, alcohol, fizzy drinks, spicy foods
- Avoid eating late at night or within 3 hours of going to bed
- Chewing gum stimulates the salivary glands and may neutralise acid
- Cease smoking

Positioning

- Elevate the head of the bed by 10-15cm
- Lying on the left side has been shown cause less frequent reflux
- Encourage an upright position where possible, avoiding lying down after meals

Pharmacological interventions

Pharmacological interventions may be initiated if adjustments to life-style changes provide a poor response.
Simple antacids are used by 30-50% women in pregnancy however limited data is available on their use in pregnancy. Most calcium and magnesium-based antacids are considered safe in pregnancy.

To prevent risk for hypercalcaemia, metabolic acidosis and renal insufficiency women should limit antacids containing calcium to 1.2 - 1.5 g per day of elemental calcium (3.0 - 3.75 g calcium carbonate) per day.

Avoid the use of antacids containing sodium bicarbonate as they may precipitate alkalosis and fluid overload.

Antacids containing magnesium trisilicates should not be used in high doses or long term in pregnancy.

Avoid taking the antacid near the time of consuming supplemental iron (gastric acid facilitates the absorption of iron). Take antacids at least 1 hour apart from iron and other medications.

Ranitidine 150mg twice daily has been shown to effective treat oesophageal reflux.

**VARICOSE VEINS AND LEG OEDEMATA**

Varicosities may develop in up to 40% of pregnant women. The increase in blood volume during pregnancy and effect of progesterone relaxing the muscular walls of the veins causes increased pressure on the veins. Varicose veins often improve three to four months following birth, and oedema generally reduces soon after birth.

Evidence regarding successful interventions for varicose veins and leg oedema in pregnancy is lacking, however despite lack of adequate research support measures such as use of compression stockings and elevation of the legs may provide comfort to women. Based on one small study reflexology appears to improve symptoms for women with leg oedema.

**MANAGEMENT**

**Non-Pharmacological interventions**

- Elevate the legs when at rest.
- Water immersion or compresses may alleviate symptoms.
- Reflexology may provide relief.
- Avoid prolonged standing or immobility, and wearing of high heels.
- Avoid tight or restrictive clothing.
- Regular exercise improves calf muscle pump. Encourage ankle flexion exercise for at least 30 minutes per day.
- Compression stocking may relieve swelling and aching of legs and prevent more varicose veins from developing.
- If resting for long periods women are advised to lie on their left side which decreases pressure on the veins in the legs and feet (the inferior vena cava is on the right side, and left-sided position relieves it of the weight of the uterus).
- Encourage use of compression stocking for plane travel or long vehicle journeys.

**HAEMORRHOIDS**

The greater blood volume in pregnancy causes an increase in venous dilatation and engorgement predisposing women to symptomatic haemorrhoids. Additionally venous stasis may be increased due to the enlarging gravid uterus and the increase in pelvic laxity.

**Conservative management**

- Prevention of constipation - high fibre diet, increased fluid intake, exercise.
- Stool softeners.
- Mild analgesia.
• Avoid straining during defecation, and encourage defecating in the morning and after meals when colonic activity is highest.  
• Skin protection creams may be beneficial for pruritis and discomfort. 
• Topical local anaesthetic and/or corticosteroid agents may be beneficial e.g. Rectinol, Proctosedyl ointments. However, creams containing topical anaesthetic may induce sensitisation, and topical corticosteroids may exacerbate local infection and cause skin irritation so use should be limited for < 7 days. 
• Warmed baths may be used to decrease sphincter tone or improve venous congestion.

Surgical Management
Closed excision haemorrhoidectomy for symptomatic haemorrhoids using local anaesthetic can be safely performed during pregnancy.

NAUSEA AND VOMITING

Approximately 50% of women experience nausea and vomiting in early pregnancy, and another 25% feel nausea alone. While in about 35% of these women the nausea and vomiting becomes clinically significant, only a small minority (0.3 - 1%) are diagnosed with hyperemesis gravidarum. This is characterised by persistent vomiting, weight loss of more than 5%, ketonuria, electrolyte imbalances, and dehydration. Nausea in pregnancy typically peaks at approximately 9 weeks gestation, with 60% of cases resolving by the end of the first trimester, and in the remaining women 91% of these cases will resolve by 20 weeks gestation. Nausea and vomiting correlates closely to levels of human chorionic gonadotropin (hCG) levels in the majority of studies. A Cochrane review found high quality evidence is lacking about provision of good supportive treatments and advice for women experiencing nausea and vomiting.

Note: women attending a low risk midwives clinic for antenatal care, and who present with signs of hyperemesis gravidarum should be referred for medical review.

MANAGEMENT

Medical History
• Perform a medical history including the pattern of nausea and vomiting, fluid and dietary intake, factors exacerbating the condition, and current management.
• Note signs of fever, headaches, abdominal pain or other symptoms that are not characteristic with uncomplicated nausea and vomiting in pregnancy.
• Exclude other medical conditions causing nausea and vomiting e.g. gastro-intestinal, renal or endocrine

Clinical Assessment
• Perform urinalysis including assessment of ketones, pH, and signs of urine infection such as nitrates, blood and protein.
• Maternal assessment for signs of dehydration.
• Perform a blood pressure.
• Perform temperature, pulse, and respirations if the medical history indicates risk for infection.
• If a women presents with a history of nausea and vomiting which is more than normally expected in pregnancy, perform a baseline weight (if not available). Perform a weekly weight until the nausea and vomiting resolves.
• Consider performing full blood picture, Urea and electrolytes, liver function tests, and thyroid function tests if clinical picture merits further investigation.

Non-pharmacological Interventions
• Small, frequent meals and snacks
• Bland, low fat, low carbohydrate, high protein diet

Minor Symptoms or Disorders in Pregnancy
Clinical Guidelines: Obstetrics and Midwifery
King Edward Memorial Hospital
Perth Western Australia

All guidelines should be read in conjunction with the Disclaimer at the beginning of this manual
• Take more liquids than solids in the diet\textsuperscript{23}
• Encourage fluids to prevent dehydration – a least 2 litre/day\textsuperscript{24}
• Avoid an empty stomach\textsuperscript{20, 24}
• Prevent a full stomach e.g. mixing solids with liquids\textsuperscript{24}
• Avoid rich, spicy or fatty foods (including smelling and cooking)\textsuperscript{24}
• Eating dry crackers before rising in the morning
• Ice chips or icy poles may be beneficial
• Consume a high-protein snack prior to going to bed\textsuperscript{20}
• Ginger (\textit{Zingiber officinale}) extract may provide benefit for management of nausea and vomiting in some randomised studies\textsuperscript{16, 23}, however a Cochrane review found the results were inconsistent and limited\textsuperscript{17}. Recommended dose: 125 - 250 mg every 6 hours\textsuperscript{16} (in 24 hours the dosage should not exceed 1 gm\textsuperscript{15, 20}). Concomitant use of anticoagulants and ginger is not advised due to the theoretical risk of inhibiting platelet function.\textsuperscript{23}
• B\textsubscript{6} acupressure may possibly provide some relief for some women.\textsuperscript{21-23}
• Provide the woman with the KEMH brochure 'Morning Sickness. A Simple Guide to Ease Your Discomfort'.

\textbf{Pharmacological treatment}

Pharmacological treatment may be required if non-pharmacological methods are unsuccessful.

• Pyridoxine (vitamin B\textsubscript{6}) has been shown in randomised studies to reduce symptoms of nausea and vomiting.\textsuperscript{16, 25}
  Dosage: 10 – 25 mg every 8 hours\textsuperscript{16}. If a woman is taking a multivitamin containing vitamin B\textsubscript{6} then the dosage is adjusted accordingly.
• Additionally, a combination including doxylamine with pyridoxine has been shown to be beneficial and safe.\textsuperscript{16, 22}
  Doxylamine dosage recommended: 12.5 mg each morning, and 12.5 mg in the afternoon, and 25 mg at night.\textsuperscript{16}
• If the above treatment is ineffective, use of penothiazine, metoclopramide, or ondansetron may be initiated.\textsuperscript{15, 16} These treatments are used if symptoms are prolonged and intractable i.e. for hyperemesis gravidarum.\textsuperscript{15}
• Iron therapy may need to be temporarily stopped until nausea settles.\textsuperscript{21}

\textbf{VAGINAL DISCHARGE}

High levels of oestrogen in pregnancy result in marked shedding of superficial mucosal cells in the vagina leading to increased vaginal discharge (leucorrhoea). The normal bacteria in the vagina interacts with increased glycogen in the mucosal cells causing increased acidity in the vagina which provides some protection against pathogens, but increases risk for \textit{Candida albicans} and \textit{Trichomonas vaginalis}.\textsuperscript{3, 26}

\textbf{MANAGEMENT}

• Women should be advised of normal physiological vaginal discharge changes in pregnancy, and instructed to inform health professionals of any abnormalities.
• Obtain vaginal or/and cervical swabs for laboratory testing as required.
• See: Clinical Guideline, Antibiotic Treatment for Vaginal Infections.

\textbf{PELVIC GIRDLE AND LOW BACK PAIN}

45-50\% of women experience pregnancy-related low back (PLBP) or pelvic girdle pain (PGP), with more than 80\% of these women experiencing difficulties with daily living, and up to 30\% requiring bed rest and leading to absence from work.\textsuperscript{27}
PGP refers to pain in the symphysis pubis and/or pain in the region of one or both of the sacroiliac joints, and pain in the gluteal region. Pain is often aggravated during standing, walking, sitting, twisting, climbing of stairs, and turning while in bed. The pain with PGP is intermittent, there is no restriction of lumbar spine or hip movement, and it is often described as a stabbing, burning, dull, or shooting pain.

PLBP however, is characterised by lumbar region pain, is dull, and women experience it during forward flexion.

MANAGEMENT

- Refer women for physiotherapy consultation. A clinic is available on Tuesdays, Wednesdays, Thursdays and Fridays from 1000-1130. No appointment is required.
- Reassure women that most PGP resolves in a few weeks or within the month following delivery, however in 8-10% of women pain can be experienced for 1-2 years.
- Conduct a medical history and physical examination to exclude other causes of pain e.g. trauma, fevers, neurological symptoms, inflammatory signs or tenderness.
- Education and management for women with PGP or PLBP includes:
  - avoidance of fatigue and have frequent periods of rest
  - avoiding situations that aggravate the condition e.g. unrelenting postures, twisting while lifting, activities such as unequal weight bearing, bouncing, hip abduction
  - using pillows to support the abdomen while lying in the lateral position, and to support the lower back when sitting, and placement of a lumbar roll behind the back with the feet slightly elevated.
  - use of massage and local applications of heat and cold may provide relief
  - hydrotherapy may be useful in decreasing back pain
  - utilisation of aids such as elbow crutches, walking frames and wheelchairs to assist mobility is some situations may be required.
  - a supportive pregnancy belt may be beneficial
  - to avoid wearing high-heel shoes

CARPEL TUNNEL SYNDROME

Carpel tunnel syndrome (CTS) in pregnancy usually presents in the second or third trimester and is caused by excess fluid compressing of the median nerve in the wrist. This causes paraesthesias, swelling and pain in the hand/hands, and impairs sensory and motor function of the hand. Symptoms often are worst at night, and can be exacerbated by forceful activity and extreme wrist positions. In pregnancy hormonal changes, oedema, and generalised slowing down of nerve conduction (if a woman has gestational diabetes) have been linked to causing CTS. Women who have pre-eclampsia, hypertension, excessive weight gain, and have oedema in pregnancy are at more risk for developing CTS.

MANAGEMENT

- Early treatment involves activity modification including:
  - avoiding positions of extreme flexion or extension
  - avoiding prolonged exposure to vibration e.g. driving, lawn mowing, use of power tools
  - avoiding repetitive actions or aggravating activities e.g. typing
- Arrange physiotherapy referral if symptoms require further management.
  - wrist splinting may be initiated – a neutral position maximises carpal tunnel volume and decreases pressure on the median nerve. Splints are normally worn at night, however some women may find they need to wear them during the day as well.
- Corticosteroid injections provide temporary relief in 80% of patients. However, if given to a patient with diabetes it can cause transient serum glucose elevation for up to 5 days.
• Inform women the symptoms of carpel tunnel syndrome normally resolve within 2 weeks of birth.\textsuperscript{31, 32} 
• Surgical options are generally not recommended during pregnancy.\textsuperscript{32}

### LEG CRAMPS

Leg cramps and restless leg syndrome usually occur at night and may effect up to 30\% of pregnant women.\textsuperscript{33} The cause of leg cramps in pregnancy is unclear, although suggested reasons include the slowed venous return due to raised intra abdominal pressure, the progesterone effect causing decreased tone in the venous musculature, and nutritional deficiencies due to fetal demands.\textsuperscript{34} The pain experienced during leg cramps is caused by a build up of lactic and pyruvic acid leading to involuntary muscle contraction.\textsuperscript{29, 34} Calcium supplementation have not be shown to be effective, however magnesium supplements may provide a slight effect at decreasing the number of attacks.\textsuperscript{29, 34}

### MANAGEMENT

• Perform a health history to exclude other causes of leg cramps such as:
  - electrolyte imbalances, dehydration, inactivity or excessive exercise\textsuperscript{33}
  - musculoskeletal problems e.g. prolonged sitting, back injuries, strenuous exercise of lower limbs, flat feet\textsuperscript{33}
  - endocrine conditions e.g. thyroid disease, diabetes\textsuperscript{33}
  - renal damage leading to muscle cramping and weakness\textsuperscript{33}
  - cardiovascular conditions e.g. history of deep vein thrombosis causing venous insufficiency\textsuperscript{33}
  - neurological conditions e.g. multiple sclerosis, Huntington disease\textsuperscript{33}

• Strategies for prevention or relief of cramps include:
  - during leg cramps – massage, walking, and stretching may help\textsuperscript{29}
  - a warm bath prior to bedtime\textsuperscript{35}
  - drinking adequate fluids\textsuperscript{35}
  - prophylactic night-time calf stretching\textsuperscript{33}

**Magnesium supplement dosage**

The Cochrane review suggests Magnesium lactate or citrate 5mmol in the morning, and 10mmol in the evening.\textsuperscript{34} Available medication at KEMH is in the form of MagMin 500mg tablets which contain 40mg of magnesium (1.65 mmol Magnesium).\textsuperscript{15}
REFERENCES (STANDARDS)


REFERENCES / STANDARDS Cont.


National Standards – 1- Care provided by the clinical workforce is guided by current best practice
Legislation -
Related Policies -
Other related documents – KEMH Clinical Guideline, Section:
- Management of Constipation in Pregnancy
- Antibiotic Treatment for Vaginal Infections

**RESPONSIBILITY**

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