

The Whole Nine Months *Massage in pregnancy*

As a registered nurse, aromatherapist and qualified massage practitioner, Apryl Shannon is passionate about extolling the benefits of massage to women during the pre-natal and post-natal periods of their lives. Here, Apryl discusses the undoubtedly valuable effects of massage upon the expectant mother, from conception until delivery.

BY APRYL SHANNON (B.NURSING)

For centuries, in many cultures around the world, massage has been regarded as a vital ingredient in the pre-natal and post-natal care of women. Maternity massage creates a combination of relaxation and stimulating messages to the receptors that prompt a woman's body to function effectively during her pregnancy.

In recent years, Australian women have begun to experience, and to take advantage of, the numerous benefits pregnancy massage offers to their physical and emotional well-being.

The upheaval and anxiety that pregnancy can sometimes bring to a woman's life can be attributed to, an increase in undesired stress levels. As a study by J. Longworth suggests, since the psycho-physiological effects of massage have proven to be an effective intervention in psycho-emotional arousal, it follows that massage, performed by the hands of a specially trained professional massage practitioner, acts as a very significant panacea in lessening the intense stress, tension and irritability often experienced in pregnancy. (Longworth 1982)

Stress activates the sympathetic branch

of the autonomic nervous system and ongoing stress increases adrenal production of stress hormones. This can cause:

- variances in maternal heart rate and blood pressure, vomiting, nausea, toxaemia and immune system dysfunction
- reduced blood supply to the uterus by as much as 65%, resulting in lower foetal heart rate and reduced blood oxygenation
- interference in foetal brain and central nervous system development
- higher incidence of miscarriage, prematurity, prolonged labours with more complications, and postpartum complications and
- increased perinatal foetal distress, low birth weight and infant irritability, restlessness, crying and digestive disturbances. (Gorsuch, Key 1974)

In contrast to the effects of stress, support and relaxation activate the parasympathetic branch of the autonomic nervous system, increasing production of endorphins and dopamine. This helps create balance in the body and encourages a healthy, smoothly functioning state,

characterised by:

- steady blood pressure, pulse and respiratory rate
- regular blood flow to uterus, placenta and foetus
- healthy immune system functioning, emotional states and response to stressful stimuli
- and reduced fear and anxiety. (Samuels 1996)

The Benefits of Pregnancy Massage

Massage can provide an experience of 'letting go' and inward focus. It can create the same positive physiological states and increased alpha brain wave activity as meditation. Variations in pressure, rhythm and positioning flood the sensory nerve pathways with input that can increase body awareness and override signals of pain and stress. (Juhan 1987)

Massage also improves energy levels and blood flow, which can increase haemoglobin levels and may help to prevent anaemia. Regular massage applied to the lower limbs can help to alleviate fluid build-up and assist with venous return, thus helping in the avoidance of varicose veins. Although manual lymphatic drainage massage should be avoided.

Perineal massage can enable preparation by the mother to assist with an easier and less traumatic delivery. (Cassar 1999)

According to The Lancet, perineal massage has been recommended to increase perineal elasticity, and current evidence supports the use of perineal

6 Massage also improves energy levels and blood flow, which can increase haemoglobin levels and may help to prevent anaemia. 9

massage in women completing their first pregnancy. Diaphragmatic release and abdominal breathing can decrease musculoskeletal strain to the neck, chest and upper back that is often caused by inefficient breathing. (Noble 1995)

An informal Swedish survey suggested that 48% - 56% of pregnant women suffer from lumbar and pelvic pain. Secondary to pregnancy, back and pelvic pain can be the

result of:

- improper posture created by an anterior weight load of enlarging breasts, uterus, and foetus
- muscle strain and imbalance
- myofascial trigger points
- and/or foetal positioning

Pregnancy massage has also been found to have a positive impact on:

- fibrosis, muscle spasms and cramps, especially in the back and neck
- muscle tone and imbalance
- the stress on weight-bearing joints and musculofascial structures (sacro-iliac joint, lumbar spine and mid-back)
- tension, fatigue and headache
- nervous tension assisting with sleep problems, and possibly reducing blood pressure through relaxation and stress reduction
- blood circulation, bringing more blood to tissue and placenta, thus providing greater nutrition to the tissues and enhanced waste production removal
- blood and lymph circulation and the physiological process of gestation, by supporting the work of the heart, increasing cellular respiration, reducing oedema and contributing to sympathetic nervous system sedation
- problems associated with swelling, varicose veins and leg cramps
- maintaining skin elasticity, easing stretch marks and uncomfortable tightness
- management of digestive complaints such as constipation, gas, nausea and indigestion
- deeper, easier breathing
- the sensory awareness and relaxation necessary to be an active and responsive participant in the birth experience
- and providing a pregnant woman with the experience and model of loving, nurturing touch which will in turn encourage her to touch her baby lovingly.

Techniques

Practitioners should focus on muscles and joints utilising techniques that:

- reduce muscle spasms and fibrosis
- relieve myofascial shortening and pain
- reduce uterine ligament strain and re-educate efficient structural integrity and body use.

An enhanced supply of nutrients and oxygen and accelerated removal of waste products promote cellular respiration. This

improves the tissue health of both the mother and baby. Techniques promoting circulation of blood and lymph, especially therapeutic relaxation massage, support circulatory function. These methods decrease the negative effects of increased blood and interstitial fluid volumes. (Foldi 1978)

Kneading and stretching of a contracted muscle can be expected to elicit inhibitory reflex responses from tendon proprioceptors. This should contribute immediately to the relief of spasm.

Improved circulation within the muscle as a result of massage should also be directly beneficial by assisting in the removal of metabolic waste and by interrupting the 'pain-tension cycle' that involves ischaemic pain. (Yates 1990)

Techniques such as strain, counterstrain and other positional release methods, can also help break this pain cycle and relieve spasmed muscles (Jones, Lawrence H, 1981). Remedial techniques can be employed to reduce pain by elongating shortened, bunched connective tissue provided they do not cause pain and distress to the client.

Resisted movements, rhythmic passive movements and muscle energy techniques are all effective in pain management. (Fritz 1995)

Utilising these techniques effectively and safely will help ease the discomforts of the mother and facilitate a balanced and healthy pregnancy.

Safety Guidelines

The risks and potential hazards associated with maternity massage cannot be ignored.

Before working with pregnant women, a practitioner's sound knowledge of anatomy and physiology, and an understanding of the ongoing changes that occur from conception through to the post-natal period, is vital. The practitioner must work with caution and expertise and ensure nothing is done to potentially harm the baby, create a miscarriage or cause a birth defect.

It is imperative that the practitioner adjusts the therapy according to the specific stage of pregnancy and also importantly, the individual requirements of the client.

High-risk pregnancy

Women with high-risk pregnancy often welcome the assistance of pre-natal massage. Massage therapy can promote

Infant Massage Is More Than Just Strokes

Join The Fastest Growing
Industry Worldwide

Become a Certified Infant
Massage Instructor

Benefit from:

- Working with parents & babies
- Increasing your income & client base
- Empowering parents with a lifelong skill that's clinically proven
- Provide a "massage service that's different to your competitors - *teach parents how to massage their baby.*



4 Day Workshop

Leading to accreditation with the
**International Association
of Infant Massage Inc.**

Group & Early Bird incentives available.
100% Satisfaction, Money Back Guarantee

**IAIM techniques are clinically
proven to improve digestion,
relieve intestinal colic, promote
growth and development on all levels**



For more information:

www.infantmassagetraining.com

Glenda Chapman

Australia's only
Internationally Accredited Teacher
Member: IAIM, ATMS, RA of A

Tel: (02) 4369 3668



Infant Massage
Training Centre

stress reduction, ease the discomforts of frequently prescribed bed rest and may improve the pregnancy outcome.

However, it is imperative that a thorough medical history is taken and a written medical clearance is obtained to minimise legal liabilities and maximise effective care of mother and baby.

Where stress is a significant contributing factor massage may offer a number of benefits for people classified as having a

6 Massage therapy can promote stress reduction, ease the discomforts of frequently prescribed bed rest and may improve the pregnancy outcome. 9

high-risk pregnancy.

A massage therapist should always work closely with medical personnel before providing and during the provision of massage services to clients with a high risk pregnancy. Some clients in the high risk category should not receive massage unless provided under direct medical supervision.

Examples of high risk pregnancies include:

- pre-pregnancy diabetes mellitus
- cardiac pulmonary, liver disorders

- previous problem pregnancy
 - multiple pregnancy
 - chronic hypertension
 - asthmatic mother
 - risk of foetal genetic disorders
 - convulsive disorders
 - RH- negative factor or maternal genetic problems
 - intrauterine growth retardation
 - and systemic lupus erythematosus
- Contra-indications
- vaginal bleeding or spotting
 - threatened miscarriage
 - early labour
 - placental dysfunction
 - eclampsia (toxaemia)
 - abnormal foetal heartbeat or movement.

Client Positioning

Positioning of a client during pregnancy massage is important as this will enhance comfort and reduce any strain or tension in muscles while at the same time ensuring circulation is unhindered.

During therapy, the mother should be placed in a way that reduces the strain of the baby's weight on the mother's back, stomach, legs and shoulders. The positioning should also ensure that no additional physical pressure is placed on the baby.

Various forms of additional support are needed, such as cushions, bolsters, towels and specially designed foam pieces and pillows. This will help to accommodate the safe and comfortable positioning required throughout the pregnancy.

Special Considerations

Supine Hypotensive Syndrome

Supine Hypotensive Syndrome is caused when the pregnant client lies in the supine position and the large pregnant uterus compresses the venous system (vena cava), interfering with blood return from the lower body to the heart. Supine Hypotensive Syndrome has the potential to cause dizziness and to compress the aorta, thus decreasing the amount of oxygenated blood available to the uterine artery and to the foetus.

Increased femoral artery blood pressure may lead to the development of varicose veins in the legs, vulva and vaginal wall. Dizziness is the result of less blood being pumped by the heart. Supine positioning is therefore not advised after week 13.

Deep Vein Thrombosis

Deep vein thrombosis (DVT) is an



Above. Deeper abdominal massage in the 3rd trimester of pregnancy.

absolute contra-indication for pregnancy massage. Pregnancy increases the risk of DVT (blood clots in the lower extremities) and Williams Obstetrics states that the likelihood of DVT in normal pregnancy and post-partum is increased by a factor of 5.

Life threatening pulmonary embolism can result from this condition when clots from another part of the body break off and lodge in the lungs. Clients who spend a lot of time sitting or have taken the contraceptive pill are at greater risk of developing DVT. Testing for Homan's sign is indicated for this condition. (Cunningham, et al., 1989)

Intensity of Bodywork

It is essential that all massage movements are carried out without inflicting any pain on the recipient. This is because hormones that are released in response to pain have the effect of elevating blood pressure, respiration rate and heart rate while at the same time lowering immunity and blood flow to the uterus. (Cassar 1999)

Areas of precaution

Many texts on acupuncture, reflexology and Chinese medicine state the importance

of avoidance or specific precaution of several meridian points during pregnancy. Over-stimulation of these points is thought to cause the vagina to relax, the cervix to open and the embryo to be discharged.

Although, to date, no definitive research has been carried out in this area, oriental literature suggests that sustained pressure of certain meridian points should be avoided when massaging clients during gestation, including:

- Spleen 6 and 9
- Kidney 3
- Liver 3
- Stomach 36
- Bladder 60, 67,31 and 32
- Gallbladder 21
- Large Intestine 4
- Trimester I (Weeks 1-13).

Although it has often been reported that, possibly because of the high rate of pregnancy losses during this period, massage during the first trimester of pregnancy is inadvisable, there are many other reasons for miscarriage. (Wilcox, et al., 1988)

A report released in 1988 discussed the remarkably inefficient process of human reproduction. Half of all embryos are lost



Nature Care College



HEAD AND SHOULDERS ABOVE THE REST

Nature Care's Continuing Professional Education (CPE) Seminars offer further training to qualified practitioners.

A PAIN IN THE NECK

Sat 19 Feb
\$125 NCC graduates & ATMS & AAMT Members
\$155.00 Non Members
Specialist techniques for working the scalenes upper trapezius and sternocleidomastoid.

TRIGGER POINT THERAPY

Sat & Sun 12-13 March
\$290 NCC graduates & ATMS & AAMT Members
\$330 Non Members
Treating musculoskeletal problems using myofascial trigger point techniques.

HOT STONE THERAPY

Sat & Sun 26 & 27 March | \$350.00
Hot stones have great capacity to heal chronic pain.

LYMPHATIC DRAINAGE MASSAGE

Fri, Sat, Sun 15-17 April
\$410 NCC graduates & ATMS & AAMT Members
\$450 Non Members
Techniques developed by Emil Vodder and Dr Bernard Chikly.

INNATE INTELLIGENCE & THE ENERGETIC INTERFACE

Sat & Sun 16 & 17 April
\$290 NCC graduates & ATMS & AAMT Members
\$330 Non Members
Learn about the body as a self-healing mechanism which uses sensations, signs and symptoms to communicate.

Next **OPEN DAY** is Saturday 7th May 2011 | www.naturecare.com.au

Please contact a
Course Advisor on
(02) 9438 3333 or
info@naturecare.com.au

before the expected menses, another 30% are lost after or around the time of the missed menses and 65-90% of clinically recognised early pregnancy losses are the result of chromosomal abnormalities, the occurrence of which correlates strongly with increasing maternal age.

Taking this into consideration, if a woman is already having regular massages before conception, treatment by a competent practitioner adequately trained in pre-natal massage techniques with extensive knowledge of the physiological changes in pregnancy could be very beneficial. Obtaining a medical is always advisable regardless of which trimester the

the uterine muscle mass that will eventually supply the contractile force needed for delivering the baby.

Progesterone inhibits uterine motility so that the foetus is not expelled prematurely. As a result of the large drop in hCG, and the placenta taking over the role of secreting progesterone and oestrogen, the negative side effects and discomforts of the first trimester often disappear. (Vander, et al., 1994)

Massage must not disrupt these enormous hormone changes as they are vital for the healthy development of the foetus and support systems. In the first three months of pregnancy, massage is unlikely to harm the foetus or disturb the natural process. However, since this is such a delicate and important time for the expectant mother, it is best to avoid any possible complications. Massage on the abdominal area is therefore contraindicated during this phase. (Cassar 1999)

In the first trimester, massage should focus on the relief of fatigue and other physiological and psychological adjustments.

Relaxation massage is very effective in reducing anxiety and stress as it sedates the nervous system and stimulates the release of endorphins. Reduction in stress and anxiety can assist the woman to recover from daily physical & emotional stresses, assisting with recovery and relieving fatigue.

Treatments for client

- Diaphragmatic breathing education
- Relaxation techniques
- Therapeutic relaxation massage
- Cross-fibre friction, passive movements, stretching techniques, and positional release

Changes and additional symptoms in pregnancy

- Enlarged tender breasts
- Emotional and hormonal adjustments
- Skin and hair changes
- Frequent urination
- Nausea and /or vomiting
- Headaches

Digestive complaints and constipation result from increased levels of progesterone in the pregnant woman's body. The increase in progesterone contributes to smooth muscle relaxation (bladder, stomach and intestines), resulting in slower digestion, which allow for better absorption of nutrients and an increase in the storage

🌀 In the first trimester, massage should focus on the relief of fatigue and other physiological and psychological adjustments. 🌀

client may be in at the time of the provision of massage service.

In the first critical trimester, the embryo grows from a microscopic fertilised egg into a three-inch foetus weighing one ounce. The mother's body undergoes significant changes due to the change in hormonal balance brought about by pregnancy and the rapidly developing foetus.

Human chorionic gonadotropin (hCG), which is measured in pregnancy tests, causes the immense increase in progesterone and oestrogen and the initial discomforts often experienced in early pregnancy. Tissues of the placenta are responsible for several hormones. Trophoblast cells secrete hCG immediately after the embryo implants itself in the uterine wall. The hCG signals the corpus luteum that pregnancy has commenced and strongly stimulates steroid production of it. In response to hCG, the corpus luteum increases in size and releases large quantities of progesterone and oestrogen which in turn stimulate continued growth of the placenta and endometrium. (Solomon, et al., 1994)

Subsequent to the 12th week, hCG decreases dramatically and large quantities of progesterone and oestrogen are then secreted by the placenta to maintain the pregnancy. Oestrogen stimulates growth of

of body fat. The rise in progesterone also results in a rise in body temperature.

Blood volume increases and changes composition, this can also contribute to fatigue. To cater for the specific needs of the foetus and uterine tissues and for the added demands on the mother's heart and kidneys, respiration rate and oxygen consumption rise by about 15-20% in pregnancy.

PRACTITIONER GUIDELINES AND PRECAUTIONS –

Morning sickness and vomiting

- avoid appointments during this time, avoid rocking movements & strong smells during the massage
- avoid deep pressure on lower back left side as this is where the placenta is situated and at this stage it is still developing and vulnerable
- no abdominal massage
- avoid reflexive pressure to points stimulating the uterus when working with the upper back, sacrum, hands, feet and legs

- avoid rhythmic rocking movements when nausea is present
- use whole hand soft pressure on medial leg
- use a firm gentle touch avoiding any pain at maximum depth with all techniques.

Positioning

Only minor adaptations in positioning on the table are necessary in the first trimester.

Supine, prone, sidelying, semi-reclining or in a chair are advised. These should be adjusted as necessary for breast tenderness.

Trimester II (Weeks 14-26)

The massage practitioner must be aware of all the complex physiological changes that are occurring as the weeks progress. Usually, during the second trimester, a pregnant woman's physical discomforts such as nausea, breast tenderness, fatigue and more frequent urination disappear but these will be replaced by other physical considerations.

Remember that an up-to-date history

and observation are always necessary. The first incidence of chronic back pain is often reported at this time.

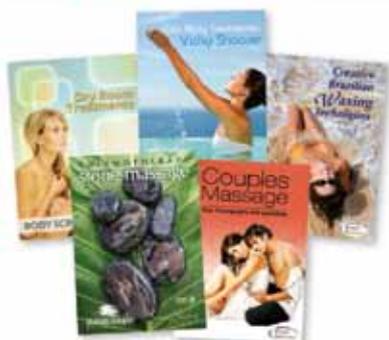
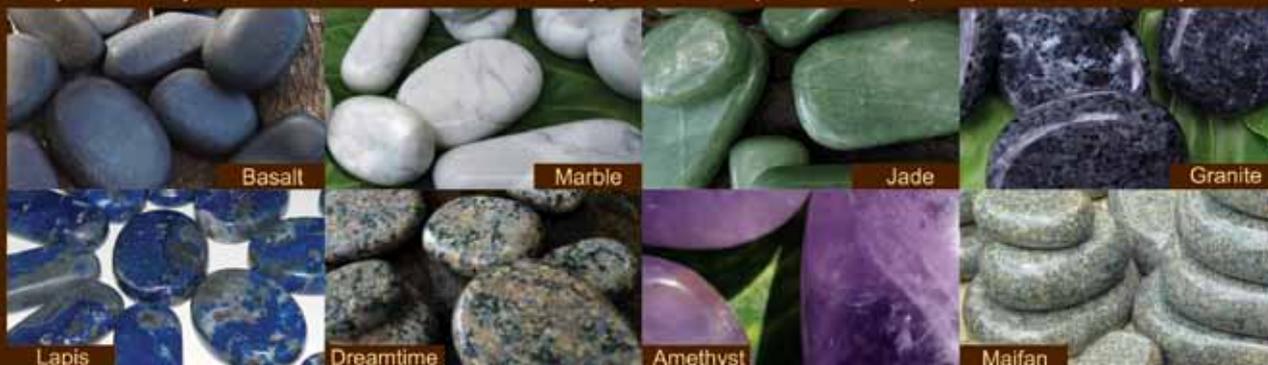
As a result of the enlarging uterus and breasts, the overall increase in weight and as the centre of gravity shifts and the internal organs are pushed up and back, extraordinary stresses are placed on the musculoskeletal system.

The uterus is halfway to the umbilicus at week 16; at 20 weeks it has reached the umbilicus; and at 28 weeks is halfway to the xiphisternum. Shortening begins to occur in the posterior myofascial sheath, which extends from the plantar surface of the foot, over the paravertebral musculature and to the skull. (Myers 1998) (Keogh, Ebbs, 1984)

Normal balance is lost between the anterior abdominal and iliopsoas musculature and the posterior paravertebral muscles.

As the body weight increases and shifts more anteriorly and lordosis increases, the resulting postural imbalances cause the muscles of the neck, back, legs and feet to be overworked and fatigued. The pelvic joints also relax and loosen as hormones

Largest range of handcrafted massage stones, specialising in Australian granite



Educational DVD's, stone heaters, stone sets and kits, stone massage workshops and in-house training



Stone Eagle Handcrafted
Massage Stones
ABN: 85 801 675 879
PO Box 307 Port Douglas
4877 QLD Australia
Ph: 1800 504 886
or M: +61 429 489 658
Email: info@massagestones.com.au
www.massagestones.com.au



Handcrafted to perfection with passion and purpose for professional body and facial therapy

prepare the pelvis for delivery. Ligaments and muscles around the hip joints begin to strain as the femur rotates more laterally and compresses in the acetabulum. Knees may also hyperextend causing calf cramping.

With weight gain, a feeling of compression at the knee and ankle joints may also occur. There is a general loss of stability and a waddling gait ensues. (Gould 1997)

As the uterus rises higher in the pelvic cavity, uterine ligaments (round, broad, sacrouterine) stretch and cause intermittent sharp pain.

This may be referred into the groin or lower abdomen from round ligament strain, or referred to the gluteal or lumbar muscles as a result of the broad ligament

As the focus is now more on relieving structural, muscles of the back and neck may become nodular and likely to house trigger points.

also straining. The abdominal musculature also stretches with the growing uterus. This stretching may form visible lines of torn connective tissue (strae gravidarium) and cause taut and itchy skin. Diastasis may also begin to occur in this trimester (ie: the abdominis recti muscles may start to separate) as the baby grows between 28 and 35 cm (11 and 14 inches) and weighs approximately 0.5-0.7 kg (1-1.5lbs).

Other changes:

- skin and hair changes
- varicose veins
- spider veins
- heartburn
- constipation
- haemorrhoids

Client positioning

The pregnant client needs very careful handling as the musculature is increasingly overworked, ligament strain and laxity increases, joint compression grows and the uterus increases in size.

Safe positioning and comfort are the two most important requirements.

In the second trimester, supine positioning is inadvisable as the weight of the enlarged uterus in this position compresses the inferior vena cava leading to potential hypotension or low blood pressure. (Cunningham, et al., 1989) Even with the use of contoured cushions or special tables, prone positioning, together with exerting strain on the lumbar, pelvic and uterine structures, places further strain on already taxed uterine ligaments and increases sinus pressure.

Supine and prone positioning are therefore contraindicated after week 13.

Supine semi-reclined, side lying, or seated positions where the hip and torso angle is maintained at approximately 90°, avoid all these problems and are the preferred positions for back and pelvic massage. Most women find side lying, when supported by bolsters and pillows, comfortable. (Gould 1997)

Adequate support for the cervical spine should also be provided for alignment with the torso, ensuring the head is not hyper extended or side bent. Lying on the left side also facilitates maternal blood flow back to the heart thus increasing output to the placenta and foetus. (Gilbert, et al., 1993)

After week 22, supine semi-reclined and side lying are the preferred positions. In the semi-reclining position, an angle of between 45°-75° from hip to head avoids pressure on the vena cava. (Sherwood 1993)

Positions, supports and tables with holes which allow the abdomen to hang or allow the mother rest on her abdomen should be avoided as this may place additional stress on the uterine ligaments. Seated massage should also be avoided when the mother's abdomen is large as the forward leaning position may compromise blood flow in the femoral arteries.

Perineal massage instruction may be offered from week 35 to prepare this delicate area for delivery.

Treatments for clients

As the focus is now more on relieving structural stresses due to postural imbalances, muscles of the back and neck may become nodular and likely to house trigger points. Hip and buttock pain is likely as the hips are rotated in the characteristic waddling gait in an attempt to steady the posture.

- Trigger point release techniques that do not cause pain or distress to the client, cross-fibre friction, passive movements and connective tissue massage

- Diaphragmatic breathing education – Remove and replace with - Education on changes to breathing mechanics can assist to allay the clients anxiety regarding bouts of breathlessness. This does not necessarily require diaphragmatic breathing exercise as respiration is naturally increased by about 20% to handle additional foetal demands. (Sherwood 1993)
- Kegel exercise instruction for pelvic floor musculature
- Relaxation techniques – for stress relief and birth preparation
- Perineal massage instruction – commenced from 35 weeks of gestation. (Labrecque et al., 1999)
- Continued regular moderate exercise – to help alleviate backache. (Gould 1997)
- Yoga-based exercises for pregnancy under the guidance of a teacher specifically trained in yoga for the pregnant client are highly recommended. (Hookway 1998)

Trimester III (Weeks 27-40+)

The anticipation of the new birth, and dramatic increase in uterine and body size, increase physiological, musculoskeletal and psychological strains.

The weight of the baby more than

triples to an average of 3.5kg (7.5lbs) and the length doubles to around twenty inches. The average weight gain during pregnancy is 11-14kg (25-30lbs) and much of this occurs in the last trimester. (Gould 1997)

An increased demand for protein, carbohydrate, fat and minerals to promote tissue development occurs and metabolic rate increases. Excess food intake is also stored as adipose tissue. (Gould 1997)

This extra weight may result in fatigue and posturally induced strain to both muscles and ligaments, especially if the back and abdominal muscles are weak. The referred pain of trigger points may create concentrated areas of back pain.

Continued regular moderate exercise helps maintain posture and cardiovascular fitness and relieves muscle tensions. Relaxin softens ligaments placing additional stress on skeletal structures and additional work on muscles, which can lead to fatigue and discomfort. Positions adopted by the foetus can result in a functional Scoliosis in the mother, which can also promote fatigue and discomfort.

The increased anterior weight load and musculoskeletal strain may lead to an increase in discomfort. Sacroiliac, lumbar joint and myofascial pain may create moderate to severe discomfort.

The likelihood of referred pain from overstretched ligaments of the uterus, sacrouterine, broad and round ligaments is increased. Pain may be referred to the lower pelvis, groin, buttocks and lower back.

Chronic piriformis tension may entrap or compress the sciatic nerve in some people. The rectus abdominis muscles may further diastase resulting in uneven pelvic alignment and the iliopsoas muscles often are unable to maintain normal pelvic orientation resulting in excessive lumbar curvature. (Rolf 1977)

A waddling gait usually results from inactivation of hip flexor muscles.

As relaxin levels increase during the latter weeks, pain in the pubic bones and/or separation of the symphysis pubis may occur. Shortness of breath may result from postural changes which can result in an increased kyphosis. Shortness of breath can also be experienced due to the increased number of cells, both foetal and maternal, producing carbon dioxide as a result of aerobic cellular metabolism. Hyperventilation is the body's natural process for removing excessive carbon dioxide.

Heartburn, constipation and haemorrhoids are common.

Become a Certified Infant Massage Educator with Infant Massage Australia

The Infant Massage Educator training enables you to develop skills in strengthening family relationships through the nurturing touch of infant massage.

Certification includes:

- 4-day workshop, theoretical and experiential
 - Self-paced study module
 - Extensive handouts including 2 books
 - Infant Massage Australia membership
- Early bird package for early fee payment
Our facilitators have many years commitment in promoting infant massage and in other health professional roles. They are active local members of Infant Massage Australia, a non-profit group supporting and promoting nurturing touch in Australian families.

For training details and application form please contact your local trainer.

QLD & NT: Amanda Buckmaster

0409 614 467, (07) 3352 7884

amanda.peter@bigpond.com

www.nurturingconnection.com.au

WA: Sydel Weinstein 0414 636 459

sydel@thefamilynurturingcentre.org

www.thefamilynurturingcentre.org

SA: Kellie Thomas

0412 195 349, (08) 8562 2863

enhancedability@yahoo.com.au

www.infantmassage.org.au

VIC & NSW: Clare Thorp

(03) 9728 8667

clarethorp@bigpond.com

www.firstconnections.com.au



Empowering parents. Enriching families.

See www.infantmassage.org.au for more information on workshops and trainers.





Above. Enthusiastic students looking on while Apryl drapes and reposition the client.

In the last trimester, in response to increased interstitial fluid volume as the body systems become overloaded, fluid retention and oedema in the feet and legs are also common. As this presentation may be symptomatic of other medical conditions, oedema should always be assessed by a medical practitioner and treated under medical supervision. Inappropriate treatment may mask symptoms and delay lifesaving treatment in conditions associated with eclampsia, cardiac, hepatic and or renal disorders. Many disorders may go undetected and undiagnosed until faced with the additional stresses that the body is subjected to during pregnancy.

6 Massage can have obviously beneficial effects on the physical, and psychological changes taking place during pregnancy.. 9

Thoracic outlet syndrome can occur due to structural changes such as the marked kyphosis/lordosis typical of trimester III, resulting in posturally induced anterior flexion of the neck and slumping of the shoulder girdle leading to a reduction in clearance space in the thoracic outlet for both the nerves and blood vessels. Carpal

tunnel syndrome induced by increased interstitial fluid may also produce numbness and tingling in the fingers and hands. (Cunningham, et al., 1989)

The uterus becomes more excitable during the third trimester and mild Braxton-Hicks contractions may be experienced with increasing frequency and strength. (Sherwood 1993)

Late in the third trimester increased relaxin, produced by the corpus luteum and placenta, relax the birth canal, loosening the connective tissue between the pelvic bones. This allows the foetus to shift downwards. This releases some of the pressure from the abdomen and ribs but increases pressure on other structures, such as the bladder, which compresses to less than about one-third of normal size. This often results in increased urinary frequency. (Sherwood 1993)

Perineal massage by instruction, for prevention of trauma at birth, can be offered and commenced at about week 35 to reduce the risk of episiotomy. A large study undertaken in the UK revealed that 85% of women who have a vaginal birth undergo some perineal trauma. (McCandish, et al., 1998)

Client Positioning

The side lying, semi reclining are the only safe positioning options during the third trimester of pregnancy. Again, supine positioning is too dangerous as this may restrict uterine blood flow and result in Supine Hypotensive Syndrome. Prone positioning increases intrauterine pressure and produces ligament strain as well as the other obvious discomforts.

Treatments for clients

- pelvic floor preparation (Kegel exercises)
- Trigger point release techniques that do not cause pain or distress to the client, cross-fibre friction, passive movements and connective tissue massage
- diaphragmatic breathing education
- relaxation techniques to facilitate production of endorphins
- perineal massage instruction
- rib cage release
- educating partners in appropriate massage
- instruction in infant massage

Practitioner guidelines and precautions

- limit deep tissue massage to areas that

are stressed directly by pregnancy and only applied in a manner that does not result in pain and discomfort

- begin and complete each session with structural balance guidance
- skin products used by the pregnant woman should not contain Retin-A as vitamin A in large amounts may cause birth defects.

... and, in conclusion

Before treating a pregnant client, the massage practitioner should always ensure the client obtains written referral from her general practitioner or obstetrician to ensure full communication exists between all health professionals. This will also ensure any precautions or potential problems are discussed.

There can be no denying the ever-increasing burdens placed on a woman's body during pregnancy. Massage can have obviously beneficial effects on the physical, and psychological changes taking place during pregnancy and, play an important role in the overall functional improvement, general comfort and well-being of the pregnant client.

REFERENCES:

Cassar M., (1999), Handbook of Massage Therapy, Butterworth-Heinemann, Oxford.

Foldi, M., (1978). Anatomical and Physiological basis for physical therapy and lymphoedema, *Experientia*, 33(suppl).

Cunningham, et al., (1989), Williams Obstetrics, Appleton and Lange, Norwalk.

Fritz, S., (1995). Fundamentals of Therapeutic Massage, Mosby/ Lifeline: St. Louis.

Gilbert, E., et al., (1993). Manual of High Risk Pregnancy and Delivery, Mosby-Year Book, Inc., St Louis.

Gorsuch, R., Key, M., (n.d). 'Abnormalities of pregnancy as a function of anxiety and stress', *Psychosomatic Medicine*, 36: 1974.

Gould, B.,(1997). Pathophysiology for the Health-Related Professions, W.B.Saunders, Philadelphia.

Hookway, F., 1998, Introduction to yoga-based exercises for pregnancy, *The Practising Midwife*, Vol 1; n 12; pp.36.

Juhan, D., (n.d). Job's Body: A Handbook for Bodywork, Station Hill Press: New York, 1987.

Keogh, B., Ebbs, S., (1984). Normal Surface Anatomy, William Heinemann Medical Books Limited. London.

Labrecque, et al., (1999). *American Journal of Obstetrics and Gynaecology*; 180: 593-600.

Longworth, J., (1982). 'Psychophysiological effects of slow stroke back massage in normotensive females', *Advances in Nursing Science*, vol. 4, pp. 44-61.

McCandish, R., et al., (1998). A randomised controlled trial of care of the perineum during second stage of normal labour, *British Journal of Obstetrics and Gynaecology*, 105: 1262-72 in *The Lancet*, 2000, Commentary by Charles J. Lockwood, Vol 355, n 9212.

Myers, T., (1998). Poise: Psoas-Piriformis Balance, *Massage Magazine*, vol. 72 Mar/Apr 98, pp.72-83.

Noble, E., (1995). Essential Exercises for The Childbearing Year, New Life Images, Harwich, MA.

Ostgaard, H., et al, (1992). Prevalence of back pain in pregnancy, *Spine*, Vol. 17 n.1, pp. 53-55.

Rolf, I., (1977). Rolfing, The Integration of Human Structures, Harper and Rowe, New York.

Samuels, M., (n.d). The New Well Pregnancy Book, Fireside: New York, 1996.

Sherwood, L., (1993). Human Physiology From Cells to Systems, West Publishing Company, St Paul MN.

Solomon, E., Schmidt, R., Adragna, P., (1994). Human Anatomy and Physiology, Harcourt Brace College Publishers, Ft. Worth.

Vander, A., Sherman J., Luciano, D., (1994). Human Physiology The Mechanisms of Body Function, McGraw-Hill Inc., USA.

Wilcox, A., et al, (1988). Incidence of early loss of pregnancy, *New England Journal of Medicine*; 319:189-94., in *The Lancet*, 2000, Commentary by Charles J. Lockwood, Vol 355, n 9212.

Yates, J., (1990). A Physician's Guide to Therapeutic Massage: Its Physiological Effects and Their Application to Treatment. Massage Therapists' Association of British Columbia: Vancouver, BC, Canada.

Maternity Massage Professional Education

Courses 2011
Prenatal Therapeutic
 March 26th & 27th
Postnatal Remedial
 July TBA

The Pavilion Kiama

Course Dates Vary, please contact us for more information
Email: apryl@iprimus.com.au (Ph) 0414966181



Professional Association C.E.C's.

The most comprehensive training in Pre & Post-Natal Massage in Australasia.

Comprehensive lecture notes & sequence manual.

Academic transcript of hours & topics

Display certificate

www.mothercaremassage.net

