



TE OPE KĀTUA O AOTEAROA
DEFENCE FORCE



Te Ope Kātua o Aotearoa Ngā Aratohu Whakapakari Tinana Nō Muri i te wā Hoki o te Hapūtanga

**New Zealand Defence Force
Guide to Exercise, Fitness and Physical
Training during and after Pregnancy**



HEI MANA MŌ AOTEAROA
A FORCE FOR NEW ZEALAND

Produced by:

NZDF Physical Performance Squadron

HQ Joint Support Group

Trentham Military Camp

Upper Hutt

New Zealand

If you wish to copy or reproduce any of this material apart from for the purpose of private study, research and review, please email JSG.FHO.PPS.HQ@nzdf.mil.nz for permission.

Contents

Foreword Commander Joint Support Group COL Ben Pitt	5
Foreword National Manager Force Health Fran Cook	6
Background	7
Introduction	8
Chapter 1: Discovering you are pregnant	9
NZDF Medical Review	10
Choose your Lead Maternity Carer	11
Māori and Pacific Lead Maternity Carers	12
Inform your Manager	14
Book a Pregnancy WOF with a Women’s Pelvic Health Physiotherapist	15
Pregnancy Exercise Programme	16
Chapter 2: Exercising during Pregnancy	17
Exercising During Pregnancy	18
Warm-Up / Cool Down	21
The Talk Test During Exercise	22
Pelvic Floor	23
Deep Core & Stabilising Muscles	24
Chapter 3: First Trimester Weeks 0–12	25
Physiological Changes	26
Hydration	27
Exercise During the First Trimester	29
Chapter 4: Exercise Programmes for the First Trimester	31
Pelvic Floor Strengthening Exercises	32
Deep Core Muscle Strengthening	33
First Trimester Pelvic Floor & Deep Core	34
First Trimester Strength Training	36
Chapter 5: Second Trimester Weeks 13–27	39
Physiological Changes	40
Abdominal Separation	41
Maternity Support Belts	42
How do I know what’s normal?	43
Exercise During the Second Trimester	45
Chapter 6: Exercise Programmes for the Second Trimester	47
Second Trimester Pelvic Floor & Deep Core	48
Second Trimester Strength Training	49
Pregnancy Stretching Programme	52
Chapter 7: Third Trimester Weeks 28–40	53
Physiological Changes in the Third Trimester	55
Back and Pelvic Pain	56
Pelvic Floor Injury and Dysfunction	57
Exercise in the Third Trimester	58

Chapter 8: Exercise Programmes for the Third Trimester	59
Third Trimester Pelvic Floor & Deep Core	60
Third Trimester Strength Training	62
Pregnancy Stretching Programme	64
Chapter 9: Postpartum Weeks 0–6	65
Recovery	66
Birth Injuries	67
Caesarean Section	68
Postnatal Weeks 2–6	70
What is Normal After Birth?	71
Chapter 10: Exercise Programmes Postpartum Weeks 0–6	73
Postpartum Weeks 0–6 Pelvic Floor & Core	74
Chapter 11: Postpartum Weeks 7–12	77
Clearance to Exercise 6 Weeks	78
Keeping in Touch Days	79
Self-Check for Diastasis Recti	80
Exercising Postpartum Weeks 7–12	82
Breastfeeding, Bras and Exercise	83
Breastfeeding, Hydration and Nutrition	84
Chapter 12: Exercise Programmes Postpartum Weeks 7–12	85
Postpartum Weeks 7–12 Pelvic Floor & Core	86
Postpartum Weeks 7–12 Strength Training	88
Chapter 13: Postpartum Weeks 12+	91
Return to Running (3–6 months)	92
Chapter 14: Exercise Programmes Postpartum Weeks 13+	93
Postpartum Weeks 13+ Pelvic Floor & Core	94
Postpartum Weeks 13+ Strength Training	96
Return to Running Programme	99
Running with a Buggy/Pram	100
Chapter 15: Returning to work	101
Returning to Work	102
Courses, Promotion, Seniority, Nominations	103
Fitness Testing	104
Postnatal for Life	106
Chapter 16: Further Reading about Specific Pregnancy Related Topics	107
Pelvic Floor Self Examination	108
Miscarriage	109
Stillbirth	110
Pregnancy and Postnatal Depression	111
Cultural Support	113
Checklist for Commanders	114
Directory of Key Contacts	115

Foreword

Commander Joint Support Group

COL Ben Pitt



*Ki te whei ao,
Ki te ao mārama,
Tiheiwa mauri ora.*

*To the glimmer of dawn,
to the bright light of day,
there is life.*

Congratulations on your pregnancy. This is an exciting and probably overwhelming time as you adapt and change (in mind and body) to grow a baby.

The New Zealand Defence Force is committed to supporting you through your journey of pregnancy, childbirth, postpartum and family life.

The New Zealand Defence Force is a unique organisation that provides a Force for New Zealand. There are very few jobs apart from professional sportspeople that require its workforce to stay fit and operationally deployable as part of their jobs. That is why support for our military wāhine during pregnancy and postpartum recovery is so important.

The New Zealand Defence Force is committed to ensuring our servicewomen are safe and supported during their pregnancy and have the support and service they require to return to their career following their postpartum recovery.

This guide has been specifically developed for New Zealand Defence Force servicewomen for the unique roles and requirements they have. This guide will provide information and support for you to:

- Stay physically safe and well during pregnancy,
- Best prepare for childbirth,
- Recover back to and maintain full fitness and operational deployability.

This is a special time in your life as your body adapts and changes to grow a baby. Use the knowledge and support around you to ensure you are well informed, linked into treatment providers and are safe and protected as you grow a new life.

Ahakoā he iti, he pounamu.

Although it is small, it is precious, like greenstone.

Foreword

National Manager Force Health

Fran Cook



Pregnancy is a special time that brings with it a range of unique challenges for women in the Forces. New Zealand Defence Force has robust policy around pregnancy and return to work practises, and there are many support services (medical officers, physiotherapists, exercise rehabilitation instructors, social workers, chaplains, SAPRAS) that will provide you with assistance during your pregnancy and postpartum journey.

I encourage you to use these services. They are there to support you as you transition through the various stages of pregnancy, childbirth, post-partum recovery, and return to full fitness and deployability.

Growing a baby is a precious journey that will require you to make some modifications and adaptations to ensure your pēpi is kept safe and secure during pregnancy. These may include modifications to some job roles, changes to your medical and operational deployability status, changes to exercise, fitness and training, and changes to diet, drinking and smoking. Draw on those around you and the invaluable information contained within this guide to help embrace these changes to enable the best possible start to the life of your pēpi.

I wish you well during this time of joy, anticipation, and change. Everyone's experience will be different and that's ok. Enjoy this special time your way, with guidance and support available to you as you need it.

“Me mahi tahi tātou, mo te oranga o te katoa.”

Work together for the wellbeing of everyone.

“Me aro koe ki te hā o Hineahuone.”

Pay homage to the essence of womenkind.



Background

The NZDF Guide to Exercise, Fitness and Physical Training during and after Pregnancy was developed in consultation with NZDF Medical Officers (MOs), NZDF Physiotherapists, Exercise Rehabilitation Instructors (ERIs), Physical Training Instructors (PTIs) and the NZDF Human Performance Team.

Input from APM Physiotherapy, single Service gender leads, Wāhine Toa representatives, fitness trainers who specialise in pre and post-natal training and lead maternity carers (LMCs) has enabled NZDF to develop a multidisciplinary guide to support Service personnel navigate the challenges of exercise, fitness and physical training during and after pregnancy.

This version is current with effect June 2022 and will be next reviewed in 2023 on direction from the National Manager Force Health, Joint Support Group.

Introduction

Exercising safely during pregnancy has many benefits for the mother and growing baby. Some of the benefits of exercise include:

- Staying fit and strong to prepare your body for childbirth,
- Maintaining a healthy body weight,
- Reducing injury,
- Increasing self-esteem and feel-good hormones,
- Reducing fatigue, stress, and anxiety,
- Reducing pre and post-natal depression,
- Enable a faster recovery following birth,
- The benefits of exercise extend to your growing baby.

The following guide will provide information about exercise, fitness and physical training during and after pregnancy to enable Service personnel to be in the best possible health for pregnancy, birth and safe recovery back to full fitness.

This guide acknowledges all types of pregnancies (planned and unplanned) and those who are trying to conceive or are having fertility challenges. This booklet has been written by military females for military females and wish you the best on your pregnancy or fertility journey.



Chapter 1: Discovering you are pregnant



NZDF Medical Review



As soon as you discover you are pregnant (or think that you might be pregnant) book an appointment with a Medical Officer (MO) at the Defence Health Centre (DHC).

Your MO will confirm your pregnancy and conduct routine health checks to make sure you are healthy and well. Your medical grading will be changed to acknowledge your pregnancy and you will receive an MD906 grading form which will list service specific restrictions. This is to ensure that

you are employed on duties that are safe and appropriate for you and your baby.

If you are healthy and well your MO will advise you that it is ok to continue exercising. You will be exempt from fitness testing, contact sports and formal fitness classes (including unit PT and unit sports). You may elect to undertake fitness testing, contact sports and formal fitness classes, however it is recommended that you seek medical advice before doing so.

You will **not** be cleared to exercise if you have persistent bleeding, pregnancy induced high blood pressure, dizziness, fainting, anaemia, excessive swelling, incontinence, heart or lung problems or any other health conditions. If any of these conditions are present, exercise will need to be monitored closely by a health professional. Your MO will discuss this with you and will be able to refer you for specialised exercise classes that cater to complicated pregnancies.

Choose your Lead Maternity Carer



You should choose a lead maternity carer (LMC) as soon as possible. Along with other things they will talk to you about staying healthy during pregnancy, including advice on exercise and training.

Your LMC (midwife, obstetrician or specially trained GP) will provide regular monitoring of you and your baby during your pregnancy. They will attend your labour, birth and period following the birth of your baby.

If you are healthy and well your LMC will advise you to continue fitness training. They will continue to monitor you throughout your pregnancy and may advise you to restrict or cease certain types of exercises if there is a medical reason to do so.

Call your LMC with any pregnancy related concerns. They may direct you to urgent care or book an appointment with you if you report severe pain, cramps or blood loss. Your LMC (or their back up) will be available 24 hours a day, seven days a week to provide with phone advice or an appointment if necessary.

Continue to **visit the DHC for any medical problems not related to your pregnancy** and keep your MO informed of all relevant information related to your pregnancy as it progresses.

To find a LMC you can call 0800 MUM 2 BE (0800 686 223) or go to www.findyourmidwife.co.nz

Māori and Pacific Lead Maternity Carers



During your pregnancy and birth you deserve to feel safe – physically, emotionally, spiritually and culturally. There are a number of Māori midwives who work individually or as a collective and can be found at www.findyourmidwife.co.nz and selecting Māori midwife.

Ngā Maia Māori Midwives Aotearoa is a national body that represents Māori birthing. The kaupapa of Ngā Maia focuses on māma, pēpi, whānau and promoting matauranga Māori in pregnancy and childbirth. Birthing within traditional Māori society often involved squatting or holding posts, and a specific strengthening/stretching programme in preparation for this may be important for you.

You can elect to choose a Pacific midwife at www.findyourmidwife.co.nz. Pacific models of health are based on Pasifika concepts, knowledge, values and practices. Pasifika health providers can be found at www.healthnavigator.org.nz and Pacific Health resources can be found at www.health.govt.nz/pacifichealthresources



Inform your Manager

Confidentially inform your manager about your pregnancy as soon as practically possible so they can ensure you (and your baby) are employed safely within your workplace.

Your manager will conduct a risk assessment of your current role and workplace environment in conjunction with you, the MO and the health and safety representative to advise on any duty restrictions.

Unless you elect to do so you are not required to attend formal PT, unit sports, field exercises, shift work, drill or parades, undertake weapon training or undertake any other duties against medical or health advice.

A checklist for commanders/managers can be found in the final chapter of this booklet.

Book a Pregnancy WOF with a Women's Pelvic Health Physiotherapist

A women's pelvic health physiotherapist is a physiotherapist who has completed specialist training in assessment and treatment of the pelvic floor and core. They provide treatment for pregnancy and postpartum related symptoms such as pelvic pain, back pain, abdominal separation and carpal tunnel syndrome.

A pregnancy WOF is recommended around 20 weeks (or earlier if there are problems) to:

- check your pelvic floor muscles and teach you how to activate them correctly,
- provide advice on appropriate pelvic floor safe exercise during pregnancy,
- provide information about back care and safe movement to help reduce abdominal muscle separation,
- provide advice about suitable perineal massage techniques.

This may include an internal examination (if you consent) to ensure that your pelvic floor muscles are working as they should be.

Referral to a women's pelvic health physiotherapist can be given by the MO (on request) at the DHC or can be booked directly through APMphysio@nzdf.mil.nz

The pelvic health physiotherapist may recommend that you book another appointment late in your third trimester to re-check that everything is functioning well and provide you information about when and how to push during birthing.



Pregnancy Exercise Programme



After you have been cleared by your MO and LMC to exercise it is recommended that you book an appointment with your camp or base physiotherapist APMphysio@nzdf.mil.nz or exercise rehabilitation instructor (ERI) to discuss an individualised pregnancy training programme.

The physiotherapist and / or ERI will discuss the level and type of exercises that are safe for you and the growing baby. Your pregnancy exercise programme will be targeted towards staying fit and healthy for your baby and no longer about achieving running and lifting personal bests.

You should visit your physiotherapist for advice about injuries and special programme considerations. Physiotherapists are movement specialists who provide advice and exercise programming for injuries, rehabilitation, strengthening, stretching and balance during and after pregnancy.

ERIs are physical training instructors (PTIs) who have conducted additional training in pregnancy and postnatal exercise prescription and can provide an exercise programme for fitness, strength and flexibility during and after pregnancy.

If you enjoy group fitness training, it may be suitable for you to join rehabilitation classes that are run within your camp or base. Email PT4wahinehapu@nzdf.mil.nz to find out the details of your local ERI.

The physiotherapist and/or ERI will provide you advice on safe exercises during pregnancy and will develop an exercise programme for you based on your current level of training, current injuries and training goals.

Chapter 2: Exercising during Pregnancy





Exercising During Pregnancy

A pregnancy training program is designed to maintain good pelvic floor and core health and to prepare the body for birth and recovery. Many exercises can still be performed during pregnancy, but various factors need to be considered such as breathing, pressure on your abdomen, positioning, balance and movement. In a healthy, uncomplicated pregnancy the benefits extend to the foetus (baby).

During pregnancy your mind-set needs to shift from 'can I do it' to 'should I do it'. Think about what benefit there is in doing a specific activity and what impact it may have on your pelvic floor and postnatal rehabilitation.

RECOMMENDED

Moderate intensity exercise including aerobic activity (walking, swimming, water aerobics, cycling, low impact aerobics) – 30 minutes of activity most days of the week.

Pregnancy exercise classes (Pilates, pregnancy yoga, hydrotherapy, aqua jogging).

Light to moderate resistance training (using bands or light weights). If you are used to doing weights, continue but decrease load, amount and range of movement as your pregnancy progresses.

If you already engage in vigorous activity or are highly active continue if you feel well but lower the intensity and stay closely monitored by your LMC. Continue to ask yourself ‘can I’ versus ‘should I’.

Stay closely monitored by your LMC and ERI.

NOT RECOMMENDED

It is not recommended that you participate in sports with sudden direction changes or activities where you could fall, collide, or cause trauma.

It is not recommended to conduct heavy weight training (1-5RM) or exercises that alter breathing patterns or put downward pressure on your pelvic floor muscles.

Endurance exercises that increase the body temperature for periods over 60 minutes are not recommended due to overheating.

Activities that cause a rapid or prolonged increase in heart rate over 60 minutes are not recommended. The heart is already working twice as hard as normal.

Any activities that just don’t ‘feel right’.

Exercising in excessively humid or hot conditions is not recommended. Your body temperature is already increased due to pregnancy and your foetus’s temperature is 2 degrees higher than yours. Overheating can have adverse effects on foetal development.

It may be painful for some people to do wide squats or lunges (or exercises that place pressure on the low back, groin or pelvis). Work within a pain free range.

Exercises where you lie flat on your back after 20 weeks are not recommended. Prop a pillow or bolster behind your back to create an incline angle of 45 degrees.

Exercises that cause coning or doming of your abdominal muscles.

If you experience any of these symptoms STOP EXERCISING

Develop shortness of breath (and are unable to talk or get breath in).

Feel chest pain.

Feel deep calf pain or swelling.

Have vaginal bleeding.

Experience abdominal cramps or pain.

Feel contractions.

Have leaking of amniotic fluid.

Have sharp, intense pain in the pelvic region.

Call your DHC or LMC immediately.

Experience unusual muscle weakness.

Feel pain or numbness.

Experience excessive fatigue after exercise.

Feel intense or new low back pain.

Experience reduced movement of baby.

Feel dizzy / faint.

Develop a headache.

Develop blurred vision.

Experience new or persistent vomiting.

Call your LMC for advice.

If you experience any of these symptoms stop exercising immediately and contact your LMC. If you require urgent care or become unwell and require immediate medical care contact your DHC or After Hours Care Clinic.



Warm-Up / Cool Down

During pregnancy your blood volume will double, and your heart will work twice as hard as it normally does. Warmups should gradually increase the heart rate up to a recommended maximum of 140 beats per minute.

Your warmup could include going for a walk or a light jog (if it is comfortable to do so), arc trainer, bike or rower. Choose an aerobic activity that you enjoy that you can do comfortably for 6–15 minutes.

Cool downs should be gradual and concentrate on bringing the heart rate back down to its resting state. This can (again) be an aerobic activity of your choice – but lighter than our warm-up, as we are trying to bring the heart rate down.

Stretching exercises will keep the muscles balanced and supple, but vigorous end of range stretches are not recommended. Include your pelvic floor and deep core exercises before your warm-up or after your cool down.

The Talk Test During Exercise

The talk test is an easy way to tell if you're doing the right amount of activity while pregnant and getting the most benefit from safe exercise.

You should be doing enough to make you breathe deeply but you shouldn't have to gasp for breath.

If you can say a whole sentence before having to take a breath, you're getting your activity level about right.

If you can only say a few words between breaths, ease off a bit.

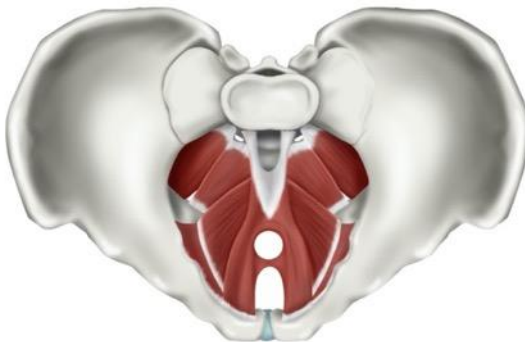


Pelvic Floor

The pelvic floor muscles are a strong group of muscles which attach from the front of your pelvis to the back of your tailbone. They are a very important group of muscles as they are the base of your abdomen and the “floor of our core”. Strong, functional and coordinated pelvic floor muscles are more robust and less likely to be damaged during delivery.

The pelvic floor muscles are required to take additional weight during pregnancy, and it is important these muscles are strong to maintain good function during and after pregnancy. Pregnancy and postpartum exercises will focus on strength and good function of the pelvic floor muscles.

Your pelvic floor muscles control the ability for you to pee, poop, push out the baby and are important for sexual function. Like other muscles in the body, the pelvic floor muscles consist of slow twitch and fast twitch fibres, and exercise should include both types of training and strengthening.



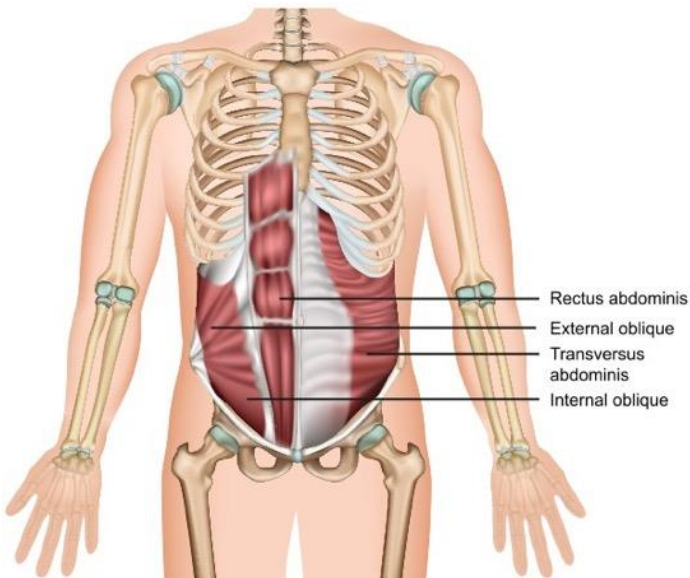
Deep Core & Stabilising Muscles

The deep core and stabilising muscles support our neck, shoulders, spine and pelvis. The muscles on the surface of our body are our movement muscles and the deep core and stabilising muscles are muscles that provide stability, posture and foundation support.

During pregnancy we require strong core and stabilising muscles to:

- Maintain a good posture as our centre of gravity changes,
- Keep the muscles strong as they stretch to accommodate the growing baby,
- Support our spine and pelvis joints to prevent low back or pelvic pain,
- Work with the uterus to push the baby out during delivery.

Core muscle strengthening will make up a key component of exercise training during and after pregnancy.



Chapter 3:

First Trimester

Weeks 0-12



Physiological Changes



Although your baby is very small in the first trimester, growing from the size of a poppy seed to the size of a plum, there are many physiological changes occurring. These include:

- An increase in blood volume and heart rate. This can make some people feel dizzy or lightheaded,
- Swollen and tender breasts,
- The need to pee more often as the growing uterus pushes on your bladder,
- Moodiness, forgetfulness or reduced ability to focus due to hormone production,
- Heartburn, constipation or gas due to the relaxation of the muscles that break down food.

Energy levels may be low and morning sickness can occur in the first trimester. You may feel too sick (or tired) to train during the first trimester and that is fine. Listen to your body and train when you feel well enough to do so, even if it is just a short walk or short strength session.

Joints and ligaments become hyper-flexible during pregnancy so ensure you are not overstretching joints and ligaments during your training. The heightened flexibility during pregnancy is due to a high production of the hormone relaxin, which helps prepare the pelvis for childbirth. It may, however, cause low back pain, pelvic pain, groin pain, wrist pain, knee pain or other joint injury because the joints are less stable.

This hormone remains present in the body for three months following birth, and three months after finishing breastfeeding, so it's important to gradually return to training following birth and breastfeeding.



Hydration

It is important you keep well hydrated during pregnancy as your body requires a higher water intake to form amniotic fluid, produce extra blood volume, carry nutrients and flush out waste and toxins.

Take a water bottle to your workout with you and drink regularly throughout your workout. Drinking cold water before, during and after exercising is helpful for lowering body temperature.

Drink regularly throughout the day and aim to drink at least 8–12 glasses of water every day.



Exercise During the First Trimester

During the first trimester you can (generally) keep doing whatever exercise or physical training you were doing before you became pregnant but decrease the intensity. Keep the heart rate below 140 beats per minute and manage your temperature to ensure you do not overheat. Add pelvic floor and deep core exercises to your routine.

Avoid activities that cause a rapid or prolonged increase in heart rate (over 60 minutes), or activities where you could fall, collide, cause trauma, or overheat. Avoid endurance exercises that increase the body temperature for periods over 60 minutes. Your heart is pumping twice as hard as it normally would so your warmup should be slow and gradual up to 140bpm.

If you choose to attend PT or rehabilitation classes, it is important you have a confidential chat with your instructor prior to the class. This will enable them to provide alternate exercises where required, and to keep an eye on you during the class.

This phase of pregnancy is a great opportunity to learn to breathe well. Practice expanding your ribs wide during your breath instead of up and down. As your pregnancy progresses there will be limited space for the ribs to move downwards.

FIRST TRIMESTER PREGNANCY CHECKLIST

	Book an appointment with your MO at the Defence Health Centre (DHC).
	Choose your LMC.
	Inform your Manager/Commander of your pregnancy.
	Book a Pregnancy WOF with a women's pelvic health physiotherapist.
	Book an appointment with APM Physiotherapy.
	Book an appointment with the ERI.
	Continue exercising if your LMC advises you that there are no complications.
	Continue to seek health advice for any non-pregnancy related matters from the DHC.
	Book an appointment with the DHC if you have a complicated pregnancy requiring special exercise class referral.
	Focus on breath connect, pelvic floor and deep core muscle exercises.
	Continue to exercise as you were pre-pregnancy (but decrease intensity, level and load and ensure that you control your heart rate, temperature and avoid contact sports).
	Talk about pregnancy depression with friends, helplines, DHC referral.
	Upsize your sports bra if required.

Chapter 4:

Exercise Programmes for the First Trimester



Pelvic Floor Strengthening Exercises

When you first start doing pelvic floor muscle exercises you might find these difficult or frustrating, but it is worth persevering. A women's pelvic health physiotherapist will teach you how to activate your pelvic floor muscles and confirm that you are doing these correctly.

Below are instructions on how to activate and strengthen your pelvic floor. These are also known as Kegel exercises. The easiest way to start pelvic floor exercises is lying on your back.

HOW TO DO KEGELS (SLOW TWITCH)

- Lie on your back.
- As you exhale squeeze and lift your pelvic floor muscles. Cues that might help you to do this are to visualise a marble at the opening of your vagina and squeeze and lift, suck up a tampon, hold in a fart, stop yourself peeing, grip on a straw and suck up a smoothie, go up in an elevator.
- Maintain maximal effect for (up to) 10 seconds.
- Relax fully and rest for 10 seconds.
- Repeat 10 repetitions.

Try not to use your bum or tummy muscles. Keep breathing normally.



HOW TO DO KEGELS (FAST TWITCH)

- Lie on your back.
- Do ten fast lift and releases.
- Make sure you fully relax in between.

These contractions are important to train the muscles to act quickly (sneeze, cough, jump).

Deep Core Muscle Strengthening

The transversus abdominus muscle acts like a corset and holds in the core from all directions. Maintaining a strong and flexible transversus abdominus during pregnancy is important to:

- Provide support to your growing baby and the spine,
- Provide support to the changing centre of gravity,
- Help during labour and delivery.

HOW TO DO DEEP CORE EXERCISES

- Lie on your back on the floor and put your fingers just inside your hip bones.
- Do a light cough so you can feel the muscle activating.
- On your exhale breath gently draw in your lower abdomen (at your undie line).
- Hold for ten seconds. Keep breathing throughout.
- Complete 5–10 repetitions.



First Trimester Pelvic Floor & Deep Core

Complete 3 x per day (in bed in the morning and night, and once during the day).

[Click here to watch video](#)

Pelvic Floor (Slow Twitch) x 10 repetitions



Lie on your back with your knees bent to 90 degrees.

As you exhale squeeze and lift your pelvic floor muscles. Cues that might help you to do this are to visualise a marble at the opening of your vagina and squeeze and lift, suck up a tampon, hold in a fart, stop yourself peeing, grip on a straw and suck up a smoothie, go up in an elevator.

Squeeze and lift and maintain maximal effort for (up to) 10 seconds.

Relax fully and rest for 10 seconds.

Repeat 10 times.

Pelvic Floor (Fast Twitch) x 5–10 repetitions



Lie on your back with your knees bent.

Lift and squeeze (ten fast lift and releases).

Make sure you fully relax in between each contraction.

Transversus Abdominus x 5–10 repetitions



Lie on your back with your knees bent. Put your fingers just inside your hip bones.

Do a light cough so you can feel the muscle activating.

On your exhale breath gently draw in your lower abdomen (at your undie line).

Hold for ten seconds. Keep breathing throughout.

Complete 5–10 repetitions.

Glute Bridge x 10 repetitions



Lying on your back with your knees bent. Tilt pelvis back and lift spine off the ground segment by segment. Squeeze buttocks. Hold 2 seconds and slowly lower. Connect breath to your movement.

Breath Connect



Practice expanding your ribs wide during your breath instead of up and down. As your pregnancy progresses there will be limited space for the ribs to move downwards.

First Trimester Strength Training

Complete 3–4 x per week if you feel well enough to do so. Ensure you have been cleared to exercise prior to starting a programme and touch base with your local PTI or ERI to take you through the exercises and programme. [Click here to watch video](#)

Warm-up

5mins light cardio, active calf stretches against wall 30–60 secs, narrow legged quarter squats 10 reps, exaggerated march/arm circles 30–60 secs, trunk twist/side bend.

Exercise 1 – Bench press – 10 reps x 2–3 sets



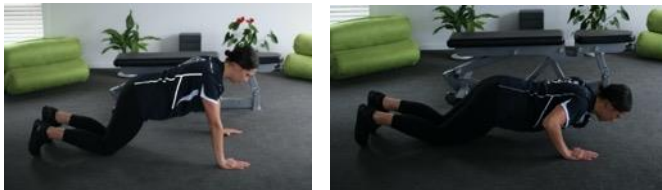
Lying on your back on the bench with feet on the floor or bench (ensuring that back is in a neutral position). Contract transversus abdominus. From a fully extended position lower bar slowly to chest. Raise to start position.

Exercise 2 – Bent Over Row – 8–12 reps x 2–3 sets



Holding onto bar bend forward from the hips, keeping the back straight. Draw in core and pull elbows to sky and bring bar to belly button, squeezing in the shoulder blades. Slowly lower to the start position.

Exercise 3 – Kneeling Press-ups – 10 reps x 2–3 sets



Starting in a kneeling position. Draw in lower abdominals and lower slowly chest to ground. Raise up to start position.

Exercise 4 – Squats – 8–12 reps x 2–3 sets



Standing with bar on shoulders. Draw in lower abdominals. Slowly lower down (as if you were going to sit on a chair). Raise to start position.

Exercise 5 – Reverse Lunge – 8 reps x 2–3 sets (each side)



This exercise can be completed with dumbbells or bodyweight. Draw in abdominals. Step backward. Lower knee towards ground. Return to start position. If this exercise causes pain in the hips, pelvis or back, decrease depth or complete a narrow lunge holding onto a wall.

Exercise 6 – Deadlift – 8–12 reps x 2–3 sets



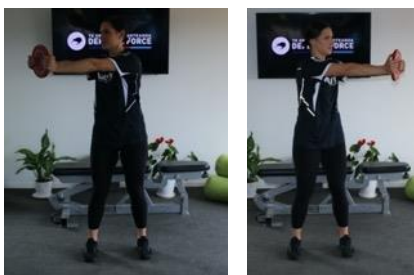
Holding bar at thigh height. Draw in abdominals and bend forward at the hips lowering the bar directly towards the ground to shin height. Slowly return to a standing position.

Exercise 7 – Side Bend – 8 reps x 2–3 sets (each side)



Holding onto weight plate in one hand. Draw in abdominals and slowly lower weight down the outside of the leg into a side bend position. Return to the start position.

Exercise 8 – Standing Twist – 8 reps x 2–3 sets (each side)



Holding weight plate to the front, feet shoulder width apart, lower abdominals drawn in. Twist weight plate slowly from side to side, staying strong and stable through the core.

Exercise 9 – Opposite Arm / Leg Raise – 10–12 reps each side x 2–3 sets



Start in four-point kneeling position. On your exhale breath gently tilt your pelvis to a flat back (tuck tailbone under). Reach your right arm forward and your left leg back. Return to the starting position and work the other side. Complete 10–12 repetitions. Do "just arm" and "just leg" if you find your pelvis twisting during the movement.

Chapter 5:

Second Trimester

Weeks 13–27



Physiological Changes

During the second trimester your baby grows from (about) the size of a lemon to (about) the size of a lettuce. The morning sickness and tiredness have hopefully subsided and you might be feeling like you have regained your energy and desire to exercise again.

Your breast tenderness may have subsided, but they will continue to feel heavy and full as your milk ducts develop. You may need additional support for your developing breasts during exercise in the form of a well-fitting bra. Bra fittings can be conducted at your camp or base clothing store, or you may prefer to size and purchase your own at a local department store.

As your uterus expands it may press against blood vessels causing you to feel dizzy at times. Continue to stay hydrated and wear comfortable loose clothing to avoid overheating or discomfort. You may need to start wearing maternity uniform or request permission to wear civilian clothing through your Commanding Officer.

Haemorrhoids are common during pregnancy due to extra blood flow in the body. Avoid cycling and rowing if it is too painful and opt for swimming/walking if this is more comfortable. Complete stretching exercises during your workouts to prevent/reduce leg cramping.

15 Weeks

Your baby is about the size of an apple



Abdominal Separation

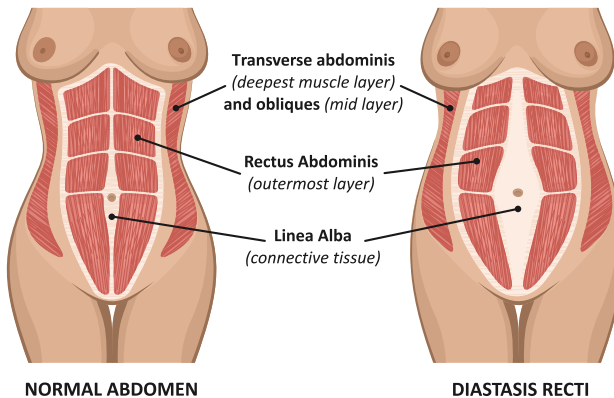
Stretching and thinning of the abdominal muscles during pregnancy is normal and known as abdominal separation or diastasis recti if the separation is 2cm or wider. Abdominal separation is a natural process as the uterus stretches the muscles in the abdomen to accommodate your growing baby.

Exercises during this trimester should aim to not put additional pressure on the rectus abdominus (six pack) muscle and sit-ups, bicycles, leg throws, and full press-ups are not recommended.

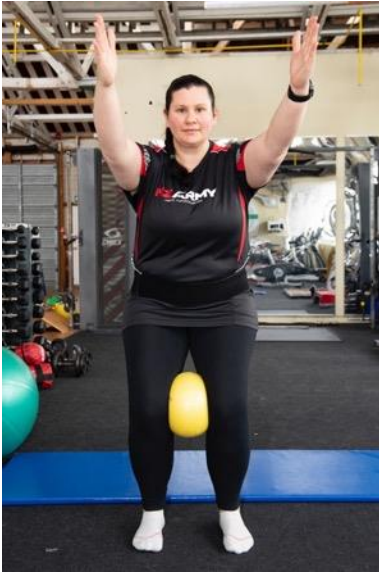
Exercises that are recommended are pelvic floor and deep core exercises and breathing exercises to practise breathing wide into your rib cage. These types of exercises strengthen the core but avoid putting additional pressure on the stretching and thinning muscles of the abdomen.

Repair and recovery from diastasis recti usually take between 6–24 months following birth. Diastasis recti will require a specific strengthening programme if there is doming or dipping of the abdominals 6 months post-partum.

DIASTASIS RECTI



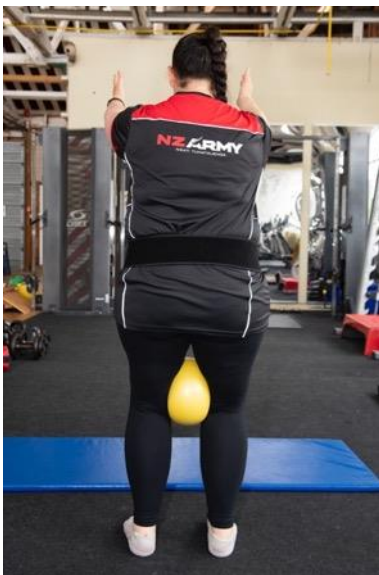
Maternity Support Belts



During pregnancy the joints in the spine or pelvic area often become painful due to increased joint laxity caused by hormones preparing the body for childbirth. Maternity support belts are commonly used to address pregnancy related back or pelvic girdle pain to provide support and compression of the back and pelvic joints and can reduce pain, symptoms and discomfort.

If you are experiencing back or pelvic pain during your pregnancy enquire about maternity support belts at the DHC or APM Physiotherapy. You may choose to purchase your own online or from a maternity shop.

Smiley belts or Serola belts are commonly used maternity support belts in New Zealand but any band that is made from a stretchy but firm (wetsuit) material and can sit below your bump will provide you effective support. Wear maternity support belts when you require extra support for your back and pelvis (such as during walking and exercising).



High-waisted exercise tights may also help support the spine and pelvic area. Talk to your women's pelvic health physiotherapist about their recommendations.

How do I know what's normal?

A HEALTHY BLADDER

- Doesn't leak, tells you when its full and gives you time to get to a toilet.
- Can hold up to 400 – 600 mL of urine.
- Empties 4 – 8 times per day or once every 2–3 hours.
- May wake you up once a night to go to the toilet (or twice if you are older or in early pregnancy).
- Completely empties each time.

AN UNHEALTHY BLADDER

- Leaks urine with coughing, sneezing, lifting, jumping, skipping, running.
- You have a sudden urge to pee.
- Empties more than every two hours (more than 8 times per day).
- Feels heavy in your underwear.
- Can only hold 300mL of urine or less.
- Has you up more than twice per night.
- Does not feel completely empty after passing urine.
- The urge is so strong you can't get to the toilet in time.

If you are experiencing any of these symptoms book an appointment with a women's pelvic health physiotherapist to improve your pelvic floor muscle function. Leaking is common but not normal.



Exercise During the Second Trimester

During the second trimester your bump will be growing and things like running or high impact activities might start to feel uncomfortable. Try swapping them out for low impact activities such as walking or swimming. Group training classes are fun but ensure to let your instructor know that you are pregnant so alternate exercises can be given when appropriate.

Exercising lying flat on your back is not recommended after 20 weeks. Opt to do exercises in a sitting or incline position which allows better blood flow to the foetus.

SECOND TRIMESTER PREGNANCY CHECKLIST

	Book an appointment with a women's pelvic health physiotherapist.
	Book a review appointment with APM Physiotherapy if you are experiencing any pregnancy related or non-pregnancy related pain or injury.
	Book an appointment with the ERI to update your pregnancy exercise programme.
	Continue exercising if your LMC advises you that there are no complications.
	Continue to seek health advice for any non-pregnancy related matters from the DHC.
	Book an appointment with the DHC if you have a complicated pregnancy requiring special exercise class referral.
	Walk.
	Talk about pregnancy depression with friends, helplines, DHC referral.
	Upsize your PT kit if required.
	Size for a maternity uniform or request to wear civilian clothing (if you haven't already).

Chapter 6: Exercise Programmes for the Second Trimester



Second Trimester Pelvic Floor & Deep Core

Complete 3 x per day. [Click here to watch video](#)

Pelvic Floor (Slow Twitch) x 10 repetitions



Start in a four-point kneeling position, knees under hips, hands under shoulders.

As you exhale squeeze and lift your pelvic floor muscles. Cues that might help you to do this are to visualise a marble at the opening of your vagina and squeeze and lift, suck up a tampon, hold in a fart, stop yourself peeing, grip on a straw and suck up a smoothie, go up in an elevator.

Maintain maximal effort for (up to) 10 seconds.

Relax fully and rest for 10 seconds.

Repeat 10 times.

Pelvic Floor (Fast Twitch) x 5–10 repetitions



Four-point kneeling position.

Lift and squeeze pelvic floor muscles. Do ten fast lift and releases.

Make sure you fully relax in between.

Transversus Abdominus x 5–10 repetitions



Four-point kneeling position.

On your exhale breath gently draw in your lower abdomen (at your undie line).

Hold for ten seconds. Keep breathing throughout.

Complete 5 – 10 repetitions.

Opposite Arm / Leg Raise



Start in four-point kneeling position.

On your exhale breath gently tilt your pelvis to a flat back and tuck tailbone under.

Reach your right arm forward and your left leg back. Do not allow your hips, pelvis or ribs to rock or rotate as your lift.

Return to the starting position and work the other side.

Complete 10–12 repetitions.

Do "just arm" and "just leg" if you find your pelvis twisting during the movement.

Second Trimester Strength Training

If you feel well enough to do so, keep up your gym exercise programme. Skip out any exercises that 'just don't feel right' for you. Complete 3–4 x per week. [Click here to watch video](#)

Warm-up

5mins light cardio, active calf stretches against wall 30–60 secs, narrow legged quarter squats 10 reps, exaggerated march / arm circles 30–60 secs, trunk twist / side bend.

Exercise 1 – Single arm seated shoulder press – 10 reps x 2–3 sets



Sitting holding dumbbells, elbows at shoulder height. Raise right arm until elbow is near to the ear and lower under control. Repeat for the left side.

Exercise 2 – Single arm dumbbell row – 8–12 reps x 2–3 sets



Hold dumbbell in right hand and bend over to place left hand on bench, ensuring the back is straight and core is activated. Pull elbow high towards the sky and squeeze shoulder blades together, then slowly complete. Repeat on the left side.

Exercise 3 – Incline push-ups – 8–12 reps x 2–3 sets



Kneeling with hands on a bench, box or chair. Draw in lower abdominals and lower chest slowly toward bench keeping the back straight. Return slowly to start position.

Exercise 4 – Sit to Stand Squats – 8–12 reps x 2–3 sets



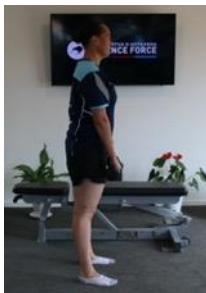
This exercise can be completed with dumbbells or bodyweight. Draw in lower abdominals and slowly lower down as if you were sitting into a chair. Touch buttocks onto bench then raise back up to a standing position.

Exercise 5 – Reverse Lunge – 8 reps each side x 2–3 sets



This exercise can be completed with dumbbells or bodyweight. Draw in lower abdominals. Step backward. Lower knee towards ground. Return to start position. If this exercise causes pain in the hips, pelvis or back, decrease depth or complete a narrow lunge holding onto a wall.

Exercise 6 – Deadlift – 8–12 reps x 2–3 sets



This exercise can be completed with dumbbells or bodyweight. With a slight bend in the knees bend forward at the hips to lower the dumbbells down towards your shins. Keep the back in a neutral position (not arched or curved). Slowly raise to the start position.

Exercise 7 – Diagonal Arm Raise – 8–12 reps each side x 2–3 sets



Holding dumbbell in the right hand, move the weight from the left hip, diagonally across the body (leading with the elbow) until the elbow is straight and the dumbbell is above head height. Lower under control.

Exercise 8 – Standing Twist – 8–12 reps each side x 2–3 sets



Holding dumbbell to front, feet hip width apart. Contract deep core muscles and twist from one side to the other.










Exercise 9 – Opposite Arm /Leg Raise – 8–12 reps x 2–3 sets



Start in four-point kneeling position. On your exhale breath gently tilt your pelvis to a flat back, and tuck tailbone under. Reach your right arm forward and your left leg back. Return to the starting position and work the other side. Complete 8–12 repetitions. Do "just arm" and "just leg" if you find your pelvis twisting during the movement.

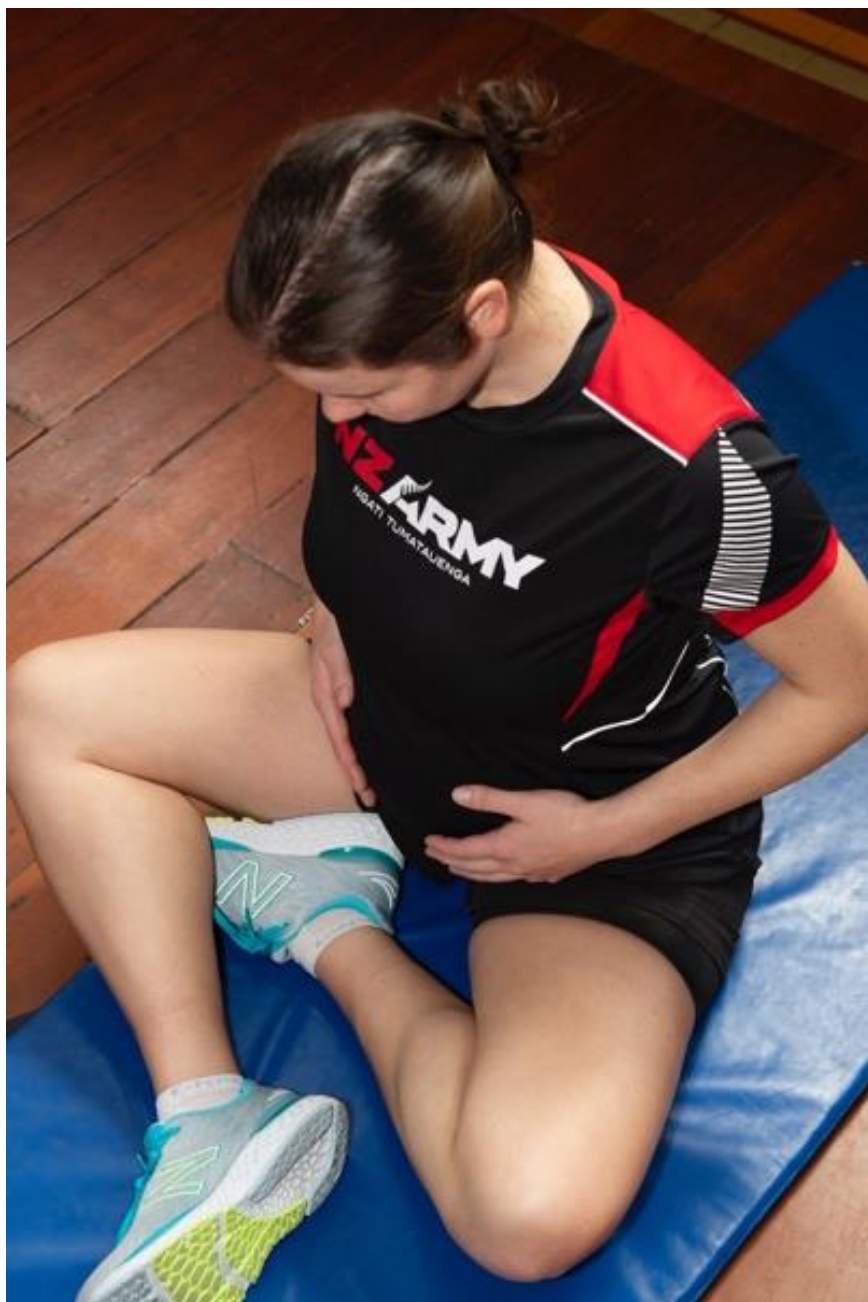
Pregnancy Stretching Programme

Complete 1 x per day. Start with a breath connect exercise to slow the heart rate and recentre. Take stretches to the point of stretch, but not to the end of range. Hold for between 10–30 seconds.

Breath Connect	Side Stretch	90 / 90 Stretch
		
Cat	Cow	Thread the Needle
	 <p data-bbox="418 962 647 986">Add tail swish movement.</p>	
Child's Pose	Stretch Back	Breath Connect
 <p data-bbox="90 1318 376 1369">Wide legged so there is room for your bump.</p>		

Chapter 7:
Third Trimester
Weeks 28–40





Physiological Changes in the Third Trimester

Your baby is rapidly putting on weight which may make you feel heavy, tired, achy and sore. You might feel discomfort in your pelvis, hips and back as the ligaments loosen to prepare for labour.

It is normal to experience a 20% weight gain during pregnancy, although this will be different for each person. Consider upsizing your PT shirt and shorts or requesting permission through your commanding officer to wear civilian PT clothing.

The extra weight doesn't just disappear when baby arrives (unfortunately) and will take most people up to two years to feel "normal again". Take a long-term view on your new body shape and your return to normal.

The baby will add pressure on your organs which may lead to feeling breathless, having heartburn and needing to go to the toilet often. Continue exercising as long as you feel well and comfortable and continue regular health checks with your LMC.

Back and Pelvic Pain



Up to 45% of women experience back or pelvic pain during pregnancy, particularly during the third trimester, and is usually caused by hormonal changes (pelvic floor muscles stretch and weaken) or biomechanical changes (changes in posture and centre of gravity).

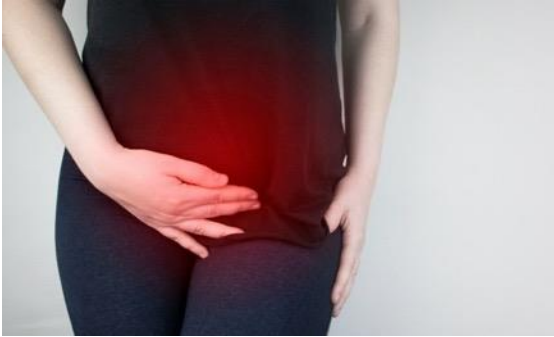
The pelvic girdle is the ring of bones around your body at the base of your spine. Pain can be felt in the lower back, front of the pelvis, hips, inner thighs or a mixture of all.

Back and pelvic pain can often be aggravated by exercise, however continuing to exercise can also help manage the pain. It is important that you can find the right intensity and right types of exercise for you. Seek assistance from a physiotherapist to assist in identifying exercises that may help manage these symptoms. Below are further recommendations to reduce back and pelvic pain symptoms:

- Reduce distance or speed of walks,
- Avoid uneven terrain,
- Reduce stride length (take shorter steps),
- Avoid activities where your legs cross (crossing your legs, leg swings),
- Get in and out of bed and the car as if your knees are glued together. Swivel on your bottom and turn. This also reduces strain on the abdominals.
- Place pillows between the length of your legs to keep them level when sleeping on your side (body pillows work well),
- Avoid activities where you take your legs outside of hip width (wide squats, side lunges)
- Avoid activities where you stand on one leg,
- Sit down when dressing or putting on shoes if required.

Be led by your pain and comfort levels. Different exercises and activities affect individuals differently.

Pelvic Floor Injury and Dysfunction



Pelvic floor injury or dysfunction is common in pregnant and post-partum women. Up to 80% of pregnant women will leak when they are pregnant and over 30% will continue to leak after childbirth. **Although it is common it is not normal.**

Servicewomen who complete regular heavy lifting or do high impact, high load exercise are at increased risk of pelvic floor injury. Other risk factors are smoking, obesity, chronic cough, constipation, family history, or geriatric pregnancies (pregnant ≥ 35 years of age).

If you have put on a lot of weight during your pregnancy, are pregnant with twins or triplets, or have had more than three pregnancies it is highly recommended you see a pelvic health physiotherapist and consider undergoing a really structured supervised rehabilitation programme.

If you are experiencing any of the below symptoms, during or after pregnancy, ensure you book in with a pelvic health physiotherapist and get a structured pelvic floor programme:

- Urinary incontinence – peeing when you laugh, cough, run or jump,
- Urinary or faecal urgency – you can't hold on, you must go now,
- Heaviness/dragging or bulging in the vagina/pelvis/anus,
- Pain/difficulty with sexual intercourse (dyspareunia),
- Obstructive defecation (trouble emptying poo),
- Faecal/anal incontinence – pooing or farting accidentally,
- Pelvic pain.

Pelvic injury and dysfunction have the potential to severely restrict function and career if left unchecked. Make sure you are proactive in looking after your pelvic floor and seek help early.

Exercise in the Third Trimester



In the third trimester you can continue exercising unless your LMC has advised against it. You can stay active right up to the birth of your baby if you feel well.

Continue doing low impact activities such as strength training, walking or swimming. This will help prepare you for the demands of carrying added weight and childbirth. Gentle

stretches to reduce aches and pains are recommended as well as pelvic floor and deep core exercises to maintain pelvic floor and core strength.

If you are experiencing back or pelvic pain the following exercise guidelines may help:

- Avoid breaststroke kick when swimming,
- Reduce stride length when aqua jogging/walking/jogging in the pool,
- Focus on exercises for the adductors (inner thigh muscles) and gluteal (bottom muscles),
- Exercise with a small ball such as a Pilates ball or rolled up towel,
- Use a band around the knees to strengthen stability muscles and maintain narrow stance,
- Cross trainers, stairs, lunges, single lower limb exercises may cause pelvic pain for some people. Avoid these exercises where possible,
- Avoid carrying loads to the side on one hip.

Back and pelvic pain may continue after pregnancy while breast feeding in some women but most settle once hormone levels return to normal.

If you are not feeling well or experiencing complications with your pregnancy ask your MO about a referral to specialist pregnancy classes that may be suitable for you to attend.

Chapter 8:

Exercise

Programmes for the

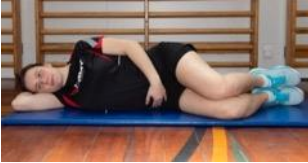
Third Trimester



Third Trimester Pelvic Floor & Deep Core

Complete 3 x per day. [Click here to watch video](#)

Pelvic Floor (Slow Twitch) – 10 repetitions



Lying on your side or sitting on a swiss ball.

As you exhale squeeze and lift your pelvic floor muscles. Cues that might help you to do this are to visualise a marble at the opening of your vagina and squeeze and lift, suck up a tampon, hold in a fart, stop yourself peeing, grip on a straw and suck up a smoothie, go up in an elevator.

Maintain maximal effort for (up to) 10 seconds.

Relax fully and rest for 10 seconds.

Repeat 10 times.

Pelvic Floor (Fast Twitch) – 5–10 repetitions



Lying on your side or sitting on a swiss ball.

Squeeze and lift pelvic floor muscles. Do (up to) ten fast lifts and releases.

Make sure you fully relax in between.

Transversus Abdominus in Sitting – Pelvic Tilt Exercise 10–30 seconds



Sitting on a swiss ball.

Roll your bottom bones forward and backwards on the swiss ball tilting and arching through your spine.

Complete for 10–30 seconds.

Transversus Abdominus in Sitting – Leg Lift – 5–10 repetitions



Sitting on a swiss ball, shoulders over hips, feet flat, neutral spine

On your exhale breath gently draw in your lower abdomen (at your undie line). Imagine “hugging your baby” with your core muscles.

Lift alternate heel or foot off the ground keeping hips neutral and body balanced for 10 seconds

Rest and complete (up to) 5–10 repetitions

Rotation in Sitting



Sitting on swiss ball with hands behind head. On exhale breath draw in lower abdominal muscles. Turn from side to side slowly and controlled.

Third Trimester Strength Training

Complete 2–4 x per week. [Click here to watch video](#)

Warm-up

5mins light cardio, active calf stretches against wall 30–60 secs, narrow legged quarter squats 10 reps, exaggerated march/arm circles 30–60 secs, trunk twist/side bend.

Exercise 1 – Single arm seated shoulder press – 10 reps x 2–3 sets



Sitting on swiss ball or bench, holding dumbbells, elbows at shoulder height. Raise right arm until elbow is near to the ear and lower under control. Repeat for the left side.

Exercise 2 – Single arm dumbbell row – 8–12 reps x 2–3 sets



Hold dumbbell in right hand and bend over to place left hand on swiss ball or bench, keeping the back straight. Draw in lower abdominals and pull elbow high towards the sky and squeeze shoulder blades together, then slowly lower. Repeat on the left side.

Exercise 3 – Wall push-ups – 8–12 reps x 2–3 sets



Standing 30–50cm away from a wall with hands at shoulder height. Draw in lower abdominals and slowly lower chest towards wall. Return to the start position.

Exercise 4 – Sit to Stand Squats – 8–12 reps x 2–3 sets



Starting in a seated position with feet hip width apart. Bend at the hips, draw in lower core and raise into a standing position. Keep shoulders over hips as you slowly lower to a sitting position.










Exercise 5 – Opposite Arm/Leg Raise – 8–12 reps x 2–3 sets



Start in four-point kneeling position. On your exhale breath gently tilt your pelvis to a flat back, tuck tailbone under. Reach your right arm forward and your left leg back. Return to the starting position and work the other side. Do "just arm" and "just leg" if you find your pelvis twisting during the movement.

Pregnancy Stretching Programme

Complete each day. Start with a breath connect exercise to slow the heart rate and re-centre. Take stretches to the point of stretch, but not to the end of range. Hold for between 10–30 seconds.

Breath Connect	Side Stretch	90 / 90 Stretch
		
Cat	Cow	Thread the Needle
 <p data-bbox="90 995 342 1018">Add tail swish movement.</p>		
Child's Pose	Stretch Back	Breath Connect
 <p data-bbox="90 1332 376 1386">Wide legged so there is room for your bump.</p>		

Chapter 9: Postpartum Weeks 0–6



Recovery



Congratulations. Baby is here. The next three months will be a blur of feeding, nappies, washing teeny tiny baby clothes, recovery and sleeping (hopefully).

Treat the next 12 weeks as a fourth trimester as baby is transitioning to life outside of you and will demand a lot from you.

Your body will be recovering from birth and now is the time to

concentrate on healing and looking after your baby. You can walk and do gentle pelvic floor and deep core exercises but no more than this is recommended within the first few weeks following birth.

Birth Injuries

Birth injuries are physical injuries experienced during childbirth and can affect the mother, baby or both. Common birth injuries to the mother can include vaginal or perineal tearing, episiotomy (cut or incision to the perineum), pelvic floor injury (due to overstretching or tearing) and organ prolapse (bladder, uterus or rectus bulging into vaginal area).

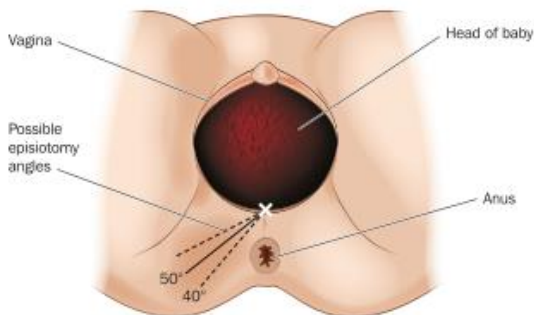
Birth injuries are usually caused by the position of the baby, having a large baby ($\geq 4\text{kg}$), having a long labour or an extremely short labour, labour complications, assisted delivery using forceps or ventouse (vacuum), or having a small or unusually shaped pelvis.

Some birth injuries are minor and heal on their own (minor vaginal or perineal injury) but deeper tears and some prolapses will require stitches/surgery.

Perineal tearing, episiotomy, or injury to the pelvic floor will cause pain and discomfort around the injury area and will require a longer period of rest and recovery before return to exercise. Work closely with your LMC and pelvic health physiotherapist to gain a safe, effective and gradual return to exercise and fitness. Doing pelvic floor exercises as soon as you feel ready, and on advice of your LMC or physiotherapist, will aid in recovery.

Serious tears or damage to the pelvic floor will require physiotherapy and exercises to re-strengthen the pelvic floor. Some women will need to use pessaries in their vagina to support internal structures, or surgery to repair a prolapse.

Whilst birth injuries are physical, many mothers experience emotional or psychological distress before, during or after the birth. This is known as birth trauma. Work closely with your LMC and MO to ensure you receive the appropriate treatment and support. Some birth injuries are now covered by ACC and physiotherapy services, appointments, further surgical interventions will be funded through ACC. This is relevant if you choose to release from the military and are still experiencing problems in the long term.



Caesarean Section

One in four women in New Zealand will need to have an elective or emergency caesarean section. A caesarean section is an intervention where the abdomen muscles and uterus are cut through to allow delivery of the baby.

A caesarean section is major abdominal surgery requiring regional or general anaesthesia. The procedure requires cutting through your abdominal muscles and a longer recovery time will be required to allow repair and re-strengthening of the abdominal and deep core muscles. It will take 6–10 weeks for your caesarean section wound to heal and during this time you can complete walking, pelvic floor and deep core exercises if you feel well enough to do so.

Check with your women’s pelvic health physiotherapist before commencing any resistance exercise or training and ask them about treatment for caesarean section scar pain or numbness if this is relevant to you. Tightness and adhesions often occur at the caesarean section scar site and massage, or soft tissue release may be helpful if there is ongoing discomfort in this area.

For the majority of women, pain will subside by 3–6 months but some women experience pain for up to 12 months. Work closely with your LMC, women’s health physiotherapist and MO to ensure you are receiving the support and advice you require to gradually build back your strength, function and fitness.





Postnatal Weeks 2–6

If you have had a caesarean section, assisted delivery or birth injury the body is probably still feeling pretty beaten up. You will require a longer period of rest and rehabilitation compared to a vaginal delivery with minimal tearing.

Continue to walk and do deep core and pelvic floor exercises if you feel well enough to do so. Low impact activities on the cycle or cross trainer can be added for women who experienced non-complicated births.

During weeks 2–4 you can add body weight squats and bridging activities if you feel well enough to do so, but note, there is no hurry to get back to exercise if your body doesn't feel quite right yet. Add in stretches for the chest and neck which may become sore with breastfeeding.

The focus of exercise during the initial weeks of your postpartum journey should be focused on reconnecting your breath, deep core and pelvic floor. You may feel the urge to pick up where you left off, however, your body has undergone a dramatic physiological process, it is often your brain that is ready to return to exercise, not your body.

Exercises such as lying on your back and breathing are recommended to coordinate the pelvic floor and diaphragm to work together. Put your hand on your tummy and observe your tummy rise as the air enters the lungs. As you exhale, breathe passively allowing your pelvis to move with your breath. You can add in single leg fall outs, glute bridges and clam squeeze exercises.

It is vital that emphasis is placed on healing and strengthening the pelvic floor and core to reduce long term pelvic floor dysfunctions.

What is Normal After Birth?

NORMAL	NOT NORMAL
Being sore	Being so sore that you cannot complete self-care activities.
Having haemorrhoids	Haemorrhoids that are so sore that you cannot sit down. Haemorrhoids that make you cry.
Feeling overwhelmed	Feeling so overwhelmed that you are unable to feed your baby or are having thoughts about harming yourself or the baby, sadness for more than 10 days.
Tears, episiotomies, C-section wound pain	Redness over wound, fever, foul smelling discharge, worsening pain (infection).
Bleeding	Changing pads multiple times in an hour, bleeding increases after initially slowing down, bleeding that lasts longer than 6 weeks.
Cramping	Significant constant pain (instead of cramps that come and go).
Leaking urine at the end of pregnancy and a few weeks after birth	Leaking or incontinence six weeks post-partum (pelvic floor dysfunction).
Pain with urinating/defecating following birth injury	Pain, stinging or burning (infection, prolapse). Extreme constipation.
Nipple pain	Red streaks or painful lumps in your breasts (mastitis), latching issues, bleeding or pus.
Doming, coning, a gap between the abdominal muscles	Doming, coning or a gap between the abdominal muscles after 6 months post-partum.
Bulging or Pressure	Vaginal bulging or pressure 3 months post-partum.

Seek medical advice if you experience any birth complications listed in the right column.

POSTPARTUM CHECKLIST FOR SERVICEWOMEN

	Focus on breath connect, pelvic floor and deep core.
	Walk.
	Talk about post-natal depression with friends, helplines, DHC referral.
	Purchase a supportive sports bra.

Chapter 10: Exercise Programmes Postpartum Weeks 0–6



Postpartum Weeks 0–6 Pelvic Floor & Core

Complete 3 x per day. [Click here to watch video](#)

Breath Connect



Lying on your back with one hand on your tummy and one hand on your chest. Reconnect breath with the rising and falling of your tummy.

Close the mouth and take a slow breath in through the nose, while feeling the abdomen rise and inflate like a balloon. Breathe out slowly through pursed lips as if you are blowing bubbles.

Pelvic Floor (Slow Twitch) – 10 repetitions



Lie on your back.

As you exhale squeeze and lift your pelvic floor muscles. Cues that might help you to do this are to visualise a marble at the opening of your vagina and squeeze and lift, suck up a tampon, hold in a fart, stop yourself peeing, go up in an elevator.

Relax fully and rest for 10 seconds.

Repeat 10 times.

Pelvic Floor (Fast Twitch) – 5–10 repetitions



Lie on your back.

Do ten fast lift and releases.

Make sure you fully relax in between.

Glute Bridge – 10 repetitions



Lying on your back. Tilt pelvis and lift spine off the ground segment by segment. Squeeze buttocks. Hold 2 seconds and slowly lower. Connect breath to your movement.

Single Leg Fallout – 8–10 repetitions each side



Lying on your back with knees bent and feet flat on the floor. On the exhale breath gently draw in the lower abdominals. Slowly lower the knee out to the side keeping the hips and pelvis still. Exhale as you lower. Inhale as you move back to the start position. Reset core between each repetition.

Transversus Abdominus – 5–10 repetitions



Lie on your back on the floor and put your fingers just inside your hip bones.

On your exhale breath gently draw in your lower abdomen (at your undie line).

Hold for ten seconds. Keep breathing throughout. Complete 5–10 repetitions.

Clam Squeeze – 10 repetitions – hold for 2 seconds



Lying on your side with knees bent to 90 degrees. Place ball or pillow between knees and gently squeeze as you lift and squeeze your pelvic floor and draw in lower abdominals. Hold for 2 seconds and release on your inhale breath.

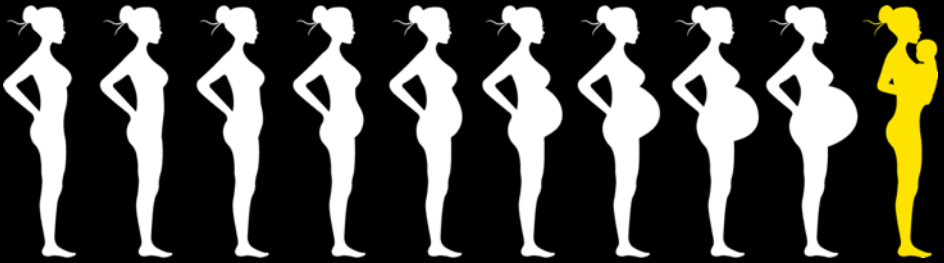
Warm-up – Walk with baby 5–20 minutes (energy permitting)



Keep pram handle close to your hips. This removes downward pressure on the pelvic floor muscles and core connection.

Book in with a women’s pelvic floor physiotherapist if you need to pee/leak during your walk or are feeling a bulging or pressure in your knickers.

Chapter 11: Postpartum Weeks 7–12





Clearance to Exercise 6 Weeks

Once you have had your 6-week clearance from your LMC you can start getting back into light exercise such as power walking, low impact exercises (cycle, rower, cross trainer) and light resistance exercises for the upper body, lower body and core. Continue with your pelvic floor exercises. The clearance from your LMC is more related to stitches/wound healing, rather than mental or physiological readiness. Everyone will be ready to return to exercise at different times and return to exercise when your body and mind is ready.

Ensure you get a postnatal WOF six weeks (or longer) following birth to check pelvic floor muscle damage and strength. It is also important that the pelvic health physiotherapist confirms that you are doing your pelvic floor exercises correctly. They will also do an assessment of diastasis recti, posture and core strength check to enable a safe return to exercise.

You can request a referral to a women's health physiotherapist at the DHC or directly through APMphysio@nzdf.mil.nz. You may wish to do this during some of your 'keeping in touch' hours if approved by your commander / manager.



Keeping in Touch Days

NZDF personnel who are on parental leave may return to work for up to 64 hours on the discretion of their commander/manager. You can apply for keeping in touch days via email and ensure you include your service number, name, time, date and number of keeping in touch hours to be taken.

You could use some of your hours to touch base with your camp or base MO at the DHC if approved by your commander / manager. Ask about a referral to a women's health physiotherapist, camp or base physiotherapist or ERI. Check that the rehabilitation instructor has done recent pregnancy, postnatal and pelvic floor coursing to ensure they can programme an ideal return to exercise for you.

Your MO will also review your health and wellbeing and provide you advice about your recovery.

Self-Check for Diastasis Recti

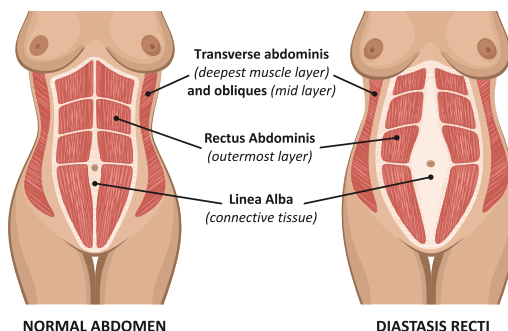
Most women will experience some abdominal separation during pregnancy. For some women diastasis recti may correct itself after delivery as the abdominal muscles gain strength. For others, specific core exercises need to be completed to strengthen the abdominal and deep core muscles. Many of these exercises will be similar to the core exercises you were doing during pregnancy but can now be progressed as you recover and get stronger.

SELF CHECK FOR DIASTASIS RECTI

- Lie on your back, knees bent, feet flat on the floor.
- Raise your head up off the floor slightly and look at your knees.
- Is there a doming or coning shape in your midline?
- Move your hand above and below your belly button, and all along the midline of your abdominal muscles. See if you can fit any fingers in the gaps between your muscles.
- If you feel a gap or separation of one finger length, you have a separation.
- If you feel a gap or separation of two finger lengths, you have diastasis recti and need to complete specific deep core exercise programme.

If you have coning, doming, or a significant gap between your abdominal muscles make sure you make an appointment with a women's pelvic health physiotherapist to get specific exercises to strengthen your deep core and abdominal muscles.

DIASTASIS RECTI





Exercising Postpartum Weeks 7–12

From week 8 you can return to swimming if your wounds have healed and bleeding has stopped, and cycling or spin classes if this is comfortable. Resistance training can progress to using bands or light weights if the body is comfortable doing so.

Being overweight increases the load on the pelvic floor so don't attempt to return to run until your body mass index (BMI) is under 30 and you have been cleared by your women's health physiotherapist.

From week 12 a gradual return to running programme can be started if there is no pelvic floor or core dysfunction. Ensure you get cleared from a women's pelvic health physiotherapist prior to starting any high intensity interval training, weight training or running. Returning to running or high intensity training too soon could cause long term injury, leaking, prolapse that could result in long term dysfunction. Think about 'could I?' versus 'should I?'

Breastfeeding, Bras and Exercise



If you have chosen to breastfeed your baby, there are no medical reasons why you shouldn't return to exercise and training following medical clearance. You may need to alter training times, type and clothing to ensure exercising and running can be completed safely and comfortably.

It is acknowledged that mastitis, blocked ducts, engorgement, sore or cracked nipples, thrush, breast abscess are common breastfeeding problems, and it is unlikely you will want to exercise when experiencing any of these complications. The information below provides advice and considerations around exercising and breastfeeding when you feel ready to do so.

Relaxin levels do not return to normal until three months post-breastfeeding. For some women there may be an increase in joint laxity and theoretically an increase in joint, ligament or muscle injuries (including pelvic floor injuries). Caution will need to be taken if your joints still feel very lax and loose. Consideration should be given to avoiding rough trail runs or playing sport with fast direction changes if these hormonal changes are affecting you.

To make running more comfortable consider feeding your baby prior to exercising to ensure you don't feel overly full or that the baby isn't due to be fed during your workout time.

Consider getting professionally fitted for a sports bra that provides support and encapsulation instead of a sports bra that solely provides compression. This will be more supportive and comfortable and will stop movement in all directions.

Supportive sports bras are sized using a band and cup size, for example 12DD. Compression sports bras are sized by band size only, for example 12 or M. The military issued high impact sports bras provide encapsulated support and can be sized at your base or camp clothing store.

Breastfeeding, Hydration and Nutrition



Moderate to vigorous exercise does not impact your milk quality or the ability for your milk to provide all the nutrients required for your baby. You do need to remain adequately hydrated when you return to exercise to ensure your milk supply is not affected. It is recommended you take a water bottle with you and drink regularly during exercising.

Whilst breastfeeding your body needs an additional 400 cal (1,600 KJ) per day above your normal energy requirements to produce milk.

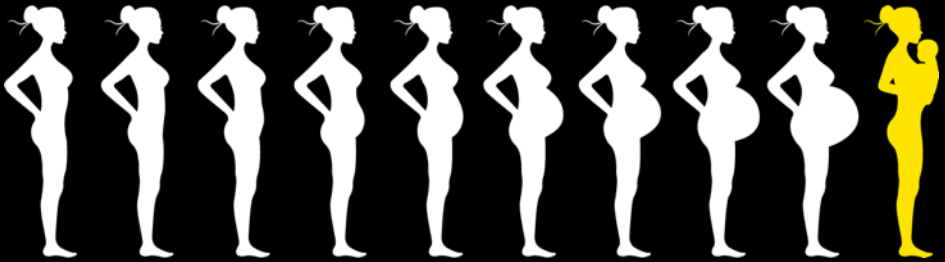
Women who are overweight can safely diet during breastfeeding if they choose to do so and monitor the impact of their diet change on their milk production.

Chapter 12:

Exercise Programmes

Postpartum

Weeks 7–12



Postpartum Weeks 7–12 Pelvic Floor & Core

Complete 3 x per day. [Click here to watch video](#)

Pelvic Floor (Slow Twitch) – 10 repetitions



Start in a four-point kneeling position, knees under hips, hands under shoulders.

As you exhale squeeze and lift your pelvic floor muscles. Cues that might help you to do this are visualise a marble at the opening of your vagina and squeeze and lift, suck up a tampon, hold in a fart, stop yourself peeing, go up in an elevator.

Maintain maximal effort for (up to) 10 seconds.

Relax fully and rest for 10 seconds.

Repeat 10 times.

Pelvic Floor (Fast Twitch) – 5–10 repetitions



Four-point kneeling position.

Squeeze and lift pelvic floor. Do ten fast lift and releases.

Make sure you fully relax in between.

Transversus Abdominus – 5–10 repetitions



Four-point kneeling position.

On your exhale breath gently draw in your lower abdomen (at your undie line).

Hold for ten seconds. Keep breathing throughout.

Complete 5–10 repetitions.

Donkey Kicks – 8 repetitions each side



Start in a four-point kneeling position, knees under hips, hands under shoulders.

Cue core and pelvic core. Squeeze buttock muscles and lift leg up towards the sky keeping hips level.

Do 8 slow “pulses” at the top of the movement then return leg to the start position.

Single Legged Glute Bridge – 8–10 second hold each side



Lying on your back with knees bent.

Activate core and then straighten left knee. Push through right leg to lift buttocks off the floor keeping hips level.

Hold for 8–10 seconds and slowly lower. If this is too difficult at this stage continue with normal glute bridge as per weeks 0–6.

Lying Leg Raises – 8–10 repetitions each side



Lying on your side. Squeeze glutes. Raise leg up to the sky and slowly lower down under control. Keep hips level.

Postpartum Weeks 7–12 Strength Training

[Click here to watch video](#)

Warm-up – 5 mins aerobic activity and light stretches

Wall Press up – 10–12 repetitions



Standing with hands on wall. Slowly lower into a wall press up keeping tummy button pulled in throughout the movement. Return to the start position slowly and under control. This can also be done on your knees or in an elevated position using a chair or bench.

Superman Prone Row – 12–15 repetitions



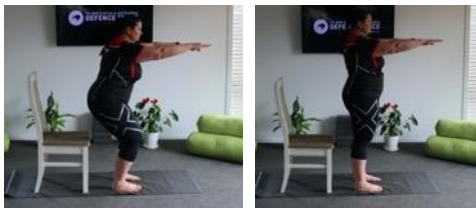
Lying on your tummy with hands to the front. Use a pillow to support under your breasts if required. Activate core and then pull elbows back into a row position and squeeze the shoulder blades together. If this causes pain in the back reduce the range of the row movement and avoid arching your back.

Wrist Exercises – 10–12 repetitions



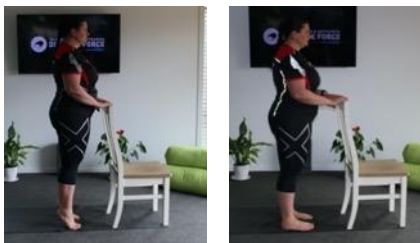
Kneeling or sitting with your hand over the edge of a chair or table. Holding onto a can, slowly lower the hand and wrist down. Return to the start position.

Squat – 10–15 repetitions



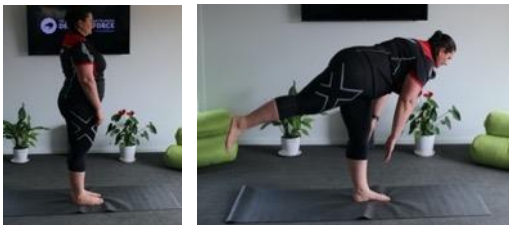
Standing with hands on shoulders or out in front. Lower into partial squat position or lower into chair then return to the start position.

Calf Raises – 10–15 repetitions



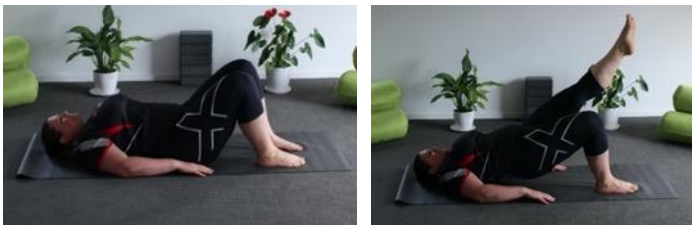
Standing holding onto chair or wall. Raise up onto toes and slowly lower.

Single Leg Deadlift – 10–15 repetitions



Balance on one leg with a slight bend in the standing knee. Hands can be on hips or out in front. Tip forward from the hips and raise leg to the rear without twisting through body or pelvis. Return to start position.

Single Leg Glute Raise – 8–10 repetitions each side



Lying on your back with knees bent. Activate core and then straighten left knee. Push through right leg to lift buttocks off the floor keeping hips level. Hold for 2–3 seconds and slowly lower. If this is too difficult at this stage continue with normal glute bridge as per weeks 0–6.

Lying Leg Raises – 8–10 repetitions each side



Lying on your side. Squeeze glutes. Raise leg up to the sky and slowly lower down under control. Keep hips level.

Single Leg Raise – 8–10 repetitions each side



Lying with knees bent. On exhale breath slowly draw in lower abdominal muscles. Slowly lift right leg until the hip is bent to 90 degrees. Lower under control. Repeat with the left side.

Chapter 13: Postpartum Weeks 12+



Return to Running (3–6 months)

Running is a high impact activity which puts a lot of pressure on the pelvic floor, core and organs. Return to running is not advised prior to three months postnatal, or longer if you have had a caesarean section or birth trauma.

Your exercise recovery will be easier if you start light as soon as you feel ready and ease your way back into training rather than doing no exercise and then returning to group PT. Do not attempt pack walking until you have been cleared to return to running and weight training.

If any symptoms of pelvic floor dysfunction are present (urinary incontinence, heaviness in the pelvic area, pain with sexual intercourse, bleeding, decreased abdominal strength or back/pelvic pain) running should be further deferred.

Your pelvic health physiotherapist will evaluate your suitability for returning to running and will consider time-based criteria with risk factors and signs and symptoms. Ask about the suitability of using a pessary during your return to running.

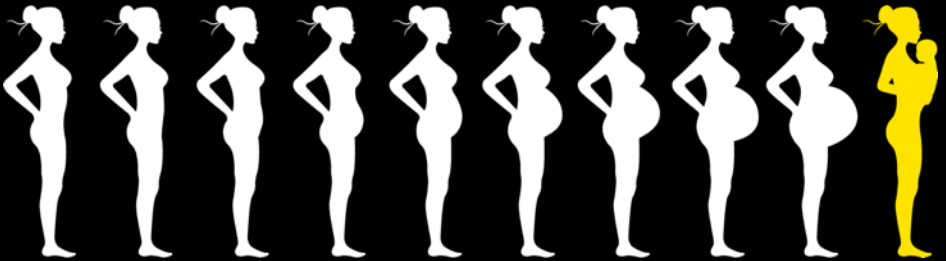
Aim for return to running between 3–6 months post-partum. Return to running should only be attempted if you can complete the following activities without any pain, heaviness, dragging or leaking. ¹Good leg strength should be evaluated prior to returning to running and you should be able to walk for 30 minutes and do the following strength exercises:



- Single leg balance 30 seconds,
- Single leg squat 10 each side,
- Jog on the spot 1 minute,
- Forward bounds 10 repetitions,
- Hop in place 10 repetitions each side,
- 20 single legged calf raises,
- 20 single legged bridges,
- 20 single legged sit to stand,
- 20 side lying leg lift exercises.

¹ Goom, T., Donnelly, G., & Brockwell, E. (2019). Returning to running postnatal – Guidelines for medical, health and fitness professionals managing this population. [Click here to go to the link](#)

Chapter 14: Exercise Programmes Postpartum Weeks 13+



Postpartum Weeks 13+ Pelvic Floor & Core

Complete 3 x per day. [Click here to watch video](#)

Pelvic Floor (Slow Twitch) – 10 repetitions



Standing or sitting. Neutral spine. Shoulders stacked over hips and feet.

As you exhale squeeze and lift your pelvic floor muscles. Cues that might help you to do this are to visualise a marble at the opening of your vagina and squeeze and lift, suck up a tampon, hold in a fart, stop yourself peeing, go up in an elevator.

Maintain maximal effort for (up to) 10 seconds.

Relax fully and rest for 10 seconds.

Repeat 10 times.

Pelvic Floor (Fast Twitch) – 5–10 repetitions



Standing or sitting. Neutral spine. Shoulders stacked over hips and feet.

Squeeze and lift pelvic floor muscles. Do ten fast lift and releases.

Make sure you fully relax in between.

Transversus Abdominus – 5–10 repetitions



Standing or sitting. Neutral spine. Shoulders stacked over hips and feet.

On your exhale breath gently draw in your lower abdomen (at your undie line).

Hold for ten seconds. Keep breathing throughout.

Complete 5–10 repetitions.

Single Legged Balance – 30 seconds each side



Standing or sitting. Neutral spine. Shoulders stacked over hips and feet.

Cue core and pelvic floor. Cross hands across chest and balance on one leg.

Single Leg Glute Raise – 8–12 reps x 3 sets,

Complete as a normal glute raise (as per 0–6 weeks) if required.



Lying on back with one knee bent and one knee straight.

Activate core and lift buttocks up off the ground, keeping hips level, and hold for a count of 3–5 seconds. Slowly lower under control.

Postpartum Weeks 13+ Strength Training

[Click here to watch video](#)

Warm-up

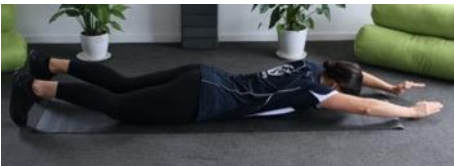
March on the spot, march on the spot & roll shoulders forward/backward, march on the spot & reach up to the ceiling, march on the spot & arms up and down breathing, taps across, taps backward, hamstring curls, arms up and down breathing, Kegels.

Exercise 1. Kneeling Press-Up to Superman – 8–12 reps x 3 sets



Start on your knees in a kneeling press-up position. Activate your core and lowering into a press-up position, as far as comfortable for you. Return to the start position then raise opposite arm and opposite leg. If this is painful, uncomfortable or is causing twisting through your pelvis, do arm and leg separately.

Exercise 2. Superman Prone Row – 8–10 reps x 3 sets



Lying on your tummy with arms outstretched to the front. Use a pillow to support under the breasts if required. Activate core and then pull elbows into a row position squeezing the shoulder blades back and down. Slowly return to the start position.

Exercise 3. Squat Jump (only complete if cleared to return to run) 8–12 reps x 3 sets, Complete squat without jump if not cleared or experiencing leaking.



Standing with feet just outside hip width apart. Lower into partial or full squat. If you have been cleared to run and are experiencing no pelvic floor dysfunction, add a small jump at the top of your squat.

Exercise 4. Walking Lunge – 8 reps each side x 3 sets



Step forward and lower rear knee towards ground. Lift and repeat on the opposite site.

Exercise 5. Single Legged Calf Raise – 8–12 reps x 3 sets



Standing on one leg and holding onto chair or wall if required. Raise heel off ground and hold for a count of 1–2. Slowly lower back to start position.

Exercise 6. Single Legged Hop (only if cleared for running) 8 reps each side x 3 sets, Complete single legged squat if not cleared or leaking.



Balance on one leg and raise off ground into a hop position. Hold balance position in between hops for 2–3 seconds.

Exercise 7. Fire Hydrant – 8 repetitions each side x 3 sets



Start in a four-point kneeling position. Activate core and lift right leg out to the side to work through the hip stabiliser muscles. Keep hips level and ensure your pelvis isn't tilting. Slowly return to start position.

Exercise 8. Single Leg Glute Raise – 8–12 reps x 3 sets,

Complete as a normal glute raise (as per 0–6 weeks) if required.



Lying on back with one knee bent and one knee straight. Activate core and lift buttocks up off the ground, keeping hips level, and hold for a count of 3–5 seconds. Slowly lower under control.

Return to Running Programme

The following return to running programme is based on the UK National Health Service Couch to 5K training plan and is designed to gradually increase running tolerance and load using interval training. This programme should not be commenced prior to 12 weeks post-partum. Remember to think ‘should I be doing this?’ not ‘can I do this?’

Jog uphill and walk downhill initially to reduce pressure on pelvic floor.

Start each exercise session with a 5 min warm-up ideally a fast walk. Increasing running tolerance is the aim, not speed. Aim to run for the entire run interval even if it is slow.

Combine this running programme with strength training programmes to improve strength and stability through the legs, glutes, core, pelvic floor. This will help you return to running and reduce your chances of sustaining an injury.

If you are finding the programme too difficult, repeat the previous week cycle. You want it to be challenging but not so difficult that you dread the progressions.

Rest is an important part of recovery so try to ensure you have a day where you rest.

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Week 1	1 mins R/ 1.5 min W/ 20 mins total	Cross- train/ rest/ strength	1 mins R/ 1.5 min W/ 20 mins total	Cross- train/ rest/ strength	1 mins R/ 1.5 min W/ 20 mins total	Cross- train/ rest/ strength	Rest/ Recover
Week 2	1.5 mins R/ 2 min W/ 20 mins total	Cross- train/ rest/ strength	1.5 mins R/ 2 min W/ 20 mins total	Cross- train/ rest/ strength	1.5 mins R/ 2 min W/ 20 mins total	Cross- train/ rest/ strength	Rest/ Recover
Week 3	2 mins R/ 2 mins W/ 20 mins total	Cross- train/ rest/ strength	2 mins R/ 2 mins W/ 20 mins total	Cross- train/ rest/ strength	2 mins R/ 2 mins W/ 20 mins total	Cross- train/ rest/ strength	Rest/ Recover
Week 4	3 mins R/ 2 mins W/ 20 mins total	Cross- train/ rest/ strength	3 mins R/ 2 mins W/ 20 mins total	Cross- train/ rest/ strength	3 mins R/ 2 mins W/ 20 mins total	Cross- train/ rest/ strength	Rest/ Recover

R = run W=walk

Running with a Buggy/Pram

Running with a pram alters the way you run and ideally you should return to running without a pram initially. It is recommended that you should not run with your baby in the pram until they have head control and are able to hold their head up.

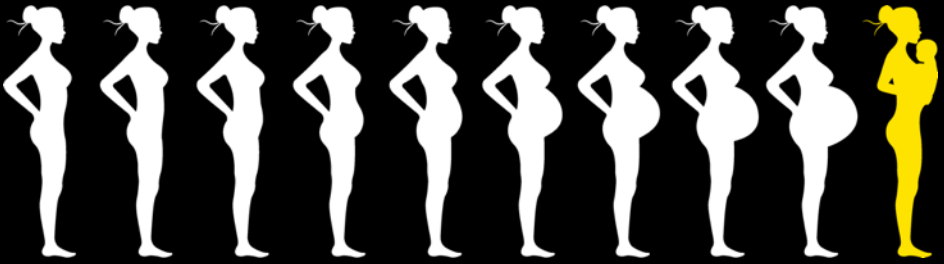
If you do run with a buggy, ensure it should be one designed for running. Start with a two-handed hold on the buggy as this is the position where your body behaves the closest to normal running.

Week 5	5 mins R / 3 mins W / 3 rounds total.	Cross-train/ rest/ strength	8 mins R / 5 mins W / 8 min R.	Cross-train/ rest/ strength	20 mins running	Cross-train/ rest/ strength	Rest/ Recover
Week 6	6 mins R / 3 mins W - 2 rounds total	Cross-train/ rest/ strength	10 mins R / 3 mins W / 10 mins R	Cross-train/ rest/ strength	25 mins running	Cross-train/ rest/ strength	Rest/ Recover
Week 7	25 mins running	Cross-train/ rest/ strength	25 mins running	Cross-train/ rest/ strength	25 mins running	Cross-train/ rest/ strength	Rest/ Recover
Week 8	30 mins running	Cross-train/ rest/ strength	30 mins running	Cross-train/ rest/ strength	30 mins running	Cross-train/ rest/ strength	Run 5 KM!

R = run W = walk

Chapter 15:

Returning to work



Returning to Work

Members of the NZDF are entitled to 26 weeks paid parental leave if you are the primary carer of the child, and up to 12 months of unpaid parental leave, which may be shared with your partner.

When you return to work you will be required to book an appointment at the DHC to review your medical grading. Your medical grading review will take into account breastfeeding, birth injury, post-natal complications and duty exemption, which will be discussed with your manager.

You will be exempt from fitness testing, contact sports and formal fitness classes (including unit PT and unit sports), unless you choose to do so, and this will remain in place for 12 months from the birth of your baby.

Every individual is different, and every pregnancy and birth is different. It is important that you work with your physiotherapist and ERI to manage your training and liaise directly with a MO with any questions or concerns about your return to work, return to training and return to fitness testing.

See DFO 3, part 12, Chapter 10 for more information on your rights and entitlements during pregnancy and the breastfeeding support phase.



Courses, Promotion, Seniority, Nominations

Promotion and seniority are not affected by pregnancy, birth and breastfeeding for a period of up to 12 months following the birth of your baby.

If you want to or need to attend promotion/trade course or other training opportunities during pregnancy, or whilst breastfeeding you are able to do so if the MO deems there is no medical reason why you are unable to. If it is a classroom-based course, you cannot be excluded from the course on fitness grounds.

If you are required to withdraw from a course because physical activity is a crucial component of the course, you can be rescheduled on the first available course on your return to full duty. You are not required to attend a course when breastfeeding unless you elect to do so.

If you are eligible for promotion but lack the course qualification, protected seniority is to be given for the required period. Seniority in rank or trade is to be protected during pregnancy, birth and breastfeeding for a period of up to 12 months following the birth of your baby and further information can be found at DFO 3, Part 12, Chap 10.





Fitness Testing

You have 12 months from the birth of your baby until you are required to do fitness testing. Returning to testing too soon can result in injury so ensure you have completed a suitable build up training prior to completing fitness testing.

You can complete fitness testing sooner than 12 months if you choose to, though it is recommended you seek guidance from the MO, pelvic health physiotherapist or physiotherapist before doing so. If you fail a fitness test during the period of your exemption, this failure is not to be recorded on your records.

The 12-month exemption period may be extended by a MO for any reason related to breastfeeding, birth injury or post-natal complications. This is fine as everybody recovers differently and over different timeframes.

Ensure you talk to your MO about your situation and ensure your manager is aware of your updated timeframes and training programme progression, so they are able to provide you support during your recovery back to full fitness.

POSTPARTUM CHECKLIST FOR SERVICEWOMEN

	Book an appointment with a women's pelvic health physiotherapist to get clearance before returning to running.
	Diastasis Recti self-check.
	Touch base with work about doing your keeping in touch hours.
	Book in with your MO for your grading review.
	Make an appointment with the APM Physiotherapist or ERI for a post-partum exercise programme.
	Talk to your manager about realistic return to fitness testing timeframes (based on recommendations from the MO).
	Work towards fitness testing timeframes.
	Pass fitness test.

Postnatal for Life

Complications and side effects from pregnancy and birth may arise immediately after or some time following pregnancy and birth. Sometimes, signs of pelvic floor damage or prolapse are not detected until menopause.

Many servicewomen do not seek help with postnatal symptoms citing that they're normal symptoms that everyone puts up with. If you experience abdominal separation, pelvic floor weakness or dysfunction, leaking, heaviness or prolapse at any point in your career (soon after pregnancy or some time down the track) make sure you book an appointment with your MO or women's pelvic health physiotherapist.

These symptoms can limit career opportunities and quality of life and you don't have to put up with them. Even though they are common, they're not normal.

There is a lot that can be done to prevent injuries, improve injuries, help you to return to full fitness without symptoms. When you listen to your body and get the right support, you can be stronger and fitter than before having children. It's never too late.



Chapter 16: **Further Reading about Specific Pregnancy Related Topics**



Pelvic Floor Self Examination

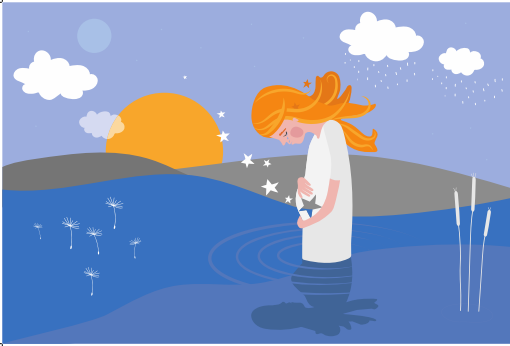
If you are comfortable doing so, do a self-examination of your pelvic floor. This will give you confidence that you are doing the exercises correctly and that you are working the pelvic floor muscles correctly.

HOW TO DO A SELF EXAMINATION

- Lie on your back, your side or in a squat position holding a mirror.
- Cue your pelvic floor through ‘sucking up a marble, holding in a tampon, hold in a fart to contract the pelvic floor.
- Look for a ‘lifting’ of the perineum (the area between your vagina and anus).
- Ensure you are squeezing and lifting when contracting, and releasing/relaxing in-between each contraction.

If you are comfortable in doing so, you can also do an internal examination to see whether the pelvic floor muscles are contracting when you are doing your pelvic floor exercises. To do this insert your index finger approximately 5cm into the vagina and feel for pressure on the side walls of your vagina when you are lifting and squeezing to contract your pelvic floor muscles. Complete the kegel slow twitch and fast twitch exercises and see if you can feel pressure of the side walls when completing the different pelvic floor contractions.

Miscarriage



Miscarriage affects 25% of all women and most commonly occurs in the first 12–14 weeks. As well as the huge emotional recovery that needs to occur following miscarriage, the body needs to recover too.

Speak to your LMC and MO about your mental and physical wellbeing as they will be able to help and refer you for further support if required. There are several organisations within the NZDF available to support taha hinengaro (emotional mental health) including social workers, psychologists and chaplains. The NZDF's Employee Assistance Programme (EAP) is also available to provide confidential counselling support for you and your family

The hormone relaxin remains in the body for three months following miscarriage (or termination) and returning to normal training (or unit PT/sports) will not be suitable until the body has had adequate time to return to its pre-pregnant state.

The MO will prescribe additional time on light duties, rehabilitation or own PT following a miscarriage (or termination) and regular consultation with your MO or physiotherapist will be required up until return to full duties is suitable.

Stillbirth



In New Zealand 300 babies die before birth each year. Stillborn is defined as losing a baby after the first 20 weeks of pregnancy. The baby must still be born, and options will be discussed with you.

The loss of a child is devastating and will take a considerable amount of time and support to recover from.

The body may start producing milk which can cause further discomfort and distress, as well as lochia (a normal discharge following birth).

Your body will require the same recovery time as any other birth. Do not rush back to exercise, training or fitness testing even though grief may drive you to. You will need to have a post-natal check six weeks after birth before you return to any intense training or exercise. Keep doing pelvic floor and core exercises and walking for light exercise.

Follow recommendations from your LMC, MO, physiotherapist, ERI and this guidebook about suitable return to running and return to fitness testing timeframes.

Pregnancy and Postnatal Depression

Postnatal depression affects up to 15% of mothers after they have given birth and 9% of women during pregnancy. Depression can occur any time during pregnancy and up to a year after your baby is born. It can also occur after miscarriage.



Symptoms of postnatal depression are feeling sad and losing interest in things that were once enjoyable. The symptoms might include:

- Feeling worthless, hopeless, useless,
- Feeling so sad that eating and sleeping patterns change,
- Blaming yourself when things go wrong, even if it's not your fault,
- Feeling anxious, panicky or overwhelmed,
- Having thoughts of suicide or harming your baby,
- Not feeling close to your baby and other family members.

Talk to your LMC or your DHC if you are experiencing pre or postnatal depression. It will not affect your employment and they will be able to connect you with people who can help you through the challenging journey.

Alternatively, you could confidentially call the NZDF4U helpline, depression or Plunket helplines which are available 24/7. A directory can be found at the back of this booklet.



Cultural Support

For Māori and many other populations in New Zealand the standard ways of delivering social and health services do not align with the context of whānau, hapū, iwi and community.

Whānau Ora is a community-based organisation that works with partners, providers and navigators to deliver customised support and services to whānau Māori, and Pacific and Pākehā families. Regional and national contact information can be found at www.tpk.govt.nz

Whānau Āwhina Plunket is Aotearoa's largest support service for the health and wellbeing of tamariki under five and their whanau. Whānau Āwhina Plunket provides free health checks, development checks and a 24/7 parenting helpline and a range of local services. More information can be found at www.plunket.org.nz

In different regions of the country there is different organisations that provide cultural support during pregnancy and post-partum. For more information look at Māori and Pacific Health Providers on the Ministry of Health website www.health.govt.nz

Checklist for Commanders

FIRST TRIMESTER	
	Your subordinate will inform you they are pregnant. This will not be easy for them particularly if they have experienced previous miscarriages. The information is to be kept confidential.
	Conduct a risk assessment of their current job with the MO and a health and safety advisor.
	Recommend duty restrictions and discuss duty restrictions listed on the MD906.
	Provide command support for miscarriage/termination if applicable. Return to PT and full duties will be around 12 weeks due to pregnancy hormones.
	Discuss their intention around trade/promotion coursing. Is their coursing classroom-based or will they require a medical waiver?
	Advise them that their seniority and promotion eligibility are not affected by pregnancy and 12-month post-partum period.
	Discuss your expectations around advisory for pregnancy related appointments.
	Discuss if they intend to continue with unit physical training opt for own PT.
SECOND/THIRD TRIMESTER	
	Ask if they have a pregnancy exercise training programme from the ERI and have made an appointment with a women's pelvic health physiotherapist.
	Discuss maternity uniform or request to CO to wear civilian uniform.
	Discuss expectations around PT uniform (do they require an upsize).
POST-NATAL	
	Reach out to see how they are doing.
	Discuss keeping in touch hours and how they would like to use them.
	Discuss return to work timeframes and whether this has changed.
	Work with individual, MO and ERI around return to fitness testing timeframes upon return to work.
	Be aware that long term injury can occur from returning to heavy lifting, high intensity training too soon. Do not order fitness testing.

Directory of Key Contacts

Service	Information	Contact Details
1737	Counselling service for people feeling stressed, depressed, feeling down or just need someone to talk to.	Free call or txt 1737 24/7
0800 MUM 2 BE	Information on how to access maternity services and what you are entitled to receive.	0800 686 223
Alcohol and Drug Helpline	Friendly, non-judgemental, professional help and advice.	0800 789 797 24/7 Text 8681 www.alcoholdrughelp.org.nz
Anxiety NZ	In person or online therapy to help you manage stress, anxiety, depression or co-related conditions for you or a family member.	0800 269 4389 www.anxiety.org.nz
APM Physiotherapy	Contracted on base NZDF Physiotherapists.	APMphysio@nzdf.mil.nz 0800 967522
Are you OK	Family violence is not OK. Worried about safety in a relationship?	0800 456 450 24/7 www.areyouok.org.nz
Asian Family Services	Helpline and support for Asian families living in New Zealand.	0800 862 342 Mon–Fri 9am–8pm www.asianfamilyservices.nz
Breastfeeding Support / Lactation Specialists	Publicly funded services in the community for lactation support.	www.nzlca.org.nz Plunket Lactation Support 0800 933 922 plunketline 24/7
Continence NZ Helpline		0800 650 659 www.continence.org.nz
Cultural Services – Whanau Ora	Support services for Māori, Pasifika and Pakeha.	0800 875 663 www.tpk.govt.nz
Pūtahi Hauora Defence Health Hub	NZDF Health Website. Information on health, wellbeing and support for Military, Civilians, Whānau and Veterans. Including Camp/Base Directory of support providers.	https://health.nzdf.mil.nz/

Service	Information	Contact Details
Defence Health Centre Base Auckland		09 417 7019
Defence Health Centre Burnham		03 363 0159
Defence Health Centre Devonport Naval Base		09 445 5922
Defence Health Centre HQ NZDF		04 527 5045
Defence Health Centre Linton		06 351 9565
Defence Health Centre Ohakea		06 351 5732
Defence Health Centre Papakura		DtelN 369 8522
Defence Health Centre Trentham		04 527 5064
Defence Health Centre Waiouru		06 387 5537
Defence Health Centre Woodbourne		03 577 1136
Depression Helpline	Talk to a trained counsellor about how you are feeling or to ask a question.	0800 111 757 24/7 Free text 4202 www.depression.org.nz
Family Violence Crisis Line and Women's Refuge	Women's Refuge Crisis Line (inclusive of transgender and non-binary persons).	0800 733 843 24/7 www.womensrefuge.org.nz
Find a Māori Midwife		www.findyourmidwife.co.nz select Māori Midwife
Find a midwife / LMC	Find a midwife in your area.	www.findyourmidwife.co.nz
Find a NZDF exercise rehabilitation instructor	Fitness and strength programme during and after pregnancy.	PT4wahinehapu@nzdf.mil.nz
Find a Pasifika Midwife		www.findyourmidwife.co.nz Select Pasifika Midwife
Find a women's pelvic health physio	Specialist women's pelvic health assessment and treatment of the pelvic floor and core.	www.physio.org.nz or ask for a referral from the DHC

Service	Information	Contact Details
Home Birth Aotearoa	Learn more about home birthing.	www.homebirth.org.nz
KC Fit Core Restore	Strengthen and flatten your core.	www.kcfit.co.nz
Lifeline	Confidential counselling.	0800 543 354 24/7 www.lifeline.org.nz
Māori Health Providers	Directory available at Ministry of Health website.	www.health.govt.nz
Miscarriage support SANDS	Organisation supporting families who have experienced death of a baby.	www.sands.org.nz
Nga Maia Māori Midwives	Nga Maia is a National Body that represents Māori Birthing.	www.ngamaia.co.nz
Nutritional Advice	Eating safely and well during pregnancy.	www.health.govt.nz
NZDF Chaplain Services	The role of the Chaplain is to provide spiritual, religious and pastoral ministry to NZDF members and their families.	An updated list of regional Chaplains and contact numbers are available on the NZDF Intranet Site Home Page
NZDF SAPRA		0800 6933 24
NZDF Social Workers		Technical Advisor 021 905 680
NZDF4U Helpline	24/4 wellbeing and counselling support.	0800 NZDF4U (0800 693 348) Text 8881
Pasifika Futures	Support for Pacific Families to achieve their aspirations in health, housing, education, training and economic development.	0800 288 727 www.pasifikafutures.co.nz
Post-natal depression		Contact your DHC for a medical referral or call any of the support numbers listed in this directory for a confidential chat.
Quitline (Quit – Me Mutu)	Smoking cessation help.	0800 778 778 24/7

Service	Information	Contact Details
Samaritans	Loneliness, depression, despair, distress or suicidal feelings. Call for confidential, non-judgemental, non-religious support.	0800 726 666 24/7
She Moves	NZ online women fitness trainers. Pregnancy and post-partum online workouts.	Search 'she moves' on Facebook or Instagram.
Shine	Domestic violence helpline.	0508 744 633 24/7 or live webchat at www.2shine.org.nz
Sleep consultant		www.babysleepconsultant.co.nz
Sneeze Without Wees Online Course	Pelvic floor course to help protect and strengthen.	www.kcfit.co.nz
Stillbirth Support	Support services for you and your family following the death of a baby.	www.wheturangitia.services.govt.nz
Suicide Crisis Helpline	A service for people thinking about or have attempted suicide or to support someone affected by suicide or suicidal thoughts.	0508 TAUTOKO 24/7 Free text HELP 4357
Whānau Awhina Plunket	Health and wellness support service for tamariki under five.	0800 933 922 24/7 parent line www.plunket.org.nz
Youthline	Support for young people throughout Aotearoa.	Free text 234 0800 376 633 24/7 Webchat www.youthline.co.nz
Yummy Mummy Fitness	Experts in fitness, weight-loss and nutrition helping mums across New Zealand.	www.yummymummyfitness.co.nz

[This page intentionally left blank]

