

EuropeActive Standards EQF Level 5 Pregnancy and Postnatal Exercise Specialist



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I. Executive Summary

This document supports the EuropeActive B1 Competence Framework and contains the essential Skills and Knowledge written as Learning Outcomes, based on job purposes, required to work as a **Pregnancy and Postnatal Exercise Specialist** in the European Health and Fitness Industry at the EQF-Fitness Level 5.

At the 5th International Standards Meeting, in Amsterdam, October 2014, the pre- and post-natal physical activity in the fitness industry was discussed, as well as the perspectives of educational standards for the **Pregnancy and Postnatal Exercise Specialist**.

High quality published articles present sufficient empirical and scientific evidence to support the promotion of moderate-to-vigorous pre- and post-natal physical activity for maternal and baby health benefits. Also, there are several published guidelines about exercising during pregnancy. Current recommendations state that pregnant women should accumulate 30 minutes or more of moderate-intensity exercise on most, if not all, days of the week if no medical or obstetric complications are present, i.e., a minimum of 3 exercise sessions completed in at least 15 minutes sessions, gradually increasing to 30 minutes per day, preferably all days of the week (ACOG 2002).

According to the available guidelines for exercising during pregnancy (Evenson et al. 2013), the programme should consist of moderate-intensity exercise (including moderate-intensity aerobic exercise, light-intensity resistance training, Pilates and balance exercises, pelvic floor training and stretching), that will be performed three times per week, under supervision of an exercise specialist. Moreover, the recreational and competitive athletes may train safely at higher intensities and volumes throughout pregnancy with the understanding that they are undergoing closer obstetric supervision. They can continue their exercise programmes or sports, unless prior to pregnancy were engaged in extreme sports (ASC 2002).

Normal pregnancy, childbirth and the postpartum period are conditioned by the appropriate level of the hormones specific to pregnancy, like oxytocin and progesterone. Therefore, both for hormonal balance, as well as for mental and physical preparation of women for childbirth and motherhood some specific exercises are recommended to be incorporated into prenatal exercise classes and physical activity programmes. They are, inter alia, breathing exercises, birth positions, relaxation, pregnancy and birth visualization (Szumilewicz et al. 2015). There are also official guidelines for exercising during postpartum (Evenson et al. 2014).

The pregnancy period is an open window for lifestyle change, including the engagement in an exercise programme. Moreover, if women are active during pregnancy, they will be more likely to be active later in life (Phelan 2010) and to have active children, as well (Currie & Rossin-Slater 2015). However, the lack of pre- and post-natal exercise classes and specific personal training programmes offered in fitness clubs maybe a reason for female clients' drop off while they get pregnant and in early motherhood. Also, some psychological barriers still exist, regarding exercise during pregnancy, in what is concerned with participants and fitness and health professionals. Evenson et al. (2009) re-

ported that the most frequent barriers for exercising during pregnancy were lack of time or being too busy, followed by reports of lack of energy or tiredness. Other women reported medical conditions, pain, or discomfort. The importance of sleep rated higher than exercising regularly during pregnancy, and maternal physical health was the most common barrier. One-third of the women referred to risks or dangers associated with physical activity, including potential harm to the baby, and fewer women mentioned losing motivation as a reason for a decline in physical activity (Clarke & Gross 2005). Other reasons commonly cited for not being active included being too tired, unwell, and that exercise was uncomfortable (Duncombe et al. 2007). In another study, one third of surveyed women in their third trimester of pregnancy, as a reason for not being active included not knowing what to do (Rutkowska & Lepecka-Klusek 2002).

Instructors should consider the multifaceted determinants and outcomes of prenatal physical activity and intervene to promote physical activity before, during, and after pregnancy, helping women to break any barriers. Exercise professionals must understand why it is not enough for pregnant women just to join usual classes in fitness clubs and why well-trained staff is required to conduct pre- and post-natal classes. On the other hand, few studies have shown that a majority of exercise instructors have poor knowledge in the field of pre- and post-natal physical activity, although they are aware of the health benefits of exercise for pregnant women and their babies (Worska & Szumilewicz 2015). In this line, it is very important to have multidisciplinary professional groups, including doctors who provide the highest influence on pregnant women to exercise properly. Indeed, a study by Krans et al. (2005) found that the probability that a woman exercised during pregnancy was increased if her obstetrician encouraged her to exercise.

Regarding this topic, few questions were raised, such as: how many of our clients in health and fitness clubs are women? how many of them will maintain an exercise programme during pregnancy? and how many of them will come back immediately after delivery or six months after delivery?

We notice that there is not a wide range of well-designed pre- and post-natal exercise programmes in the market. A good offer on pre- and post-natal exercise classes or personal training programmes, supervised by well-educated exercise specialists, may increase the rate of clients (especially during pregnancy, women need to feel safe and professionally framed while exercising). Also, specialized knowledge is needed about the following topic, among other: the official guidelines for exercising during pregnancy; the absolute and relative contraindications to exercise; the symptoms indicating the need for the interruption of exercise; the methods for determining the exercise intensity; and the planning and delivering adapted exercise programmes for this target group.

These are the reasons behind the importance of having European Standards for the **Pregnancy and Postnatal Exercise Specialist**. The purpose of this Exercise Specialist is to build exercise participation for beginners and already active women at all stages of pregnancy and in postpartum period. It could be done through group or individual exercise programmes that meet their needs and objectives. In addition, the Pregnancy and Postnatal Exercise Specialist will be expected to regularly review participants' progress and be able to report on adherence and outcomes to relevant stakeholders.

These new Standards are purpose and outcome driven, and are aligned with the fitness industry main goal to get: **'More People, More Active, More Often'**.

This booklet containing the new EuropeActive Standards is organized in the following chapters, trying to offer the reader a comprehensive approach to the requested knowledge, skills and competences for the health and fitness sector:

- Chapters I and II: Introductory information.
- Chapter III: The essential Skills and Knowledge written as Learning Outcomes, based on job purposes, required to work as an Exercise Specialist in the European Health and Fitness Industry at the EQF-Fitness Level 5. EQF 4 Personal Trainer skills and knowledge is recommended as prerequisite if this exercise specialist wants to deliver personal training sessions. EQF 3 Group Fitness Instructor is recommended if this exercise specialist wants to deliver group exercise.
- Chapter IV: The EuropeActive Competence Framework and the essential Competencies, associated to Skills and Knowledge written as Learning Outcomes, based on occupational purposes, required to work as a Pregnancy and Postnatal Exercise Specialist in the European Health and Fitness Industry at the EQF-Fitness Level 5.

Finally, it is to be noted that a qualified group of technical experts across Europe representing the different stakeholders of our sector volunteered to assist with the development of the EuropeActive Standards, and that relevant experts around the world have been involved on the external consultation process.

II. Technical Expert Group Members & External Consultation Experts

TEG Members for the European Standards Pregnancy and Postnatal Exercise Specialist (EQF level 5):

- Prof. Rita Santos Rocha, PhD, ESDRM-IPS, Sport Sciences School of Rio Maior - Polytechnic Institute of Santarém, Portugal (TEG Leader)
- Dr. Anna Szumilewicz, PhD, AWFIS, Gdansk University of Physical Education and Sport, Poland
- Dr. Maria Perales, PhD, UCJC, Camilo José Cela University, Spain
- Dr. Simona Pajaujiene, PhD, LSU, Lithuanian Sports University, Kaunas, Lithuania

These standards were fully adopted within the process of external consultation and afterwards approved by the Professional Standards Committee.

Experts who participated on the external consultation process:

- ???
- ???
- ???

Dr. Julian Berriman
Director
EuropeActive's Professional Standards Committee
Lisbon, 28th October 2015

III. EuropeActive Skills and Underpinning Knowledge for Pregnancy and Postnatal Exercise Specialist (EQF Level 5) as part of the EuropeActive Learning Outcomes Framework

Specific Prerequisites

This chapter supports the EuropeActive B1 Competence Framework and contains the essential Skills and Knowledge written as Learning Outcomes, based on job purposes, required to work as a **Pregnancy and Postnatal Exercise Specialist** in the European Health and Fitness Industry at the EQF-Fitness Level 5.

All exercise professionals will require both basic core knowledge and specific knowledge related to the context in which they work and there are specific prerequisites before starting the EQF 5 qualification:

1. EQF 4 Personal Trainer skills and knowledge or equivalent accredited certification is recommended as prerequisite if the Pregnancy and Postnatal Exercise Specialist wants to deliver personal training sessions.
2. EQF 3 Group Fitness Instructor or equivalent accredited certification is recommended if the Pregnancy and Postnatal Exercise Specialist wants to deliver group exercise.
3. Working experience as an exercise professional is recommended as prerequisite for the Pregnancy and Postnatal Exercise Specialist.

The Pregnancy and Postnatal Exercise Specialist as a certified Exercise Professional, ideally should be a member of a multidisciplinary task force: General Practitioner or Gynaecologist, Nutritionist, Physiotherapist (if applicable), Exercise Psychologist, other Exercise Specialists (optional). The Pregnancy and Postnatal Exercise Specialist should work with pregnant and postpartum women after she receives medical clearance for exercise from her gynaecologist or general practitioner.

Pregnancy and Postnatal Exercise Specialists are **not** endorsed to:

- Prescribe rehabilitation programmes;
- Provide exercise testing and prescription on risk pregnant women;
- Prescribe any kind of medication or supplements;
- Prescribe nutritional programmes;
- Diagnose any psychological disorders or mental health conditions;
- Provide any kind of psychological counselling;
- Diagnose diseases, disabilities or other clinical conditions.

Introductory information

What does level 5 mean at EQF?

Level of the EQF	Knowledge is described as theoretical and/or factual.	Skills are described as cognitive (involving the use of logical, intuitive and creative thinking) and practical (involving manual dexterity and the use of methods, materials, tools and instruments).	Competence is described in terms of responsibility and autonomy.
The learning outcomes relevant to Level 5 are	Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge.	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems.	<ul style="list-style-type: none"> - Exercise management and supervision in contexts of work or study activities where there is unpredictable change; - Review and develop performance of self and others.

What does level 5 mean at Fitness QF?

EQF Level	Occupation	EuropeActive Standards	Target Audience
Level 5	Pregnancy and Postnatal Exercise Specialist	EuropeActive Level 5	Healthy pregnant and postpartum women with medical clearance for exercise

Occupational Title

Pregnancy and Postnatal Exercise Specialist.

Job Purpose

The purpose of the Pregnancy and Postnatal Exercise Specialist is to build exercise participation for beginners and already active women at all stages of pregnancy and in postpartum period. It could be done through group or individual exercise programmes that meet their needs and objectives. In addition, the Pregnancy and Postnatal Exercise Specialist will be expected to regularly review participants' progress and be able to report on adherence and outcomes to relevant stakeholders.

Occupational Description

The Pregnancy and Postnatal Exercise Specialists have the ability to communicate with pregnant and postpartum women, and promote their engagement in specific exercise and health programmes. They also have the ability to communicate with medical and healthcare professionals about the pregnant participant's conditions and with an understanding of the standard medical conditions or contraindications in what is related to exercise. They can programme and supervise group or individual exercise, adapting the different forms of exercise to each trimester of pregnancy and postpartum period, according to available exercise guidelines. Additionally, they have the ability to develop a prenatal exercise programme for previously inactive or for active women, including athletes.

These Exercise Specialists will take a holistic approach to the wellness of their pregnant women. It includes advising on lifestyle, healthy eating and stress management in addition to the benefits of exercise relevant to the condition, with respect to professional boundaries.

Occupational Roles

The Pregnancy and Postnatal Exercise Specialists should be able to:

- Communicate with pregnant and postpartum women in tasks related to the implementation of an exercise programme;
- Communicate with medical and healthcare professionals about their pregnant or postpartum clients' conditions;
- Perform health and fitness assessment related to pregnant and postpartum women's exercise participation;
- Program and supervise group or individual exercise, according to women's condition, each trimester of pregnancy and/or postpartum period, following available guidelines and physicians' recommendations;
- Adapt different types and forms of exercise to each trimester of pregnancy and postpartum period, which are safe and effective for this special population;
- Recognize and respond to emergency situations and to warning signs to terminate exercise;
- Educate women on pre- and postnatal physical activity and exercise;
- Advise pregnant and postpartum women on lifestyle, including healthy eating and stress management, emphasizing the benefits of exercise for expectant mothers and their babies;
- Promote pregnant and postpartum women's engagement in specific exercise and health programmes;
- Respect own professional limitations to implement exercise programmes in pregnancy and postpartum period, and receive referrals from and refer women to other healthcare providers as appropriate.

Core Knowledge Areas and Skills

The educational standards for the Pregnancy and Postnatal Exercise Specialist EQF Level 5 include the following core knowledge areas and skills:

1. Role and professional development of the Pregnancy and Postnatal Exercise Specialist;
2. Morphological, physiological and biomechanical adaptations during pregnancy and postpartum;
3. Psychosocial aspects of exercising during pregnancy and postpartum;
4. Basic nutrition rules and other aspects of healthy lifestyle related to pregnancy and postpartum;
5. The benefits of exercise during pregnancy and postpartum;
6. Health issues and safety considerations related to pregnancy and postpartum exercise;
7. Health and fitness assessment in pregnant and postpartum women;
8. Prescription, implementation and adaptation of exercise for pregnant and postpartum women;
9. Specific exercises related to childbirth and motherhood;
10. Postpartum exercise and health-related issues.

Knowledge and Skill Requirements

The core knowledge and skill requirements are divided into the following sections:

1 – Role and professional development of the Pregnancy and Postnatal Exercise Specialist

Learners will demonstrate knowledge and understanding of:

- 1.1. The medical and social need for Pregnancy and Postnatal Exercise Specialists in Europe;
- 1.2. The place of the Pregnancy and Postnatal Exercise Specialists in the healthcare system and the cooperation in a multidisciplinary task force of healthcare professionals (Gynaecologist, Nutritionist, Exercise Specialist, Exercise Psychologist, Physiotherapist);
- 1.3. Specific evidence-based sources related to the benefits of exercise for pregnant and postpartum women;
- 1.4. Potential national legislation, quality assurance frameworks or other policies and guidance relating to the provision of exercise services to pregnant women;
- 1.5. The international initiatives to raise awareness of the importance of exercise during pregnancy and postpartum period.

2 - Morphological, physiological and biomechanical adaptations during pregnancy and postpartum

Learners will demonstrate knowledge and understanding of:

- 2.1. Basic terms related to pregnancy and postpartum necessary to implement pre and post-natal exercise programme;
- 2.2. Interactive effects of morphological, physiological and hormonal adaptations to pregnancy phases, postpartum and to exercise (e.g., adaptation of cardiovascular and thermoregulation systems, metabolic changes);
- 2.3. Musculoskeletal changes and biomechanical adaptations of posture and gait in pregnancy and postpartum;
- 2.4. The dose-response relationship between physical activity and health for pre- and post-natal period.

3 – Psychosocial aspects of exercise during pregnancy and postpartum

Learners will demonstrate knowledge and understanding of/ or ability to apply:

- 3.1. Psychosocial adaptations to pregnancy and postpartum;
- 3.2. The main barriers to participation in pre- and post-natal exercise;
- 3.3. Signs of depression and anxiety in pregnant and postpartum women;
- 3.4. Stress management techniques (e.g., relaxation exercises, breathing exercise, meditation, etc.);
- 3.5. Motivational techniques for starting exercise or keeping adherence to exercise (e.g., diary of behaviour, active listening and communication, motivational interviewing, giving feedback on fitness tests, etc.);
- 3.6. Motivational technique to be used during exercise sessions (cuing, voice modulation, stressing the goals of exercises, feedback on exercise performance)
- 3.7. Behaviour change strategies, leading to increase in physical activity among pregnant and postpartum women.

4 - Basic nutrition rules and other aspects of healthy lifestyle related to pregnancy and postpartum

Learners will demonstrate knowledge and understanding of:

- 4.1. Basic rules of healthy lifestyle in pregnancy and postpartum;
- 4.2. The guidelines for healthy nutrition for the pregnant and postpartum women;
- 4.3. The dietary role and common dietary sources for each of the six main nutrients (carbohydrate, fat, protein, vitamins, minerals, water) for the course of pregnancy and foetus development;
- 4.4. The influence of energy expenditure (particularly associated with resting metabolic rate and physical activity) on energy balance and related outcomes;
- 4.5. The general purpose of a nutrition programme (instructed by a Nutritionist) for pregnant and postpartum participants and the energy needs for different activities/sports/fitness plans;
- 4.6. How to provide general advice on food intake for a healthy, balanced way of eating and weight management in pregnancy and postpartum;
- 4.7. How to provide lifestyle advice, including the use of tobacco, alcohol and caffeine, sleep and rest patterns, avoiding stress.

5 - The benefits of exercise during pregnancy and postpartum

Learners will demonstrate knowledge and understanding of:

- 5.1. The improved sense of well-being and enhanced quality of life as an effect of regular exercise during pregnancy and postpartum;
- 5.2. The acute and long-term effects of exercise in pregnant women and babies, related to all fitness and wellbeing parameters (e.g., cardiovascular, muscular strength and endurance, flexibility, body composition, mental health);

- 5.3. The effect of exercise on increased energy expenditure (e.g., excess post-exercise oxygen consumption, increased fat loss, preservation of lean body mass, increased metabolic rate, prevention of overweight and obesity in mother and child);
- 5.4. The association of exercise with fertility, foetus development, birth outcomes and baby's health;
- 5.5. The preventive role for any potential future cardiac health risk related to chronic disease;
- 5.6. The preventive role for gestational diabetes and diabetes mellitus type 2 (lower blood glucose concentration during and after exercise, improved insulin sensitivity and decreased insulin requirement, lower HbA1c levels);
- 5.7. The preventive role for dyslipidaemia (e.g., decreased triglycerides, slightly decrease low-density lipoprotein, increased high-density lipoprotein);
- 5.8. The preventive role for hypertension and pre-eclampsia (e.g., improvement in mild to moderate blood pressure);
- 5.9. The preventive role for the most prevalent musculoskeletal disorders (e.g., low back pain, pelvic floor disorders, osteoporosis and poor posture);
- 5.10. The potential role of exercise in other specific conditions of pregnancy and postpartum (e.g., macrosomia, diastasis recti, pelvic girdle pain, etc.).

6 - Health issues and safety considerations related to pregnancy and postpartum

Learners will demonstrate knowledge and understanding of/ or ability to apply:

- 6.1. The risk factors and prevalence of discomforts and health conditions associated to pregnancy and postpartum (e.g., gestational diabetes, overweight, obesity, edema, low back pain, hypertension, preeclampsia, musculoskeletal disorders, diastasis recti abdominis, stress urinary and faecal incontinence and other pelvic floor disorders, stress and anxiety, oral health, sleep disorders, headache, digestive disorders, etc.);
- 6.2. Internal and environmental risk factors for complications of pregnancy and postpartum;
- 6.3. Absolute and relative contraindications for exercising during pregnancy and postpartum;
- 6.4. Reasons to stop exercising in pregnant and postpartum women;
- 6.5. Sports and physical activities to avoid by pregnant and postpartum women;
- 6.6. Safety and emergency procedures during a training session for pregnant and postpartum participants;
- 6.7. The official statements and evidence-based guidelines for exercising during pregnancy and postpartum.

7 - Health and fitness assessment in pregnant and postpartum women

Learners will demonstrate knowledge and understanding of/ or ability to apply:

- 7.1. Interviewing of pregnant and postpartum women and building rapport, taking into consideration the medical clearance for exercise;
- 7.2. Preliminary screening tools, such as: the Physical Activity Readiness Questionnaire (PAR-Q & You); the Physical Activity Readiness Medical Examination for Pregnancy (PARMED-X for pregnancy) (CSEP 2013); and the ACSM Health Status & Health History Questionnaire (ACSM 2013), to assess safety or possible contraindications to exercise;
- 7.3. Safety considerations on exercise testing for pregnant women;
- 7.4. Assessment of the pregnant women's body composition (e.g., body circumferences, body fat distribution markers and other body indexes), heart rate and blood pressure, during rest and exercise;
- 7.5. Cardiorespiratory tests (e.g., Astrand, Rockport, 6 minutes walking test, Balke and Bruce tests using treadmill or cycle ergometer);
- 7.6. Static and dynamic tests to assess posture and functionality and overall autonomy in pregnant women;
- 7.7. Physical activity and lifestyle assessment (e.g., pedometers, accelerometers, and/or questionnaires such as the 7-day Physical Activity Recall or others);

8 - Prescription, implementation and adaptation of exercise for pregnant and postpartum women

Learners will demonstrate knowledge and understanding of/or ability to apply:

- 8.1. Prescription of exercise programme (type of exercise, intensity of exercise, duration of the sessions, weekly frequency of sessions), relevant to pregnant women, their goals, medical history and exercise environment;
- 8.2. Selection of exercises and their techniques regarding women's self being, the course of pregnancy and postpartum, in particular the appearance of pregnancy and postpartum discomforts (e.g., back pain, stress urinary incontinence);
- 8.3. The most recommended forms of exercise (e.g., walking, aerobics, step exercise, water exercise, swimming, indoor cycling, core stability training, strength training, pelvic floor training, stretching);
- 8.4. Adaptation of the so called risky sports (e.g., skiing, skating, cycling, running, etc.);
- 8.5. The structure of the exercise session for the pre and post-partum period;
- 8.6. Exercise equipment for pre- and post-natal classes (e.g., fitballs, step, barbells, bands);
- 8.7. Monitoring, control and evaluation of all parameters of exercise programme (type, intensity, frequency and duration), and their adaptation to women's condition, trimesters of pregnancy and postpartum period;
- 8.8. Portable equipment controlling the parameters of the exercise session (e.g., heart rate meter, glucose meter, blood pressure meter);

- 8.9. Management of potential risk to the women during the sessions and long-term exercise programme;
- 8.10. Recording potential problems and modifications during the sessions and long-term exercise plans;
- 8.11. Reports on the outcomes of exercise programme (including charts, notes and diagrams) to enhance their readability to the client and other health professionals.
- 8.12. Self-evaluation of professional skills in order to improve the quality, safety and self-confidence in prescribing and implementation of exercise programmes for pregnant and post-partum women.

9 – Specific exercises related to childbirth and motherhood

Learners will demonstrate knowledge and understanding of/ or ability to apply:

- 9.1. Physiological and psychosocial aspects of birth;
- 9.2. Physical activity during labour and delivery;
- 9.3. Birth positions;
- 9.4. Breathing exercises;
- 9.5. Visualisation of pregnancy and childbirth;
- 9.6. Strategies to pain relief;
- 9.7. Preparation of the perineum through exercise;
- 9.8. Incorporating the preparation for birth into exercise programs.

10 - Postpartum exercise and health-related issues

Learners will demonstrate knowledge and understanding of/ or ability to apply:

- 10.1. Most essential exercises to perform early postpartum, regarding the mode of delivery (physiological birth vs caesarean section or vaginal operative delivery);
- 10.2. Typical postpartum discomforts and barriers influencing the young mothers' participation in physical activity programs;
- 10.3. Adaptations of exercise while breastfeeding;
- 10.4. Exercising with the baby (indoor and outdoor) and exercise programme adaptation to the baby's rhythm;
- 10.5. Lifetime physical activity for the whole family.

IV - EuropeActive Pregnancy and Postnatal Exercise Specialist - EQF L5 - Standards & Competencies Framework

This document describes the EuropeActive Competence Framework and contains the essential Competences, associated to Skills and Knowledge written as Learning Outcomes, based on occupational purposes, required to work as a Pregnancy and Postnatal Exercise Specialist in the European Health and Fitness Industry at the EQF-Fitness Level 5. These Competence Framework and Standards are purpose and outcome driven, aligned with the industry main goal to get 'more people, more active, more often'.

WORKPLACE COMPETENCY Learners should be able to demonstrate the following competencies:	SKILLS Learners should be able to:	UNDERPINNING KNOWLEDGE Learners should demonstrate knowledge and understanding of:	Reference to number of the core knowledge area or section:
Communicate with pregnant and postpartum women in tasks related to the implementation of an exercise programme;	Use of terminology related to pregnancy and postpartum and explain those terms to women in accessible language; Use of terminology related to physical activity, sport and exercise in pregnancy and postpartum and explain those terms to women in accessible language;	1. Specialized terms related to: <ul style="list-style-type: none"> • Reproductive anatomy: urogenital system, reproductive tract, pelvis, pelvic floor muscles, pregnancy hormones; • Fertilization and pregnancy development: trimesters of pregnancy, foetus and placenta development; • Labour and delivery: stages of labour and delivery, modes of delivery, pain relief strategies, common medical intervention during labour and delivery; • Postpartum, lactation and breastfeeding. 	2.-10.
Communicate with medical and healthcare professionals about their participant's conditions;	Use of terminology related to pregnancy and postpartum and the ability to explain women's conditions to medical and healthcare professionals; Interpret information given by medical	2. Specialized terms related to: <ul style="list-style-type: none"> • Morphological, physiological and biomechanical adaptations during pregnancy and postpartum; • Psychosocial aspects of exercise during pregnancy and 	

	and healthcare professionals and follow their recommendations regarding women's health;	<p>postpartum;</p> <ul style="list-style-type: none"> • Basic nutrition rules in relation to exercising in pregnancy and postpartum; • The benefits of exercise during pregnancy and postpartum; • Health issues and safety considerations related to pregnancy and postpartum; • Prescription, implementation and adaptation of exercise for pregnant and postpartum women; • Specific exercises related to childbirth and motherhood; • Postpartum exercise and health-related issues. 	
Perform health and fitness assessment related to pregnant and postpartum women's exercise participation;	Interview pregnant and postpartum women and building rapport, taking into consideration the medical clearance for exercise;	<ul style="list-style-type: none"> • The questions included in a first approach to the women (e.g., characteristics of the pregnancy, motivations, experience with exercise, etc.) • First approach in postpartum exercise (e.g., type of delivery, breastfeeding, experience with exercise, etc.) 	7.1. 9. 10.
	Use of preliminary screening tools for pregnant and postpartum women;	<p>Selected preliminary screening tools, such as:</p> <ul style="list-style-type: none"> • Physical Activity Readiness Questionnaire (PAR-Q & You); • Physical Activity Readiness Medical Examination for Pregnancy (PARMED-X for pregnancy) (CSEP 2013); • ACSM Health Status & Health History Questionnaire (ACSM 2013). 	7.2.
	Use of exercise tests and other health and fitness assessment tools for pregnant and postpartum women;	<ul style="list-style-type: none"> • Safety considerations on exercise testing for pregnant women; • Assessment of the pregnant women's body composition (e.g., body circumferences, body fat distribution markers and other body indexes), heart rate and blood pressure, during rest and exercise; • Cardiorespiratory tests (e.g., Astrand, Rockport, 6 minutes walking test, Balke and Bruce tests using 	7.3. - 7.7.

		<p>treadmill or cycle ergometer);</p> <ul style="list-style-type: none"> • Static and dynamic tests to assess posture and functionality and overall autonomy in pregnant women; • Physical activity and lifestyle assessment (e.g., pedometers, accelerometers, and/or questionnaires such as the 7-day Physical Activity Recall or others). 	
	Make reports with relevant information for participants and healthcare providers	<ul style="list-style-type: none"> • Several types of reports including charts, notes and diagrams. 	7.1. 8.11.
Program and supervise group or individual exercise, according to women's condition, each trimester of pregnancy and/or postpartum period, following available guidelines and physicians' recommendations;	Prescribe an exercise programme, relevant to pregnant and postpartum women, their goals, medical history and exercise environment;	<ol style="list-style-type: none"> 1. Recommendations for prescribing for pregnant or postpartum women: <ul style="list-style-type: none"> • Type of exercise; • Intensity of exercise; • Duration of the sessions; • Weekly frequency of sessions; • Progression of exercise. 2. Medical history as an important factor influencing the prescription of exercise programme. 	6.7. 8.1. 9.2. – 9.8. 10.1. 10.3. – 10.5.
	Plan the structure of the exercise session according to the pregnant and postpartum women's needs;	<ul style="list-style-type: none"> • Most recommended sports and exercises (e.g., walking, aerobics, step exercise, water exercise, swimming, indoor cycling, core stability training, strength training, pelvic floor training, stretching); <p>8.13. Adaptation of risky sports (e.g., skiing, skating, cycling, running, etc.);</p> <ul style="list-style-type: none"> • Structure of the session (e.g., warm up, aerobic part, strength/core part, pelvic floor muscle training, stretching, relaxation) 	6.7. 8.3. - 8.5.
	Conduct or supervise group or individual exercise for pregnancy and postpartum;	<ul style="list-style-type: none"> • Selection of exercises in group or individual sessions • Selection of proper equipment 	8.2. - 8.4. 9.2. – 9.8. 10.1. 10.3. – 10.5.

	Monitor, control and evaluate all parameters of the exercise programme;	<ol style="list-style-type: none"> 1. Recommendations for monitoring, controlling and evaluating of: <ul style="list-style-type: none"> • Type of exercise; • Intensity of exercise; • Duration of the sessions; • Weekly frequency of sessions; • Progression of exercise; • Exercise technique. 2. Basic rules for the use of: <ul style="list-style-type: none"> • Portable equipment • Music (rhythm and cadence) 	8.7. - 8.10. 9. 10.
	Recognize and respond to emergency situations and to warning signs to terminate exercise;	<ul style="list-style-type: none"> • Emergency situations and potential risk and problems (e.g., bleeding, dizziness, headaches, etc.) • Warning signs to terminate exercise 	6.4. 6.6. 8.9. 8.10.
	Apply official (national or international) guidelines for exercise in pregnancy and postpartum;	<p>Most popular guidelines for exercise in pregnancy and postpartum:</p> <ul style="list-style-type: none"> • WHO guidelines for physical activity; • ACOG Committee Opinion: <i>Exercise during pregnancy and postpartum period</i>; • RCOG: <i>Exercise in pregnancy</i>; • CSEP: <i>Exercise in pregnancy and the postpartum period</i>; • SMA Statement. <i>The benefits and risks of exercise during pregnancy</i>; • National guidelines. 	6.7.
	Motivate women to exercise in pregnancy and postpartum;	<ul style="list-style-type: none"> • Motivational techniques for starting exercise or keeping adherence to exercise (e.g., diary of behaviour, active listening and communication, motivational interviewing, giving feedback on fitness tests, etc.); • Motivational technique to be used during exercise ses- 	3.5 3.6.

		sions (cuing, voice modulation, stressing the goals of exercises, feedback on exercise performance).	
	Incorporate other health professionals' recommendations into exercise programme;	Professional tasks and responsibilities in developing exercise programmes of: <ul style="list-style-type: none"> • Obstetrician; • GP; • Nutritionist; • Psychologist; • Physiotherapist; • Other medical professionals; • Internal and environmental risk factors 	1.2. 2. – 6. 9. 10.
	Incorporate evidence-based knowledge into the development of pre and post-natal exercise programme;	Main sources of evidence-based knowledge on pre- and post-natal exercise: <ul style="list-style-type: none"> • Main publications; • Major databases; • Systematic reviews; • Control trials; • Comparative studies; • Qualitative studies. 	1.3. 5. 8.1. – 8.4.
Adapt different types and forms of exercise to each trimester of pregnancy and postpartum period, which are safe and effective for this special population;	Identify the changes on women's body during pregnancy and postpartum;	Main changes in pregnant and postpartum women: <ul style="list-style-type: none"> • Morphological; • Physiological; • Biomechanical; • Psychosocial. 	2.
	Apply the modifications of modes of exercises and use of equipment regarding the women's conditions;	Recommendations for: <ul style="list-style-type: none"> • Adjustment of modes of exercise (e.g., walking, aerobics/step, cycling, aqua exercise, strength training, pelvic floor muscle training, stretching, etc.); • Adjustment of equipment (e.g., step, deck, barbells, rubber, machines, free weights, etc.); • Other adjustments (e.g., room, swimming pool, mirror, 	8.2. – 8.7.

		music, etc.).	
Educate women on pre- and postnatal physical activity and exercise;	Provide information on the benefits of exercise during pregnancy and postpartum;	<ul style="list-style-type: none"> • The improved sense of well-being and enhanced quality of life as an effect of regular exercise during pregnancy and postpartum; • The acute and long-term effects of exercise in pregnant women and babies, related to all fitness and wellbeing parameters (e.g., cardiovascular, muscular strength and endurance, flexibility, body composition, mental health); • The effect of exercise on increased energy expenditure (e.g., excess post-exercise oxygen consumption, increased fat loss, preservation of lean body mass, increased metabolic rate, prevention of overweight and obesity in mother and child); • The association of exercise with fertility, foetus development, birth outcomes and baby's health; • The preventive role for any potential future cardiac health risk related to chronic disease; • The preventive role for gestational diabetes and diabetes mellitus type 2 (lower blood glucose concentration during and after exercise, improved insulin sensitivity and decreased insulin requirement, lower HbA1c levels); • The preventive role for dyslipidaemia (e.g., decreased triglycerides, slightly decrease low-density lipoprotein, increased high-density lipoprotein); • The preventive role for hypertension and pre-eclampsia (e.g., improvement in mild to moderate blood pressure); 	5.

		<ul style="list-style-type: none"> • The preventive role for the most prevalent musculo-skeletal disorders (e.g., low back pain, pelvic floor disorders, osteoporosis and poor posture); • The potential role of exercise in other specific conditions of pregnancy and postpartum (e.g., macrosomia, diastasis recti, pelvic girdle pain, etc.). 	
	Provide information on the physiological, morphological and biomechanical adaptations to pregnancy or postpartum and to exercise;	<ul style="list-style-type: none"> • Interactive effects of morphological, physiological and hormonal adaptations to pregnancy phases, postpartum and to exercise (e.g., adaptation of cardiovascular and thermoregulation systems, metabolic changes); • Musculoskeletal changes and biomechanical adaptations of posture and gait in pregnancy and postpartum; • The dose-response relationship between physical activity and health for pre- and post-natal period. 	2.2. - 2.4. 3.1. 4.2. - 4.7.
	Provide information on the psychosocial adaptations during pregnancy or postpartum;	<ul style="list-style-type: none"> • Psychosocial adaptations to pregnancy and postpartum; • The main barriers to participation in pre- and post-natal exercise; • Signs of depression and anxiety in pregnant and postpartum women; • Motivational technique to be used during exercise sessions (cuing, voice modulation, stressing the goals of exercises, feedback on exercise performance) • Behaviour change strategies, leading to increase in physical activity among pregnant and postpartum women. 	3.1-3.3 3.7
	Provide information on the most common pregnancy and post-partum's symptoms and discomforts and their relation to exercise;	<ul style="list-style-type: none"> • The risk factors and prevalence of discomforts and health conditions associated to pregnancy and postpartum (e.g., gestational diabetes, overweight, obesity, edema, low back pain, hypertension, preeclampsia, musculoskeletal disorders, diastasis recti abdominis, stress urinary and faecal incontinence and other pelvic 	6.1.

		floor disorders, stress and anxiety, oral health, sleep disorders, headache, digestive disorders, etc.);	
	Provide information on the exercise adaptations to each phase of pregnancy;	<p>Recommendation for adjustment of:</p> <ul style="list-style-type: none"> • Exercise technique and positions; • Exercise intensity and loading; • Objectives of particular exercises and exercise programmes ; • Potential risks of exercising in pregnancy and postpartum. 	8.
	Provide information on the safety of exercise during pregnancy and postpartum;	<ul style="list-style-type: none"> • Warning signs; • Guidelines for safe exercise in pregnancy and postpartum; • Emergency procedures in the exercise classes for pregnant women; • Technical requirements for the equipment. 	6.
	Provide information on the evidence-based knowledge on exercise during pregnancy and postpartum;	<p>Main sources of evidence-based knowledge on pre- and post-natal exercise:</p> <ul style="list-style-type: none"> • Main publications; • Systematic reviews; • Control trials; • Comparative studies; • Qualitative studies; 	1.3. 5.
Advise pregnant and postpartum women on lifestyle, including healthy eating and stress management, emphasizing the benefits of exercise for expectant mothers and their babies.	Provide information on general rules of healthy lifestyle during pregnancy and postpartum;	<ul style="list-style-type: none"> • Components of a healthy lifestyle programme • Pregnancy and baby development 	3.1. 4.1. 4.7.
	Provide information on the benefits of a healthy eating programme during pregnancy and postpartum;	<ul style="list-style-type: none"> • Energy expenditure and energy balance • Common dietary sources for each of the six main nutrients (carbohydrate, fat, protein, vitamins, minerals, water) • Supplements 	4.

	Provide information on stress management techniques during pregnancy and postpartum;	<ul style="list-style-type: none"> Stress management techniques (e.g., relaxation exercises, breathing exercise, meditation, etc.). 	3.4.
Promote pregnant and postpartum women's engagement in specific exercise and health programmes;	Provide information on the benefits and safety of exercise during pregnancy and postpartum among women, families, healthcare providers and policy makers;	<p>Main sources of evidence-based knowledge on pre- and post natal exercise:</p> <ul style="list-style-type: none"> Main publications; Systematic reviews; Control trials; Comparative studies; Qualitative studies. 	1.3. 5. 6.7.
	Develop cooperation with other professionals in promoting pre- and post-natal physical activity;	<p>Recommendations and rules for:</p> <ul style="list-style-type: none"> Cooperation with other exercise and health professionals; Promotion of physical activity. 	1.1. 1.2. 1.4. 1.5.
Implement exercise programmes for pregnant and postpartum women in respect of own professional limitations and in cooperation with health care professionals;	Define his/her professional roles and responsibilities;	<p>9. Professionals roles and responsibilities of Pregnancy and Postnatal Exercise Specialists, Gynaecologist, Nutritionist, Exercise Specialist, Exercise Psychologist, Physiotherapist</p> <p>10. Self-evaluation of professional skills</p>	1. 8.12.
	Define absolute and relative contraindications to exercise in pregnancy and postpartum;	<ul style="list-style-type: none"> Absolute and relative contraindications to exercise Signs for stop exercising Potential risks Sports and physical activities to avoid 	6.3. 6.4. 6.5. 8.9.
	Identify any condition that requires the referral to a determined medical or healthcare professionals;	<ul style="list-style-type: none"> Risk factors and prevalence of discomforts and health conditions associated to pregnancy and postpartum (e.g., gestational diabetes, overweight, obesity, edema, low back pain, hypertension, preeclampsia, musculoskeletal disorders, diastasis recti abdominis, stress urinary and faecal incontinence and other pelvic floor disorders, stress and anxiety, oral health, sleep disorders, 	6.1. 6.2. 8.10. 8.11.

		<p>headache, digestive disorders, etc.);</p> <ul style="list-style-type: none"> • Internal and environmental risk factors for complications of pregnancy and postpartum; 	
	<p>Incorporate the recommendations of healthcare professionals regarding women's condition and exercise adaptation.</p>	<p>Recommendations for exercise adaptation in different women's conditions:</p> <ul style="list-style-type: none"> • During the three trimesters of pregnancy; • During postpartum; • While breastfeeding; 	7. - 10.

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