



BENEFITS OF CLASSICAL BALLET PRACTICE DURING PREGNANCY

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ABSTRACT

The objective of this study is to analyze from a literature review, the benefits of the classical ballet practice in pregnant women, in their gestation period, delivery and postpartum, as stated by SOUZA et al. (2012) the gestation is a period of intense changes for women, both physical and psychological, considered by COSTA et al. (2010) one of the biggest changes that the human body can suffer. In this paper the changes in metabolic, hormonal, cardiovascular, respiratory, musculoskeletal and central nervous systems that occur in women were studied. From this study, the modifications were correlated with the benefits that classical ballet can provide for this specific moment in a woman's life, these being cardiovascular conditioning benefits, hormonal, psychological, neural, musculoskeletal, metabolic, flexibility, respiratory and body consciousness. It was possible to verify that the practice of classical ballet during the gestation period is not only beneficial for the pregnant woman, but also for her baby, for the moment of delivery and postpartum.

KEYWORDS: Ballet, Pregnancy, Gestation, Physical activity.

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INTRODUCTION

Only 4.7% of pregnant women in Brazil perform physical activity during the whole gestation period, and only 12.9% performed some physical activity during this period, an alarming finding by Surita et al. (2014). Until

1985, there was a fear of prescribing physical activities during pregnancy according to Andrade and Lopes (2008), but in 2003 the American College of Obstetricians and Gynecologists (ACOG) published a standardization informing that pregnant women can do physical activities, including, recommending that pregnant women in good physical condition exercise regularly, approving 30 minutes or more of physical activities with moderate intensity and minimum frequency of three times a week.

There is a great scarcity in the literature regarding the practice of classical ballet during the gestational period. For this reason the present study aims to show the importance of classical ballet performance during the gestation period, first discussing the great physiological and physical changes that occur in the woman's body and then pointing out the various benefits that this practice can provide, cardiac, respiratory, neural, hormonal, flexibility-related, metabolic, to the time of delivery and after in the care of the baby.

1 Benefits of Ballet for Pregnant

There is no reason why the pregnant woman should not practice physical activities and that these should be contraindicated, nor should she expect any injury to the fetus when the physiological changes do not present complications during pregnancy, as Weineck (1941) stated. Souza (2002) agrees and reports that most of the scientific literature agree that activities of moderate

intensity during an uncomplicated pregnancy can bring innumerable benefits to women's health. According to Lima (2011) these benefits can be both before and after pregnancy, where the recovery of the pregnant woman who practices physical activity becomes faster. According to the American College of Obstetricians and Gynecologists (ACOG), pregnancy should not be a time when pregnant women are confined and unemployed, but should be encouraged to be involved in physical activities. She further states that although pregnancy is directly linked to major anatomical and physiological changes, physical activity has minimal risks and great benefits for most women. The Brazilian Society of Sports Medicine (SBME) agrees, stating that the goals of physical activity during gestation are: care for physical fitness and health, better weight control, decreased symptoms generated by pregnancy, lower tension at delivery and a faster recovery after delivery. Surita et al. (2014) point to an alarming fact: only 4.7% of pregnant women in Brazil practice physical activity during the entire gestation period and 12.9% have done some physical activity during this period. According to Andrade and Lopes (2008) until 1985 there was a fear of prescribing physical activities for pregnant women, but in that same year the American College of Obstetricians and Gynecologists (ACOG) published a paper informing that pregnant women could do physical activities up to a maximum of 15 minutes and moderate intensity. In 1994, these statement was reviewed by ACOG, who supported the recommendations of the Centers for Disease Control and Prevention and the American College of Sports Medicine (CDC-ACSM) that physically fit pregnant women should exercise regularly and in 2003 there was a new change and they approved of 30 minutes or more of moderately physical activities for pregnant women and at least three times a week, even for sedentary women with clinical problems, only if they have previously undergone an evaluation. According to Cambiaghi, (2001) physical activities during the period of pregnancy bring innumerable biological benefits, the author points out the lower weight gain and adiposity of the woman, a lower risk of developing diabetes, a lower risk of obstetric complications, labor, and greater chance of a natural delivery, an absence of significant differences in gestational age, lower chances of premature birth, shorter hospital stay, and better physical condition for the woman. The best quality of life during gestation should be the main objective of physical activity, and should seek the reduction of functional capacity, obtain more strength, greater muscle tone and resistance, seeking protection against pain in the dorsal spine, especially in the lower back, bringing also psychological changes that characterize a better self-esteem and also humor, diminishing anxiety and depression, seeking a greater facility to find a suitable caloric balance and reaching a healthy lifestyle Andrade and Lopes (2008). They also report that women who perform physical activities before gestation and continue to perform activities during pregnancy tend to gain less weight and also tend to tolerate pain better at delivery. Huebscher (2012) agrees

and affirms that in addition to these benefits the classical ballet also brings better posture, intelligence, and self-esteem among other physical benefits. However, Curtis and Schuler (2007) among several other authors affirm that it is very important before starting any activity to talk to a doctor to develop a healthy program.

1.1 Cardiovascular Benefits

Katz (1999) already stated that because of the increased demand for blood that is required during gestation a healthy cardiac system is necessary because the blood needs to be transported from the pregnant woman's body to the placenta which will give the fetus nutrition and oxygen an improvement in cardiovascular efficiency may also reduce swelling in the hands and feet of pregnant women and help prevent varicose veins and hemorrhoids that, according to the author, are quite common during the gestation period. It also states that better cardiovascular conditioning helps in reducing fatigue that is felt by several pregnant women and this can be beneficial if the baby needs to be born through cesarean delivery. According to Nieman (1999, p.23) "The practice of physical exercises makes the heart stronger," Curtis and Schuler (2007) point out that it is very important for pregnant women to be in good cardiovascular health and strength. According to Andrade and Lopes (2008) the body movement generates an improvement in the distribution of blood and oxygen to the body, improving the irrigation of placental tissues. SBME reports that physical activity during pregnancy assists in the venous return of blood, aiding in the irrigation of the maternal placenta and thus preventing the appearance of varicose veins in the lower limbs of the mothers. According to Ramos (1999), a major risk factor for the appearance of varicose veins is physical inactivity during gestation, as this leads to a decrease in the muscular competence of being a blood pump. It reports that localized muscular resistance leads to a greater localized blood circulation, which is useful for women who will undergo cesarean because it accelerates the healing process. Andrade and Lopes (2008) pointed out that because of the adaptation of the organism that is occurring in the pregnant woman, regular aerobic activity generates a decrease in heart rate and blood pressure both at rest and in submaximal effort, which suggests a faster recovery of the heart's rate frequency, blood pressure and baseline values. Nogueira and Santos (2012) stated that during pregnancy the maternal blood volume and the systolic ejection increases influencing the heart rate of the pregnant woman, so it is necessary for her heart to be strong so it is able to pump the blood both for herself and to the fetus. The authors state that physical activity generates an improvement in blood circulation because of the strengthening of the heart thus having a greater capacity to pump blood and oxygen throughout the body including its peripheral regions. Stumm (2013) agrees and confirms that physical activity during pregnancy reduces blood pressure. According to Gonçalves (2016) the practice of ballet leads to a learning about breathing control so that the dancer can

make the most of her diaphragm capacity, says that this breathing helps the whole cardiovascular respiratory system.

1.2 Metabolic Benefits

According to Bouchard (2003) during the full period of pregnancy the pregnant woman has energy needs of an average of 80,000 calories, that is, 300 calories per day to manage fetal needs and also storage of adipose tissue, the author reports that pregnant women who practice physical activity have greater control over their body weight gain and also have important metabolic benefits. For Andrade and Lopes (2008), physical activity during pregnancy can be a way to control weight gain and for maintenance that keeps it close to the ideal conditions, thus helping to avoid the onset of gestational diabetes. The authors also report that activities that bring elasticity are very important to the metabolism and circulation, which are normally energetic movements, with an amplitude amplification of the upper and lower limbs, being the flexibility as seen previously much used and developed in classical ballet classes. Nogueira and Santos (2012) state that during pregnancy there is a displacement of the stomach and intestines and also a small reduction of intestinal muscle tone, because of that woman's body starts to have a greater water absorption and for this reason the gastrointestinal system starts to have less motility, thus generating a greater delay for the food to pass through the intestine and a drier stool. According to Katz (1999) a good muscle tone may help the pregnant woman to maintain good intestinal functions and other organs, generating according to Nogueira and Santos (2012) a relief of intestinal discomforts.

1.3 Hormonal Benefits

Gonçalves (2016) reports that because ballet is a pleasurable practice where the movements happen to the rhythm of a good music the activity causes the body to release endorphin, being this a substance that is responsible for the pleasure, providing well-being. In addition to the psychological benefits Andrade and Lopes (2008) also point out that physical activity helps in the lactation, because of the release of prolactin that is stimulated. The SBME performed a randomized 12-week trial that analyzed effects of aerobic activities in pregnant women performed at 40-70% of the reserve heart rate for 45 minutes and five times a week, no significant difference was found in both composition and quantity of breast milk, reports that the only significant difference found was a 25% increase in VO₂max, concluding that physical activity is safe in relation to lactation and effective for the mother in the postpartum period. Nogueira and Santos (2012) report that the main benefit of physical activity for the endocrine system of the pregnant woman is the reduction of the risk of the appearance of diabetes mellitus, which occurs because of human chorionic somatomammotropin which is secreted in greater quantity during the gestation, this hormone decreases the sensitivity to insulin and glucose, thus

increasing the risk of the woman to develop diabetes of Mellitus. They also state that regular physical activity helps control blood glucose levels, as it increases the sensitivity of insulin receptors and increases glucose utilization. This fact is also confirmed by Matsudo and Matsudo (2000) and Surita *et al.* (2014) who affirm that the practice of regular physical activity prevents the development of type 2 diabetes, since the physical activity acts in the control of glycemia, reducing the peripheral resistance to insulin. According to Surita *et al.* (2014) there is agreement that activities during gestation also help in the maintenance of postprandial glycemia of pregnant women who already have diabetes.

1.4 Musculoskeletal Benefits

During the gestation period, activities that muscle strength are important, according to Ribeiro and Porfiro (2012), since they contribute to the care of lean mass, contemplating the large muscle groups. According to Huebscher (2012), classical ballet is a form of dance that involves all the muscles of the body and strengthens each one of them. Haas (2011) says that muscular strengthening in dance serves to control and protect the joints, in his book the authors discuss the anatomy of dance and it is possible to perceive the effects that the dance has on the muscles of the human body and its extension, being the book divided into activities for the muscles of the spine, abdominal, for the ribs and breathing, to the center of the body (core), to the upper limbs, lower limbs, pelvis and hip, ankles and feet. Nogueira and Santos (2012) explain that it is important to do activities to strengthen all the muscles of the lower limbs that because of the significant maternal weight gain must be stronger to make them feel safer in their movements, as well as in their walk and sustentation of their own body weight, helping them to move more easily. Katz (1999) add that lower-body activities help the mother to become more comfortable during the gestational period, as these help the pregnant woman to carry her weight that is increased and to remove some of the pressure exerted on the feet and ankles. Haas (2011) rites that only a simple ballet movement that is widely used called "plié" already works the diaphragm, transverse abdomen, pelvic floor muscles, femoral square, internal and external obturator, upper and lower twin, gluteus maximus, piriformis, semimembranosus, semitendinosus, biceps femoris, among others. It is also important to strengthen the upper limbs, according to Katz (1999), strengthening and stretching the shoulders, arms, upper back, neck and chest are important both for the time of delivery and for the care of the baby after. Nogueira and Santos complement and declare that the strengthening of the upper limbs is very important to help support the breasts, help for a better posture and also a decrease of the gravidic symptoms mentioned above. Akmes and Oran (2014) report that back pain is very common during the gestation period, and these may even be considered as inevitable, they claim that 50 to 70% of pregnant women have some form of low back pain during the gestation period. According to

MARTINS and SILVA (2005), changes in posture mean that, on average, 51% of pregnant women with gestational ages between 34 and 37 weeks present pain that significantly interferes with their physical abilities and quality of life, Akmesse and Oran (2014) complement, informing that 80% of pregnant women with back pain experience discomfort in carrying out daily activities, thus reducing their quality of life leading to more frequent periods of rest and absence at work. Saba (2008) reports that as the uterus and the pregnant woman's belly increase, their center of gravity is moved forward and upward and for this reason the pregnant woman performs a postural adaptation to avoid falling forward. According to the author, this adaptation favors hyper lordosis, shortening of the lumbar spine musculature and also low back pain, and there is also often other compensation in the posture of the pregnant women because of the increase in breast weight and this may generate a thoracic hypophysis. Ramos (1999) writes that it is necessary that the teacher, together with the pregnant woman, take care that the new posture she has acquired does not remain after childbirth. Katz (1999) reports that keeping the body aligned is extremely important so that there is not too much unnecessary stress on the joints and muscles of the body, thereby helping to eliminate the pains of the lower back. According to Santoro (2012) classical ballet provides greater postural control, which comes from body awareness and muscle strengthening. Huebscher (2012) states that ballet has a correct posture that is necessary for the practice of the exercises, and this perfect posture starts with a strengthened abdominal muscle that can be developed through classical ballet. These strengthened muscles give greater support to the spine providing a great decrease in back pain. Huebscher (2012) ends by stating that a correct and strengthened posture that results from specific movements of the ballet, can bring about a great decrease of back pain. Haas (2011) explains that the initial position of the ballet is made through a neutral posture, working only the Erector of the spine, rectum of the abdomen and external obliquity of the abdomen. According to Cornelius (2009) pain in the back are often because of weak abdomen muscles, stating that ballet dance helps on strengthening and elongating the central muscles of the body, therefore helping in a better support of the vertebral column and bringing a better posture. Because of the posture alteration due to the gestation the intradiscal pressure of the mother increases, being important to during physical activity to be careful with the posture and to protect the vertebral spine, using compensatory activities that may help the pregnant women not to develop sciatica that refers to a pain that is generated because of the compression of the sciatic nerve, Ramos (1999). Saba (2008) agrees and says that there are physical activities that compensate and take a part of the overweight in the joints of the spine, preventing from pain, and affirms that it is important to strengthen of the abdominal muscles and elongating the low back muscles to prevent low back pain. The practice of physical activity can prevent low back pain because

physical activity leads to correct posture orientation that is affected because of the gestational period Silva (2008). In addition to the abdominal muscles, Katz (1999) reports that the strengthening of the back muscles is extremely important to maintain good posture, since the displacement of the woman's gravitational center causes stresses in the body that are balanced by the displacement of the spine and states that with the passing of gestation the slightest problem with the alignment of the body already tends to cause back pain. Stumm (2013) reports that physical activity during pregnancy will bring greater strength and muscular strength, thus avoiding greater pain and discomfort. According to Gonçalves (2016) the ballet generates the hypertrophy of the muscles, increasing and strengthening them, stimulating both the lower limbs, the upper and central members responsible for the posture.

Andrade and Lopes (2008) argue that during the gestation the muscle tissue is more demanded because of the decrease in the stiffness of the ligaments and of its tonicity, in this way it can be understood that the effort can lead the pregnant woman to fatigue more quickly, due to the contracture of the musculature. Especially during the second trimester of gestation the abdominal wall undergoes a loosening of the tissues and the straight muscles stretch, so much support of the spine as the points of greater weakness of the abdominal wall are affected, they narrate that physical activity during the pregnancy can help in the muscle contraction of the lower limbs that help propel the venous blood back to the heart. Katz (1999) reports that according to weight change the center of gravity of the pregnant woman is displaced, for this reason strengthened abdominal and dorsal muscles are needed to give her greater comfort, reducing tension in the back, hips and legs. The author also reports that during the gestation period the woman's breasts become larger and heavier due to the production of milk, in this way activities that strengthen the muscles of the chest and the back are important to assist in the support of the breasts. According to the author the toning of the upper part during pregnancy is very important because it brings comfort and advantages to the woman's health, helping in the good posture. Katz (1999) reports that strengthened abdominal muscles have the ability to carry greater volume and elongated muscles may be useful for relaxation at the time of childbirth, further states that the work of these muscles helps with elasticity, aiding the pelvis support and also the return after delivery. The abdominal muscles are those that need to perform more efforts during pregnancy, according to Katz (1999), because it happens a stretching of this muscular group and a possible separation of them. According to the author there is a great possibility of avoiding pain by stretching the abdominal muscles during activities, thus taking away some of the overload that is placed on the back. Ramos (1999) agrees and states that the abdominal muscles should be worked during gestation, since having them well trained can count countless benefits for the pregnant woman both

during pregnancy, during normal delivery and during secession. According to the author during the period of gestation a strengthened abdominal wall helps in the compensation of lumbar hyper lordosis improving the quality of the gestational period, because it decreases the frequency of low back pain or even avoids it. It also avoids evisceration due to the strong hormonal action that acts to distend the abdominal wall, it also shows that at the moment of normal delivery a strengthened abdominal musculature assists in the moment of the expulsion of the fetus increasing the intra-abdominal pressure and, in the secession, the abdominal wall strengthened can contribute to a better healing process. For Andrade and Lopes (2008) activities for the abdomen and pelvis seek to alter isometrically the contraction and relaxation of muscles to promote the body's awareness of the pregnant woman, thus preparing her for childbirth.

Neural and Psychological Benefits

Malanga (1985) states that classical ballet contributes to emotional balance, generating self-confidence, enhancing the personality, leading the self-esteem to rise and bringing self-love. Snyder (2010) points out that when the dancer learns new dance moves and gets to perform them his confidence is increased and also that ballet classes are a great place to meet new people and make new friends. According to Huebscher (2012) performing new dance techniques and making new friends who have the same passion as you, greatly increase self-esteem. Bastos (2007) reports that the learning of choreography brings several benefits for laterality, rhythm, concentration, attention, recent memory, body perception and spatial orientation, providing several psychomotor and cognitive activities, providing a good workout and bringing a good physical conditioning that is linked to the feeling of physical satisfaction and emotional, influencing in a positive way the self-esteem. As seen earlier it is common during the gestation period for women to become more forgetful and to lose memory more quickly, Huebscher (2012) argues that ballet helps memory, since dance combines the use of mind with body activities. Katz (1999) reports that physical activities offer the mother a greater number of psychological stimuli and this helps her during the day giving her more energy. Pregnancy causes bodily changes in the pregnant woman and these can often lead to a change of mood, as it causes several women to become uncomfortable with their new body appearance, feeling less attractive, heavy, uncoordinated and lacking in agility, they say. Andrade and Lopes (2008). The authors explain that making physical activity during gestation may help the pregnant women to build a body look that makes them feel more comfortable with how they look, therefore making them more likely to have a higher self-esteem. pregnant women, being able to control their intensified feelings at this stage as for example the anxiety and helps in the recovery of the woman's self-esteem.

Silva (2008), after reporting the various psychological changes resulting from the gestation period mentioned above, affirms that the constant practice of physical activities can help in a decrease of the depressive feelings, bringing the pregnant woman a feeling of well-being thus transforming the period of both the gestation, delivery and postpartum at quieter times. Ribeiro and Porfiro (2012) agree and affirm that the best physical conditioning helps in the psychological and social state of the pregnant woman because it makes her feel more disposed, also leading to a decrease in the probability of depression and stress. Silva (2008), after reporting the various psychological changes resulting from the gestation period mentioned above, affirms that the constant practice of physical activities can help in a decrease of the depressive feelings, bringing the pregnant woman a feeling of well-being thus transforming the period of both the gestation, delivery and postpartum at quieter times. Ribeiro and Porfiro (2012) agree and affirm that the best physical conditioning helps in the psychological and social state of the pregnant woman because it makes her feel more disposed, also leading to a decrease in the probability of depression and stress. Cambiaghi (2001) reports that physical activities generate a lot of psychological and social benefits, some of which are self-image improvement, improved self-esteem, a greater sense of well-being, a lower incidence of anxiety and stress, and a decrease in the risk of depression, a lower sense of social isolation especially if the activity is practiced with other pregnant women where there may be exchanges of experiences. Stumm (2013) argues that with such changes both internal and external resulting from the gestational period often lead to fears, doubts and insecurities, but that the practice of physical activity can bring significant benefits, improving mood and resulting in psychological benefits. Surita et al. (2014) reports that the practice of physical activity improves the quality of life and maternal health and helps to control the weight gain in the gestation period and the return of the same after the birth. Silva (2008) affirms that relaxation and stretching activities can generate great benefits not only physical but also emotional for the pregnant women, being able to control their intensified feelings in this phase as for example the anxiety and also helps in the recovery of the woman's self-esteem.

From a research carried out by the author through questionnaires and interviews with twenty-two pregnant women, 14 (63.6%) mentioned feeling emotional discomforts during the gestation period and of these about 70% stated that the physical activities during this period helped to improve their sense of anxiety and mood swings.

1.6 Benefits Related To Flexibility

The practice of classical ballet generates great improvements in flexibility, as it keeps the body active while being trained in flexibility, thus reducing pain in the joints Huebscher (2012). Gonçalves (2016) reports

that the ballet works-out and stretches the muscles simultaneously, resulting in elongated muscle groups, thus having a lower risk of injury, also states that flexibility is worked thru in all activities performed, since the movements must contain a large amplitude. Flexibility activities are quite useful during the gestation period because they help balance the dorsolumbar, abdominal and pelvic muscles, according to SBME and Andrade and Lopes (2008), these muscles are generally contracted due to postural changes from the gestational period. Andrade and Lopes (2008) point out that the increase in elasticity due to a well-oriented activity can improve elasticity and muscular strength, which helps to maintain posture. It is customary for gyms to offer physical activities for pregnant women that cover respiratory activities, since they are also beneficial for the body awareness and promote gas exchange, being useful for relaxation and also in the preparation for childbirth Andrade and Lopes (2008). According to the SBME, the breathing exercises, present in the stretching sessions, favor the gas exchanges and promote a better body awareness, and are then useful for relaxation and assistance at the time of delivery. According to Cit (2001) stretching activities help in maintaining the spine in a healthy and aligned position, and may bring relief from back pain that is intensified during the gestation period.

1.7 Benefits For The Time Of Birth And After Birth

Practices of physical activities during gestation may assist the mother more than just during her gestational period, but also at the time of delivery, postpartum, and the first months after the baby's birth. Katz (1999) states that strengthening the abdominal muscles assists in faster healing after a cesarean delivery. According to Saba (2008), the abdominal wall muscles strengthened by physical activities help the woman to expel the baby during normal labor. Stumm (2013) argues that physical activity during pregnancy can lead to increased abdominal resistance at delivery for expulsion of the baby, faster recovery after delivery, greater strength in the arms to carry the baby and greater facility on losing the weight that was acquired during de gestation, even though Matsudo and Matsudo (2000) because of physical activity, there is a lower weight gain and maternal adiposity. Katz (1999) reported that the pelvic girdle assists in the positioning of the uterus and compares this with a "funnel" through which the baby passes at the time of natural birth, according to the author a strengthened pelvic tonus helps in the care of the pelvic girdle position in relation to the rest of the body, states that during natural birth the relaxation of the pelvic muscles facilitates the passage of the baby and an early strengthening of these causes the mother to have greater control over them. According to Gonçalves (2016) ballet provides a great body awareness, because it requires an awareness of all parts of the body to perform their activities. Saba (2008) reports that strengthening and stretching activities of the lower limbs contribute to a better perception, control and relaxation capacity of the

pelvic musculature. Informing that a good physical training of the body during gestation assists the mother to care for the baby, as strength in the arms and legs to carry it, agility in the legs to walk with her belly that is gradually growing and body awareness generating positive body image.

It is usually mentioned exercises with some muscle groups, such as the diaphragm, the anterior rectus abdominis and the pelvic floor. The objective is the facilitation of vaginal labor, (...). (Andrade and Lopes, 2008, p.492) According to Katz (1999), activities of stretching of the pelvic floor and thigh muscles to prepare the moment of delivery, avoiding postpartum cramps because of the great length of time spent stretching the internal muscles of the pelvis are of extreme importance. Nogueira and Santos (2012) report that activities that work to strengthen the pelvic muscles are important during gestation, since these allow a greater control of this musculature. Matsudo and Matsudo (2000) point out that from research on pregnancy and physical activity it is possible to realize that one of the benefits of exercise during pregnancy is the lower risk of preterm birth and a shorter duration of the active phase of labor, faster recovery leading to shorter hospital stays, lower cesarean delivery rates, higher APGAR values, and improved maternal physical capacity. Silva (2008) states that respiratory activities can facilitate the time of labor, alleviating some of the pain and making conditions more bearable. Katz (1999) argues that breathing exercises are a primordial element to prepare the pregnant woman for the moment of delivery, stating that it is important to develop the ability to breathe deeply and completely, since the paused breathing is very useful at the time of labor and at the beginning and end of contractions. According to a survey carried out by Cavalheiro (1999) through interviews in hospitals with 30 women among these 15 actives and 15 sedentary women, it was possible to verify that 53.33% of the sedentary women had difficulty getting out of bed, with a significant distance from active women none (0%) presented this difficulty. Katz (1999) states that resistance of the upper muscles will be important if the pregnant woman needs to rely on labor or to assist in contraction. The author also states that strengthened and resilient arms and shoulders are very important after the baby is born because after the pregnancy the abdominal muscles will relax, not helping as much in the support as usual, thus needing the mother of more strength in the arms and shoulders to get up, carry the newborn and his belongings, among others. According to Katz (1999), body coordination can be very useful for the moment of delivery.

2 Recommendations for Physical Activity

According to the ACOG in 2003 for pregnant women is interesting aerobic activities to improve their cardiorespiratory situation and activities resisted for the musculoskeletal group. Andrade and Lopes (2008) confirm this information, they advise that aerobic and

isotonic activities are preferably performed daily or at least three times a week for half an hour. Curtis and Schuler (2007) classify isotonic activities as those that imply a shortening of the muscle while a tension occurs, such as lifting a weight. According to the ACOG in 2003, aerobic activities involve large muscle mass and are performed in a rhythmic or continuous way, generating according to Andrade and Lopes (2008) a considerable increase in oxygen consumption and also systolic volume, which leads to an increase in systolic blood pressure and peripheral arterial. According to Curtis and Schuler (2007) both aerobic activities to maintain fitness and bodybuilding to tone the muscles and increase their strength are widely chosen by women during gestation. Surita et al. (2014) emphasizes that aerobic, strength, stretching, relaxation and dance activities can be considered a good idea. ACOG explains that in order to bring benefits to the health of a non-pregnant woman, activities of at least moderate intensity are advised and report that there is no reason to change this recommendation after pregnancy if it is uncomplicated. According to May (2014) published by the American College of Sports Medicine (ACSM) it is advised that the intensity of activity to be performed by the pregnant woman should be 60-90% of their maximum heart rate or 50-85% of reserve heart rate or maximal oxygen consumption, said that for women who did not practice regular physical activity before gestation the lowest of these frequencies may be adequate, but if they want to maintain fitness during pregnancy, it can be considered the superior of these frequencies. According to ACOG women who have a simple and healthy pregnancy and already practiced physical activities before they should be able to do activities of high intensity without any adversity. Curtis and Schuler (2007) affirm that the pregnant woman should exercise at least three times a week seeking to maintain a heart rate of approximately 110 to 120 beats per minute varying according to the age of the pregnant woman, always keeping her below 140 beats per minute. The ACOG in 2003 published new standards for physical activity during pregnancy and also postpartum, confirms the recommendation of the Centers for Disease Control and Prevention and the American College of Medicine and Sports (CDC-ACSM) and SBME that for healthy pregnant women it is recommended to perform 30 minutes or more of moderate intensity physical activity preferably every day of the week, which is the same as that of non-pregnant women. For ACOG, two points need to be previously addressed before prescribing continuous activities with a duration of more than 45 minutes for pregnant women, these being the thermoregulation of the environment, which must be thermo - neutral or under controlled environmental conditions and the caloric balance, taking care that there is adequate energy consumption. Saba (2008) informs that it is important during physical activity that the pregnant woman wears light clothes, has a bathroom always nearby and mainly strengthens the muscles of the abdomen, back and buttocks, which provides a better and

healthier posture. For Andrade and Lopes (2008) it is important that the physical activities are done in places with regular soil and preferably made with soft material, and also well lit. Curtis and Schuler (2007) show that sports with physical contact are not the most indicated during the period of gestation and neither are those that have the possibility of the woman being reached in the region of the abdomen. ACOG also states that for previously sedentary pregnant women, it is important to progress gradually to 30 minutes a day. In this way, it states that pregnancy is not a time to greatly improve physical conditioning. According to SBME, activities with a lower impact due to joint changes of the body due to gestation should be preferred, with an intensity equal to or less than 50% of the VO₂max or reserve heart rate. According to Surita et al. (2014), physical activities should focus mainly on weight control, pain generated by postural changes, reduced stress and risk of puerperal depression, greater ease of delivery and better quality of life.

4 CONCLUSION

Gestation is a time of intense changes for the woman's life both physical and psychological, but this does not mean that they should only be at rest and without any physical activity, quite the contrary, physical activity can bring countless benefits to the pregnant woman. Classical ballet is a complete body activity that brings contributions to the posture, breathing, cardiovascular conditioning, flexibility, body and psychological balance, abdominal and body muscles as a whole, body awareness, well-being, agility and coordination, and can be considered one of the most complete activities there is. It was possible to see that classical ballet is extremely beneficial for the pregnant woman, not only during pregnancy but also in the labor and future recovery. During pregnancy the woman also acquires greater sensitivity to the auditory stimuli, so it is important to care about the sound environment, so that it provides calm and relaxation for the woman. The strengthening of the muscular structure as a whole from ballet can bring countless benefits to the pregnant woman. Strengthening of the abdominal muscles assists in faster healing after a cesarean delivery and facilitates expulsion of the baby at the time of normal delivery. The early strengthening of the pelvic muscles causes the mother to have greater control over them at the time of delivery and the relaxation of these facilitates the passage of the baby. Having the toned muscles of the upper body helps the mother to carry her child after birth, strength in the muscles of the back provides greater ease in supporting the new weight of the breasts and the growing fetus, among other benefits. The ballet for pregnant women is a practice with great scarcity of literature, although there are already dance schools that provide the classical ballet for pregnant women this modality is little seen and exercised. For these reasons, this work intends to highlight all the benefits that this art can provide for a unique moment in women's lives, demystifying the need to stay still in this period, but also always emphasizing

the need to first consult with a doctor before starting to any physical activity to see if there is no specific contraindication. The initiation must take place slowly and progressively, always respecting the individual limit of each body. Certainly, this is an area that needs to be further studied, but it is worth emphasizing that although pregnancy is linked to great anatomical and physiological changes, physical activity has minimal risks if we think about the great benefits provided for the majority of women, being the classical ballet a complete activity for this period.

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