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**Wiedza uczestniczek szkoły
rodzenia na temat przeciwwskazań
do aktywności fizycznej w okresie
prenatalnym****The level of knowledge
of contraindications for physical
movement stimulation during
pregnancy among prenatal course
participants****Streszczenie**

Wstęp. Aktywność fizyczna zaliczana jest obecnie do ważnych elementów zdrowego stylu życia kobiet w ciąży. Obok regularnych kontroli położniczych oraz odpowiedniej diety stanowi istotny aspekt przygotowania do aktywnego porodu oraz macierzyństwa. Istnieje jednak grupa przeciwwskazań medycznych, które wykluczają wprowadzenie kinezyterapii w tym okresie. Należą do nich przede wszystkim stany patologiczne oraz choroby matki, które zagrażają zdrowiu kobiety i płodu.

Cel. Celem niniejszego doniesienia jest ocena poziomu wiedzy kobiet ciężarnych z zakresu przeciwwskazań do aktywności fizycznej w okresie prenatalnym.

Materiał i metody. Badaniem w formie sondażu diagnostycznego objęto 100 uczestniczek w kursu przedporodowego w Szkole Rodzenia imienia dr Jadwigi Beaupre w Krakowie w roku 2008 i 2009.

Wyniki. Wyniki wykazały, że badane znały tylko podstawowe przeciwwskazania do wprowadzenia kinezyterapii w okresie ciąży. Istnieje zatem pilna potrzeba zwiększenia wiedzy kobiet w tym zakresie.

Abstract

Introduction. Physical activity is nowadays a very important part of the pregnant women's healthy lifestyle. Together with regular obstetric check-ups and a proper diet it is a significant part of the preparation for an active birth and maternity period. However, there is a group of medical contraindications that exclude physical movement stimulation during pregnancy. This group comprises mainly pathological conditions in pregnancy and mother diseases that can be hazardous to both woman and fetus's health.

Aim. The aim of this report is to define the pregnant women's knowledge on contraindications for physical activity in the prenatal period.

Material and methods. The research based on a survey was conducted in 2008 and 2009 in the Dr Jadwiga Beaupre School of Childbearing in Kraków on the group of 100 women.

Results. The findings show that the respondents were aware of only the most obvious contraindications for physical activity in the prenatal period. Thus, there is an urgent need to increase women's knowledge in this respect.

Słowa kluczowe: ciąża, kinezyterapia, przeciwwskazania

Key words: pregnancy, kinetic stimulation, contraindications

INTRODUCTION

Kinesistimulation is an important aspect of the healthy lifestyle of pregnant women as it can help reduce pregnancy ailments, keep up good psycho-physical shape and prepare the body for an active delivery. At the same time, its introduction in case of women whose condition shows there are some medical contraindications for physical activity in pregnancy can lead to serious health problems.

Therefore, all pregnant women are strongly recommended to consult their doctor in charge before starting any prenatal gym to exclude any potential contraindications [1, 2].

However, it should be remembered that one such consultation (e.g. on the first visit) is definitely not enough as the state of pregnancy keeps changing and physical effort can prove inadvisable at any stage. Thus, all pregnant women should ask their doctor's permission during every obstetric examination.

All in all, physical exercise can be started as early as the 16th week of pregnancy [2] but its earlier introduction is not recommended as the first trimester is the least stable and there is a high risk of miscarriage then. If no complications appear, the prenatal training can be continued.

Contraindications for physical exercise are divided into absolute and relative ones. The absolute contraindications comprise the risk of miscarriage - the phase of intensified symptoms - premature or immature labour risk, acute circulatory insufficiency, arterial hypertension, diabetes, nephropathy, pre-eclampsia and eclampsia, premature detachment of the placenta, total placenta praevia, premature amniotic sac breakage, high body temperature, fetus pulse disorders of unknown origin, improper quantity of amniotic fluid, prolonged pregnancy, high degree anaemia or vaginal bleedings. If the doctor finds any of the above-mentioned states in a patient, then the kinetic stimulation should not be applied since it could lead to serious problems concerning both the mother and the fetus, their life might be put at risk and the pregnancy lost.

The relative contraindications include: states after threatening miscarriage, states after threatening premature childbirth, mono-symptomatic gestosis – lower limb swelling, isthmocervical insufficiency after circular stitch application, marginal or low placenta praevia, the hospitalization period in case of uncontrollable pregnant vomiting (hyperemesis gravidarum), separation of the pubic symphysis in the past or currently, and chronic feverish states. In case of the relative contraindications the doctor-in-charge is the decision-maker [2] as regards the introduction and the form and intensity degree of the kinetic stimulation.

The above mentioned contraindications refer to the general physical activity in pregnancy, including both gym and other movement forms. In case of physical exercise in the water environment, one should mention vaginal infections as an additional contraindication.

There is also a group of general warning signs which should result in stopping physical exercise. The group includes the following: strong exhaustion or fatigue, headaches and vertigos, chest pains, pelvic girdle pains, aches in the lower part of the abdomen, calf pain and swelling, dyspnea prior to exertion, palpitation, painful uterus contractions, amniotic fluid leakage, vaginal bleedings and decreased fetal

movement [3]. If any of the above mentioned occurs during physical effort, it is necessary to stop exercise right away and contact the doctor-in-charge without any delay.

In order to attend the prenatal gym exercises in the School of Birth women need to present a written permission from their doctor-in-charge. Some women do not want to take part in such courses and decide to start exercising on their own. Hence, the urgent need of educating parents-to-be within the scope of the indications and contraindications and of the potential risk which can result from the improper application of the kinesistimulation in pregnancy.

OBJECTIVE

The basic aim of this report is to evaluate the level of knowledge in women participating in a prenatal course in respect of the contraindications for the kinetic stimulation in the prenatal period.

MATERIAL AND METHODS

The diagnostic survey was conducted on a group of 100 women attending the prenatal course in the Dr Jadwiga Beupre School of Birth in Kraków in 2008 and 2009. The women surveyed were between 19 and 38 years old, and between 20 and 38 weeks pregnant. The substantial majority of respondents had higher education (87%), came from urban areas (79%) and declared a good financial status (70%). Thirteen percent of the respondents had secondary education and came from the rural areas (21%) and their financial status was very good (17%) or average (13%). Almost all of them were primipares (95%) and 69% had planned their pregnancy.

RESULTS

The respondents correctly indicated the lack of doctor's permission (83%), the risk of miscarriage (86%) and pathological conditions of pregnancy as a contraindication in the context of the physical exercise (78%). Some of the women also mentioned: high temperature (43%), acute circulatory insufficiency (37%), arterial hypertension (30%), diabetes (18%), nephropathies (10%) and thyroid gland disorders (3%). Three percent of the women erroneously pointed to headaches or lower back pain, while 7% pointed to tiredness and sleepiness.

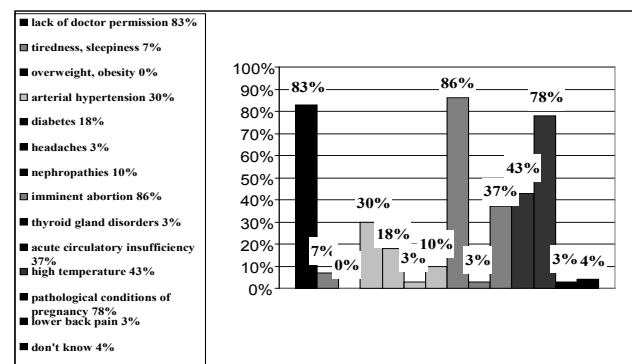


FIGURE 1. The knowledge of contraindications for physical exercising during pregnancy.

Over half of the respondents (60%) started gym only during the prenatal course and 28% of them did it earlier, but consulted their doctor first. Twelve percent of the women started it during pregnancy, without any previous consultation with their doctor-in-charge.

Most of the women surveyed (83%) knew that vaginal infection is a medical contraindication for exercising in the swimming pool during pregnancy and 17% of them couldn't answer the question.

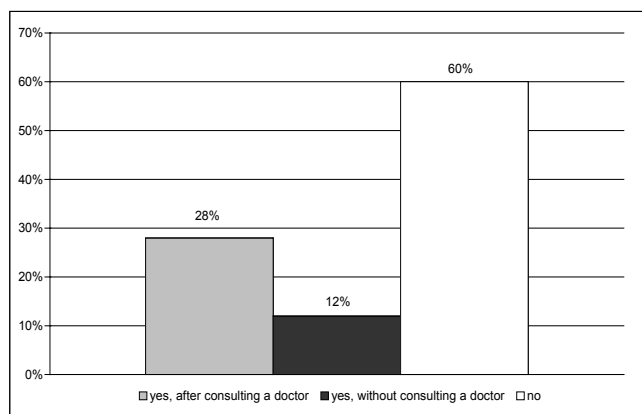


FIGURE 2. Exercising at home before starting attending the prenatal course.

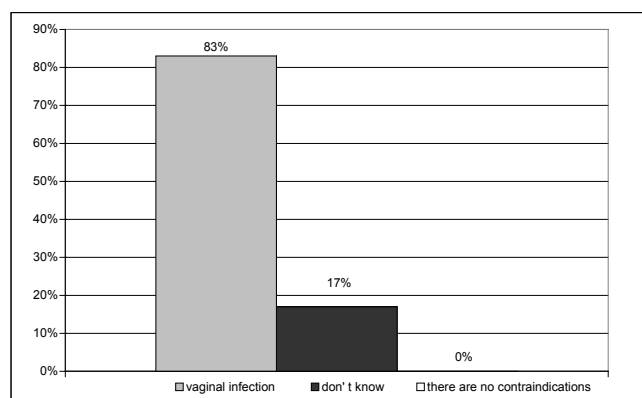


Figure 3. Knowledge of contraindications for exercising in the water environment during pregnancy.

Almost all of the women (99%) knew that when vaginal bleeding occurs the exercises should be terminated. Thirty-six percent of the women didn't realize that the pain in the lower part of the abdomen during physical exertion in the pregnancy period can be pathological.

TABLE 1. Knowledge of warning signs during physical exercises in the pregnancy period.

RESEARCH CATEGORIES	RESPONSE CATEGORIES [%]		
	Normal, no need to stop exercising	Pathological, should stop exercising and see a doctor	Don't know
Vaginal bleeding during or after exercising is:	0	99	1
Pain in the lower part of the abdomen during exercising is:	4	64	32

The findings presented in Table 2 show that 51% of the women surveyed wrongly assumed that prenatal gym in the

School of Birth may be started as early as the beginning of pregnancy. At the same time as many as 25% claimed that every pregnant woman can be physically active.

TABLE 2. General knowledge of physical exertion in the pregnancy period.

RESEARCH CATEGORIES	RESPONSE CATEGORIES [%]		
	True	False	Don't know
All women can perform physical exercises during pregnancy	25	62	13
Pregnant women can start exercising at the prenatal course even at the early stages of pregnancy	51	35	14

DISCUSSION

Physical activity of pregnant women is a subject often brought up in the media and women's magazines. On the one hand, it is a positive phenomenon since it touches upon a very important aspect of a healthy lifestyle in pregnancy, namely the application of kinetic stimulation. Many of these publications, however, are often riddled with errors or overgeneralizations and pass over important issues, such as, for instance, a proper selection of exercises or the contraindications as regards their application. Thus, it may be assumed that many women start exercising just after reading such non-specific articles, being totally unaware of the risk involved. The research carried out for the sake of this paper shows that as many as 12% of the women started the prenatal gym without any consultations with their doctor-in-charge.

One of the vital issues is the general knowledge of contraindications for kinesistimulation in mothers-to-be; another one concerns the sources of information women rely on. Many authors have different opinions regarding contraindications for kinetic stimulation in pregnancy and that is why the final decision concerning its application must be taken by a doctor-in-charge. Moreover, it should be remembered that each patient should be treated individually.

According to the research, most of the respondents knew the most evident contraindications such as lack of doctor's permission (83%), the risk of miscarriage (86%) or pathological conditions of pregnancy (78%). Less than half of the women knew about such contraindications as: high temperature (43%), acute circulatory insufficiency (37%) or arterial hypertension (30%). Scarcely did they point out to contraindications like diabetes (18%), nephropathies (10%) or thyroid gland disorders (3%). Few women indicated lower back pain, headaches, general fatigue and sleepiness as contraindications for gym in pregnancy. Paradoxically, these kinds of pregnancy ailments can be successfully eliminated by the application of appropriate, systematic physical exercise. It is worth emphasizing that nephropathies or thyroid gland disorders - being serious problems - were indicated by only a few women, while a certain number of women assumed that fatigue or headache (common problems) were serious contraindications in the context of exercise.

What should also be emphasized is the fact that many authors have a totally different approach to the issue of medical contraindications for kinetic stimulation in pregnancy.

According to Kozłowska – diabetes, arterial hypertension, thyroid gland disorders and nephropathies should be regarded as absolute contraindications for the physical movement stimulation in pregnant women [2, 4] while the members of the Royal College of Obstetricians and Gynaecologists and of the American College of Obstetricians and Gynaecologists are of an entirely different opinion. They think that these states are not contraindications. What they require is medical supervision and individual scope and time of the exercise applied [3, 5]. Some authors say that physical activity should be prohibited in case of multiple pregnancy [6]. Other specialists maintain that what such a state requires is a proper selection of exercise and an adequate adjustment of the training intensity degree. If pregnancy is physiologically correct and no complications occur, one should not give up physical exercise in case of multiple pregnancy because that would limit the possibility of taking advantage of the profits associated with the prenatal kinetic stimulation. One thing should, however, be remembered – such a pregnancy is connected with a higher degree risk than in case of a unifetal pregnancy.

Overweight or obesity are not contraindications for physical activity in pregnancy, one should, however, take into account the limitations connected with them. An obese – especially a pregnant person – can present a lower level of physical efficiency and tolerance in case of physical effort in comparison to women with an appropriate body mass increase. At the same time, some pregnancy ailments, such as swelling or joint load can be seriously intensified. Therefore, one should remember about a proper selection of exercise, as well as an adjustment of the tempo and intensity of the training individually. In case of an extreme obesity, when body mass index [BMI] exceeds 40, the medical supervision is recommended [3]. One should remember that people suffering from overweight and obesity, are especially exposed to diabetes and arterial hypertension, which, in turn, are regarded as contraindications for physical exertion in pregnancy. That is why, obese pregnant women should be especially taken care of, as the diabetes and arterial hypertension can occur at every stage of pregnancy.

An often disregarded question is underweight. According to the American College of Obstetricians and Gynaecologists, the body mass index [BMI] under 12 in pregnant women is a relative contraindication for kinetic stimulation [5]. One should remember that underweight, especially in pregnancy, can lead to serious health complications. The kinetic stimulation in pregnant women with extreme underweight can pose a substantial risk, since it can cause fainting while training, which increases the risk of injury. The most important aspect of planning physical activity for pregnant women is the analysis of their health condition while taking into account all and any relative and absolute contraindications. What is equally important is the education of women within this scope. It can result in a reduced number of complicated pregnancies and various health problems during this life period. Further research as regards the influence of the physical effort on functioning of the pregnant women's organism is thus thoroughly recommended.

CONCLUSIONS

1. The knowledge level of pregnant women within the scope of contraindications for the prenatal kinetic stimulation is far from sufficient.
2. There is an urgent need to educate future mothers within the scope of the medical contraindications for physical activity in pregnancy and the symptoms suggesting its discontinuation.

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