

Korabiusz Katarzyna, Wawryków Agata, Fabian-Danielewska Anna, Stecko Monika, Żukowska Magdalena, Janik Inga, Andruszewicz Wojciech, Torbé Andrzej. Physical activity of pregnant women. *Journal of Education, Health and Sport*. 2018;8(8):1026-1031. eISSN 2391-8306. DOI <http://dx.doi.org/10.5281/zenodo.1414249>
<http://ojs.ukw.edu.pl/index.php/johs/article/view/5965>
<https://pbn.nauka.gov.pl/sedno-webapp/works/876966>

The journal has had 7 points in Ministry of Science and Higher Education parametric evaluation. Part b item 1223 (26/01/2017).
1223 Journal of Education, Health and Sport eISSN 2391-8306 7

© The Authors 2018;

This article is published with open access at Licensee Open Journal Systems of Kazimierz Wielki University in Bydgoszcz, Poland
Open Access. This article is distributed under the terms of the Creative Commons Attribution Noncommercial License which permits any noncommercial use, distribution, and reproduction in any medium, provided the original author (s) and source are credited. This is an open access article licensed under the terms of the Creative Commons Attribution Non commercial license Share alike. (<http://creativecommons.org/licenses/by-nc-sa/4.0/>) which permits unrestricted, non commercial use, distribution and reproduction in any medium, provided the work is properly cited.

The authors declare that there is no conflict of interests regarding the publication of this paper.

Received: 02.08.2018. Revised: 18.08.2018. Accepted: 31.08.2018.

Physical activity of pregnant women

**mgr Katarzyna Korabiusz¹, mgr Agata Wawryków¹, lek. Anna Fabian- Danielewska²,
mgr Monika Stecko¹, lek. Magdalena Żukowska², mgr Inga Janik¹,
lek. Wojciech Andruszewicz², prof. dr hab. n. med. Andrzej Torbé³**

¹ Pomorski Uniwersytet Medyczny w Szczecinie, Studium Doktoranckie Wydziału Nauk o Zdrowiu, ul. Żołnierska 54, 71-210 Szczecin

² Pomorski Uniwersytet Medyczny w Szczecinie, Studium Doktoranckie Wydziału Lekarskiego, ul. Żołnierska 54, 71-210 Szczecin

³ Pomorski Uniwersytet Medyczny w Szczecinie, Klinika Położnictwa i Ginekologii, ul. Powstańców Wlkp. 72, 70-111 Szczecin

Dane autora korespondencyjnego:

Katarzyna Korabiusz

korabiuszk@gmail.com

Key words: physical activity, pregnancy.

ABSTRACT

Every pregnant woman should be aware that her every day health habits affect the child's health, but also her health during pregnancy, delivery and post-partum period. Physical activity plays an important role during pregnancy. It improves the overall physical condition and prevents many ailments of pregnancy.

The most important aspect of taking physical activity during pregnancy is the right choice of exercise and regularity and appropriate technique.

Due to many benefits of proper exercises during pregnancy, pregnant women should be encouraged and educated in this area.

Physical activity of pregnant women

Pregnancy is a special time in woman's life. Conception of a child leads to psychological, biological and social changes of a woman and a man. The moment of pregnancy in a woman's life changes her current behavior, life goals and hierarchies of values. The woman is aware that her health behaviors affect not only her health but also fetal condition, as well as well-being during pregnancy, childbirth and post-partum period [1-5].

Regular exercises, if there are no contraindications and the pregnancy is physiological, is very important for the pregnant woman. First of all, properly selected exercises improve the overall physical condition, prevent many ailments of pregnancy, increase appetite, improve well-being, and also positively affect the quality of sleep. More and more often, it is also talked about the need to undertake physical activity in order to maintain or increase cardiorespiratory function, muscle strength or range of joint mobility. Particularly noteworthy are the hip joints and joints of the spine. Properly conducted exercises during pregnancy can affect the time of delivery and improve its effectiveness. Women who are physically active during pregnancy experience less pain during labor and less frequently use pharmacological anesthesia. Physical activity also reduces the risk of gestational diabetes, and allows to control the increase of muscle mass. The research also clearly indicates that properly dosed physical activity accelerates the process of regression of pregnancy changes in the post-partum [6-12].

Also due to physical activity, women cope better with stress, mood swings, quicken irritation and return to emotional balance, because sport affects the secretion of endorphins [13].

Exercises related to physical preparation of a pregnant woman for delivery are named as kinezystimulation. The kinezystimulation consists of exercises focused on working

with individual muscle groups, general-reassurance exercises, strengthening exercises, breathing exercises and relaxation techniques [14].

The most important aspect of physical activity during pregnancy is the right choice of exercise and regularity. Pregnant woman's health training should be repeated 3 times a week or more [15, 16].

Gynecologist should individually approve exercises during pregnancy, because various disorders and abnormalities during pregnancy can be contraindication to an additional effort. Pregnant woman should also be familiar with the methodology of performing the given exercises, and the exercises themselves should be individually tailored to her needs. There are more and more specially targeted offer of fitness clubs or antenatal schools. It is important that the person conducting exercises with pregnant women had knowledge of the anatomy and physiology of pregnancy, and is also familiar with the changes taking place during pregnancy. It is also advisable to continue gymnastics at home only after proper training, because incorrect exercise may result in injuries, decrease of comfort, intensification of pregnancy ailments and, as a consequence, discouragement and interruption of physical activity. It should also be remembered that each trimester is characterized by different guidelines defining the type of activity allowed. The character of the exercises should be adjusted depending also on the level of physical activity before pregnancy, pregnant well-being, motivation, time and financial possibilities [17].

The optimal duration of physical activity is 45 minutes, where the first 15 minutes is a warm-up, then 15 minutes of general-purpose exercises, and the last fifteen minutes should be dedicated to relax and calm down. The time and exercise load should be given, it should start from short 15-minute sessions 3 times a week. Later, depending on the well-being of the pregnant woman physical activity can be extended to 30-45 minutes 4-7 times a week. Women exercising regularly before pregnancy can exercise more, lasting 30-60 minutes, with an initial frequency of 3 to 5 times a week [18].

The very methodology of exercises during pregnancy is not different from the exercises performed normally. The only difference are positions the pregnant woman should avoid. In the first trimester there are no restrictions, while from the 12th week of pregnancy should be excluded standing and supine position. From mid-pregnancy lying on stomach should be avoid. The sitting position is advantageous, because breathing from the diaphragm is the easiest one, and the position limits the stretching of the abdominal muscles. The kneeling supported position is also use (to increase the range of mobility of the joints of the spine), as well as a lying position sideways [19,20].

Great emphasis should be put on the safety of the exercises. First of all, do not overheat the body - this is particularly important in the first trimester of pregnancy, where the mechanism of thermoregulation between the mother and the fetus is not regulated. During this time, an increase in temperature above 39.2 degrees Celsius may affect the development of malformations in fetus. Physiological protection begins from the second semester. It is also very important to use a proper diet - not only properly balanced, rich in vitamins, but also remember to supplement lost calories and fluids. Dehydration is particularly dangerous for pregnant women, as it increases the risk of hyperthermia [21].

Pregnant women should avoid exercising on warm days, wear tight sports clothing, exclude exercises that strongly engage the abdominal press, do not exercise isometric exercises of the lower limbs (due to the risk of compressing the blood vessels and obstructing the proper blood flow). Pregnant women should also avoid exercises, which may expose them to violent shocks, such as jumps, twists of torso and pelvis. It is also recommended to discontinue the equivalent exercise and all that may cause fall or injury, such as horse riding, skiing, skating, diving, tennis, contact sports or strength sports. The most beneficial form of activity for a pregnant woman is gymnastics, walking, swimming, yoga, pilates, as well as riding a stationary bike [22-24]. Running is concerns as a controversial, but many research shows that if a woman regularly ran before pregnancy, there are no contraindications to continue this activity during pregnancy [25].

According to many studies, moderate, properly selected physical activity in pregnancy with a physiological course does not increase the incidence of spontaneous abortions, premature delivery or unexpected perinatal complications [9,14,21,26].

Pregnancy is an unusual time in a woman's life. It is very important to survive this period in accordance with pro-health recommendations. The benefits of exercising properly selected physical activity should ensure that pregnant women should be encouraged and educated in this area.

REFERENCES

1. Banaszak-Żak B, Dobrzyń D. (2004) Czynniki warunkujące zdrowie kobiety ciężarnej. *Ann UMCS* 59 (suppl. 14): 56-60.
2. Kornas-Biela, D., *Psychologia i pedagogika wobec statusu dziecka prenatalnego*, [w:] *Bioetyka personalistyczna*. Red. T., Wyd. Naukowe PAT, Kraków 2006.

3. Libera A., Madriańczyk K., Oleszczuk, J.: Poczucie beznadziejności u kobiet po porodzie przedwczesnym. *Przegląd Ginekologiczno - Położniczy*, 2009, 9(2), 59-62.
4. Kornas-Biela D., *Wokół początku życia ludzkiego*. Instytut PAX, Warszawa 2004.
5. Kaiser L., Allen LH.: Position of the American Dietetic Association: nutrition and life style for a health pregnancy outcome. *J Am Diet Assoc*, 2008, 108(3): 553-561.
6. Kozłowska J: Ćwiczenia fizyczne kobiet w ciąży. Aktualne (2006 r.) stanowisko Royal College of Obstetricians and Gynaecologists. *Med Prakt Gin Poł* 2007; 5: 13-18.
7. Waleśkiewicz K, Kolesińska-Janowczyk N, Rajewski P et al.: Aktywność fizyczna kobiet w ciąży. [W:] Muszkieta R, Żukow W, Napierała M, Saks E (red.): Stan i rozwój regionalnego sportu i rekreacji. Ośrodek Rekreacji, Sportu i Edukacji w Poznaniu, Bydgoszcz 2010: 192-197.
8. Rycyk M, Marczewski K: Zamojskie Studia i Materiały. Seria Fizjoterapia. 2012; 14; 1 (35): 56-62.
9. Kozłowska J, Curyło M: Skutki przygotowania kobiet do porodu i położu według zasad psychoprofilaktyki porodowej. *Now Lek* 2005; 2(74): 159-162.
10. Mizgier M, Jarzabek-Bielecka G, Durkalec-Michalski K: Rola aktywności fizycznej oraz masy ciała w etiopatogenezie oraz w profilaktyce występowania ciąży obciążonej cukrzycą. *Now Lek* 2009; 5-6: 349-352.
11. Difiore J. (2003) *Gimnastyka dla kobiet w ciąży*. Wydawnictwo MUZA SA, Warszawa.
12. Brodziński W. (2008) Wydatek energetyczny rodzących w porodach fizjologicznych. *Gin. Pol.* 55, 4: 401-407
13. Borys B. (2008) *Ćwiczenia gimnastyczne dla kobiet oczekujących dziecka*. Wydawnictwo Lekarskie PZWL, Warszawa, s. 509
14. Fijałkowski W: *Kinezystymulacja w położnictwie*. [W:] Kwolek A (red.): *Rehabilitacja medyczna*. Tom 2, Wydawnictwo Medyczne Urban & Partner, Wrocław 2003: 530.
15. Artal R, O'Toole M: Guidelines of the American College of Obstetricians and Gynecologists for exercise during pregnancy and the postpartum period. *Br J Sports Med* 2003; 37: 6-12.
16. Rutkowska E, Łepecka-Klusek C: Rola aktywności fizycznej w przygotowaniu kobiet do porodu i położu. *Ann Univ Mariae Curie-Skłodowska, Lublin* 2000; 55 (suppl. 7), 49: 255-257.

17. Iwanowicz-Palus GJ: Alternatywne metody opieki okołoporodowej. Wydawnictwo Lekarskie PZWL, Warszawa 2012: 124.
18. Ratcliffe SD, Baxley EG, Cline MK, Sakornbut EL: Family Medicine Obstetrics. Mosby Elsevier, Philadelphia 2008: 99.
19. Milanowska K: Kinezyterapia. Wydawnictwo Lekarskie PZWL, Warszawa 2003: 17.
20. Szukiewicz D: Fizjoterapia w ginekologii i położnictwie. Wydawnictwo Lekarskie PZWL, Warszawa 2012: 174.
21. Górski J: Fizjologia wysiłku i treningu fizycznego. Wydawnictwo Lekarskie PZWL, Warszawa 2011: 134.
22. Godala M, Pietrzak K, Gawron-Skarbek A et al.: Zachowania zdrowotne łódzkich kobiet w ciąży. Cz. II. Aktywność fizyczna i stosowanie używek. Probl Hig Epidemiol 2012; 93(1): 43-47.
23. Ćwiek D, Szczęsna M, Malinowski W et al.: Analiza aktywności fizycznej podejmowanej przez kobiety w czasie ciąży. Perinatol Neonatol Ginekol 2012; 5(1): 51-54.
24. Gacek M: Niektóre zachowania zdrowotne oraz wybrane wskaźniki stanu zdrowia grupy kobiet ciężarnych. Probl Hig Epidemiol 2010; 91(1): 48-53
25. Brown W, Finch C, Robinson D et al.: SMA Statement: The benefits and risks of exercise during pregnancy. J Sci Med Sport 2002; 5(1): 37-45.
26. Leifer G: Maternity nursing – an introductory text. Elsevier Saunders, Philadelphia 2005: 55.