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## The impact of the awareness of the parents On the prophylaxis of Flat-Footed Children

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### ABSTRACT

Until 5 years of age, the kids have physiological flat-feet. It's from a great sign if I can to conduct a prophylaxis starting from young age continuing throughout the entire life. To research the impact of parent's awareness on the prophylaxis off flat-feet in children. The survey was carried out in June 2016. The survey included 12 closed questions, directed towards exploring the awareness if the parents regarding the condition flat-feet, its diagnostics, prophylaxis and its impact on the general health of the children. In the research participated 59 parents of children between the age of 5 and 17. The gathered data were analyzed using the statistical software package IBM SPSS for Windows, v. 19.0. The majority of the surveyed parents - 57,6% (n=34) haven't taken their kid to the GP for a prophylactic examination. In 22% (n=13) of the examined children flat-feet have been found. According to 13,6%(n=8) of the parents that is very important for their child's health, 6,8%(n=4) stated it's relatively important and 1,7% (n=1) find it not important. The vast majority 89,8% of the respondents are interested in receiving more information, The parents claim that they're familiar with the condition flat-feet, but when analyzing their responses in our survey, we can conclude that their knowledge should be broadened.

**Keywords:** flat-footed, prophylaxis, awareness, children

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## INTRODUCTION

The arch of the foot serves as an absorber. Every step causes pressure to the arch, equal up to 5 times one's weight. The load size depends on whether the individual is walking, running or jumping. In cases of flattening of the arch a dislocation of the foot bones relative to one another is caused. Also the hyperextension of muscles, ligaments and connective tissue is caused, which leads to lack of absorbent function. The center of gravity shifts as well as all linked areas in the human body. This causes a constant pain in the foot, abnormal tensions in the knees, hips and joints of the spine. This mechanical tension is a premise for development of early degenerative changes in the musculoskeletal system<sup>2,3,4</sup>.

The causes of flat-feet can be different – more flexible foot (great mobility of the joints and weak connective tissue), foot injuries or congenital bone anomalies<sup>6,8,9</sup>.

In children flat-feet are generally caused by a weak connective tissue. Until 5 years of age, the kids have physiological flat-feet, because the ligaments are not strong enough yet. The prophylaxis has a huge significance in prevention of flat-feet later in life<sup>1,5</sup>.

The children must visit an orthopedist in order their feet to be examined prophylactically.

The full recovery from flat-feet is possible only in childhood, because the musculoskeletal system of the child is not strong enough yet. In cases of flat-feet later in life, the efforts of the orthopedists are directed to overcoming the problems that come with the flattening of the foot's arch. Consequences of this are not only the back and feet pain, but also the numbness in those areas at night, lumbar disc disease, radiculitis and syndrome of chronic fatigue:

- Excessive bodyweight (that's why flat-feet is common in pregnant women who gain weight)
- The work factor related to standing up most of the time (the risk-groups include seller consultants, teachers, hairdressers etc.)
- The extended usage of uncomfortable shoes – tight, high-heeled etc

The prophylaxis of flat-feet has a significant medico-social impact nowadays, because of the reduced physical activity and obesity in children in preschool age, which are premises for their development. It's imperative to increase the physical activity and to sustain optimal bodyweight for the certain age. There are various methods of prophylaxis and correction of flat-feet in children. One of them is putting on supinator shoes, which lift up the arch and correct the gait. Kid's orthopedic insoles can be used also. For optimal results both supinator shoes and insoles should be made according to the individual's specific needs<sup>7,10,11</sup>.

For the prophylaxis in children the main responsibility lays on the parents. They should take their kids to prophylactic examinations regularly. For this purpose the parents should be informed for both the condition flat-feet and the complications that may arise if proper

measures are not taken. In order to explore the parent's awareness on this important issue we conducted the present research.

### Purpose

To research the impact of parent's awareness on the prophylaxis of flat-feet in children.

### MATERIALS AND METHOD

The survey was carried out in June 2016. The survey included 12 closed questions, directed towards exploring the awareness if the parents regarding the condition flat-feet, its diagnostics, prophylaxis and its impact on the general health of the children. In the research participated 59 parents of children between the age of 5 and 17. The gathered data were analyzed using the statistical software package IBM SPSS for Windows, v. 19.0.

### RESULTS AND DISCUSSION

The sex distribution is: 44, 1% girls and 55,9% boys (Table 1).

**Table 1: Sex distribution of the examined children**

		Sex of the children		Total
		girls	boys	
Total	Number	26	33	59
	% in the examined group	44,1	55,9	100

All parents, taking part in the survey (n=57), except one, stated that they're familiar with the condition flat-feet. The majority of them - 54,2% (n=32), determine its significance as "Very important" for their children's health. Only 6,8% (n=4) of the respondents said that flat-feet has no impact over the overall health of the children (Table 2).

**Table 2: Relationship between parents' awareness of flat-feet and its significance for their children's health**

		Yes	No	Total
Not important	Number	4	0	4
	% in the examined group	6,8%		6,8%
Relatively important	Number	18	0	18
	% in the examined group	30,5%		30,5%
Very important	Number	32	1	33
	% in the examined group	54,2%	1,7%	55,9%
Extremely important	Number	4	0	4
	% in the examined group	6,8%		6,8%
Total	Number	58	1	59
	% in the examined group	98,3%	1,7%	100%

$\chi^2 = 0,801$ ,  $p = 0,849$  Pearson's  $r = 0,069$   $p = 0,604$

The majority of the surveyed parents - 57,6% (n=34) haven't taken their kid to the GP for a prophylactic examination. Even though they assess the impact of flat-feet over the child's health as important they haven't taken their kid to a prophylactic examination. 28,8% of the

respondents that assess flat-feet's importance as "Very important" haven't taken their kid to a prophylactic examination. It's interesting that no one of the parents who stated that flat-feet have an extreme importance have ever taken their child to prophylactic examination (Table 3).

**Table 3: Relationship between the importance of flat-feet and the prophylactic examination by the GP**

		Yes	No	Orthopedist	Total
Not important	Number	1	3	0	4
	% in the examined group	1,7	5,1		6,8
Relatively important	Number	8	10	0	18
	% in the examined group	13,6	16,9		30,5
Very important	Number	15	17	1	33
	% in the examined group	25,4	28,8	1,7	55,9
Extremely important	Number	0	4	0	4
	% in the examined group		6,8		6,8
Total	Number	24	34	1	59
	% in the examined group	40,7	57,6	1,7	100

$$\chi^2 = 4,588, p = 0,598, \text{ Pearson's } r = 0,065 \quad p = 0,624$$

In 22% (n=13) of the children flat-feet have been found. According to 13,6%(n=8) of the parents that is very important for their child's health, 6,8%(n=4) stated it's relatively important and 1,7% (n=1) find it not important (Table 4).

**Table 4: Relationship between found flat-feet and importance for the health**

		Yes	No	Total
Not important	Number	1	3	4
	% in the examined group	1,7	5,1	6,8
Relatively important	Number	4	14	18
	% in the examined group	6,8	23,7	30,5
Very important	Number	8	25	33
	% in the examined group	13,6	42,4	55,9
Extremely important	Number	0	4	4
	% in the examined group		6,8	6,8
Total	Number	13	46	59
	% in the examined group	22	78	100

$$\chi^2 = 1,245 \quad p = 0,742 \quad \text{Pearson's } r = 0,066 \quad p = 0,618$$

The vast majority 89,8% of the respondents are interested in receiving more information, the rest 10,2% aren't (Table 5).

**Table 5: A desire for more information based on children's sex**

		Sex of the children		Total
		girls	boys	
Yes	Number	25	28	53
	% in the examined group	42,4%	47,5%	89,8%
No	Number	1	5	6
	% in the examined group	1,7%	8,5%	10,2%
Total	Number	26	33	59
	% in the examined group	44,1%	55,9%	100,0%

$\chi^2 = 2,035$   $p = 0,154$  Pearson's  $r = 0,186$   $p = 0,159$

## CONCLUSION

The parents claim that they're familiar with the condition flat-feet, but when analyzing their responses in our survey, we can conclude that their knowledge should be broadened. They are show interest regarding the subject themselves. A deeper knowledge is required regarding the possible complications of the condition as well as it's prophylaxis.

## REFERENCES

1. Захаријева Д., Д. Стефанова, Н. Генчева Оценка на медиалния надлъжен свод при 150 български деца: подоскопско изследване. Сборник с доклади. НСА,София, 2013. 77-87.
2. Попов Н., Кинезитерапия в спортната практика, НСА-ПРЕС, София, 2006г, стр. 150-152.
3. Попов Н, Кинезиология и патокинезиология на опорно-двигателния апарат - НСА-ПРЕС, 2009
4. Попов Н. Д. Попова, Т. Груева. Физиотерапия при мускулно-скелетни дисфункции на долния крайник, НСА – ПРЕС. София, 2013 г.
5. Попова-Добрева Д., Н. Генчева, Г. Марковска. Динамика на разпространение на постурални нарушения и плоскостъпие при двугодишно проследяване на деца от начална училищна степен. Сборник с доклади. НСА,София, 2013. 33-40
6. Хеп В. Р. Х.У. Дебрунер. Ортопедична диагностика. Медицина и Физкултура София 2010
7. Halabchi F., Reza Mazaheri, Maryam Mirshahi, LadanAbbasian,Pediatric Flexible Flatfoot; Clinical Aspects and Algorithmic Approach, Iran J Pediatr. 2013 Jun; 23(3): 247–260.PMCID: PMC3684468
8. Hosalkar HS, Spiegel DA, Davidson RS. The foot and toes. In: Kliegman RM, Behrman RE, Jenson HB, Stanton BF, eds. Nelson Textbook of Pediatrics. 19th ed. Philadelphia, PA: Elsevier Saunders; 2011:chap 666.
9. Murphy GA. Disorders of the tendons and fascia and adolescent and adult pes planus. In: Canale ST, Beaty JH, eds. Campbell's Operative Orthopaedics. 12th ed. Philadelphia, PA: Elsevier Mosby; 2012:chap 82.
10. Sheikh Taha AM, Feldman DS, Painful Flexible Flatfoot.Foot and Ankle Clinics, Volume 20, Issue 4, Pages 693-704 ,doi: 10.1016/j.fcl.2015.07.011.
11. Stacy Stolzman, Megan B. Irby, Allison B. Callahan, Joseph A. Skelton, Pes Planus and Pediatric Obesity: A Systematic Review of the Literature,ClinObes. 2015 Apr;

5(2): 52–59. Published online 2015 Mar 23. doi: 10.1111/cob.12091, PMID:  
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