

# Socio-demographic determinants of folic acid supplementation in preconceptional period

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# Background

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- Folic acid taken by women before conception and during the first trimester of pregnancy prevents about 70% of all neural tube defects in offsprings. (MRC Vitamin Study)
- The main aim of the national Primary Prevention Program of Neural Tube Defects in Poland (1997-2007) was the reduction of the prevalence of NTD in newborns through increase of knowledge of the role of folic acid in pregnancy and intake of this vitamin by women in the periconceptional period.

# Objective

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- To determine when pregnant women started folic acid supplementation in relation to pregnancy
- To analyse socio-demographic factors impeding preconceptional folic acid supplementation

# Study design (1)

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- Survey coordinated by the National Central Office of Neural Tube Defects Primary Prevention Program in June - September 2007
- Face-to-face interview conducted by trained staff in 31 randomly selected primary health centres (general, gynecological, pediatric) in 5 (of 16) administrative regions in Poland
- Questionnaire contained 20 questions on knowledge, attitudes, behaviours concerning folic acid and personal characteristic

# Study design (2)

## inclusion criteria & characteristics

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- 272 women 18 - 35 years old  
(mean age  $27 \pm 2$  years)
- pregnant at the time of the interview (34,9%) or during 2 years before the interview (65,1%)
- Number of women in each region proportional to number of residents and urbanization rate

# Study design (3)

## Assessment of primary variable

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Folic acid consumption before pregnancy was assessed by 2 questions:

1. Are you (have you been) taking folic acid during pregnancy?
2. When did you begin to take folic acid?

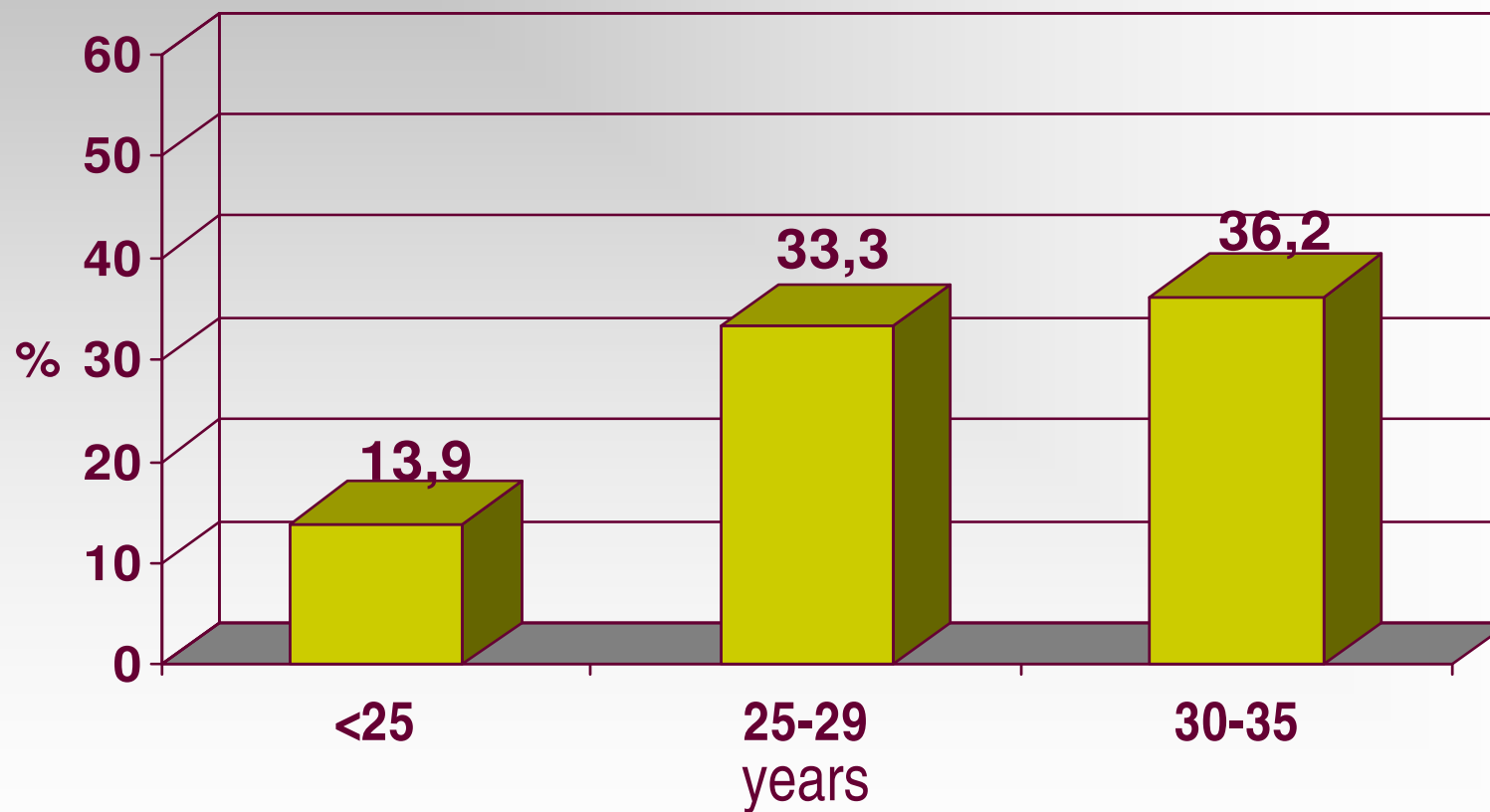
# Results: behaviour

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- 85,7% of respondents consumed folic acid during pregnancy
- 28,7% of women started supplementation with folic acid before pregnancy and 52,2% - in the first trimester of pregnancy
- 95,7% of respondents who consumed folic acid during pregnancy, did it every day, the others - several times a week

Factors influencing the start of folic acid supplementation before pregnancy:

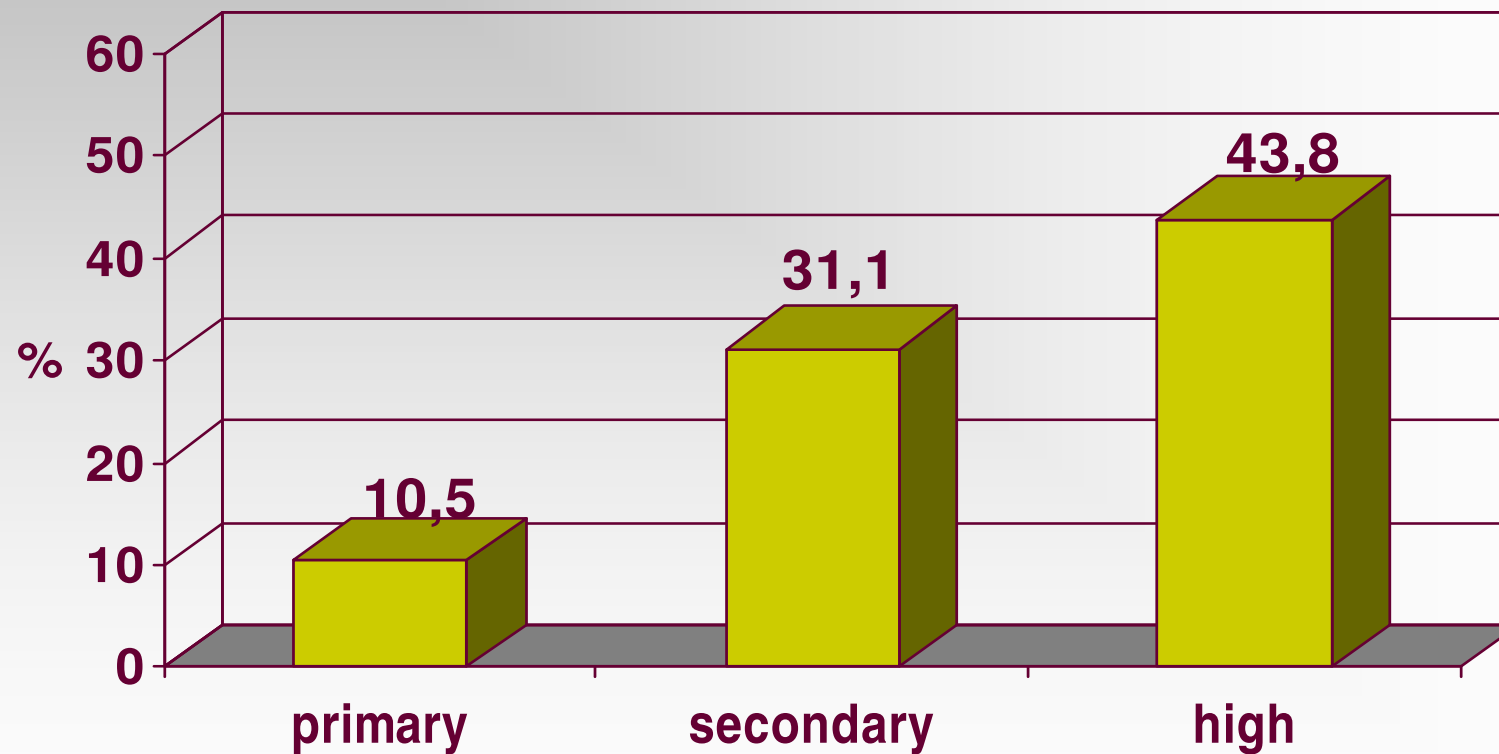
## Age





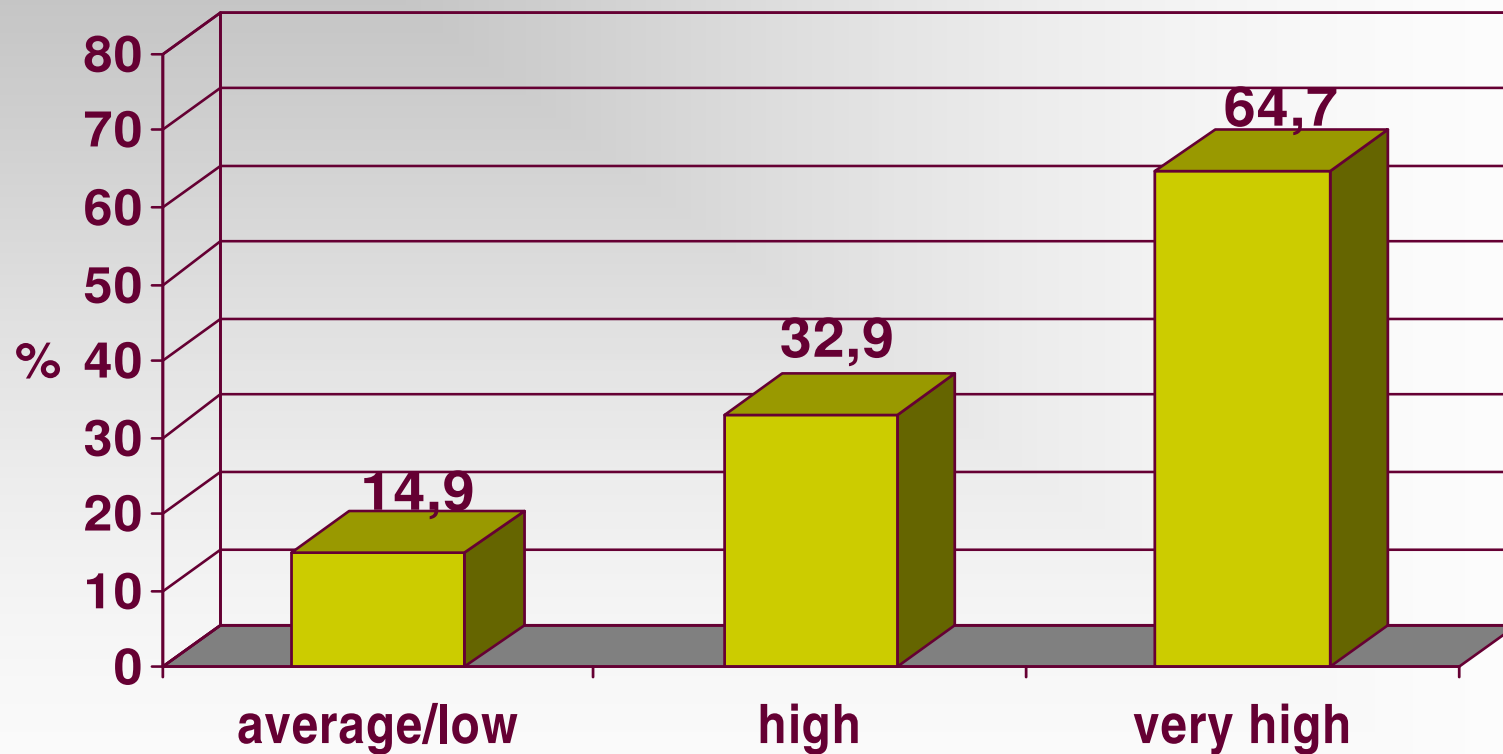
Factors influencing the start of folic acid supplementation before pregnancy:

## Educational level



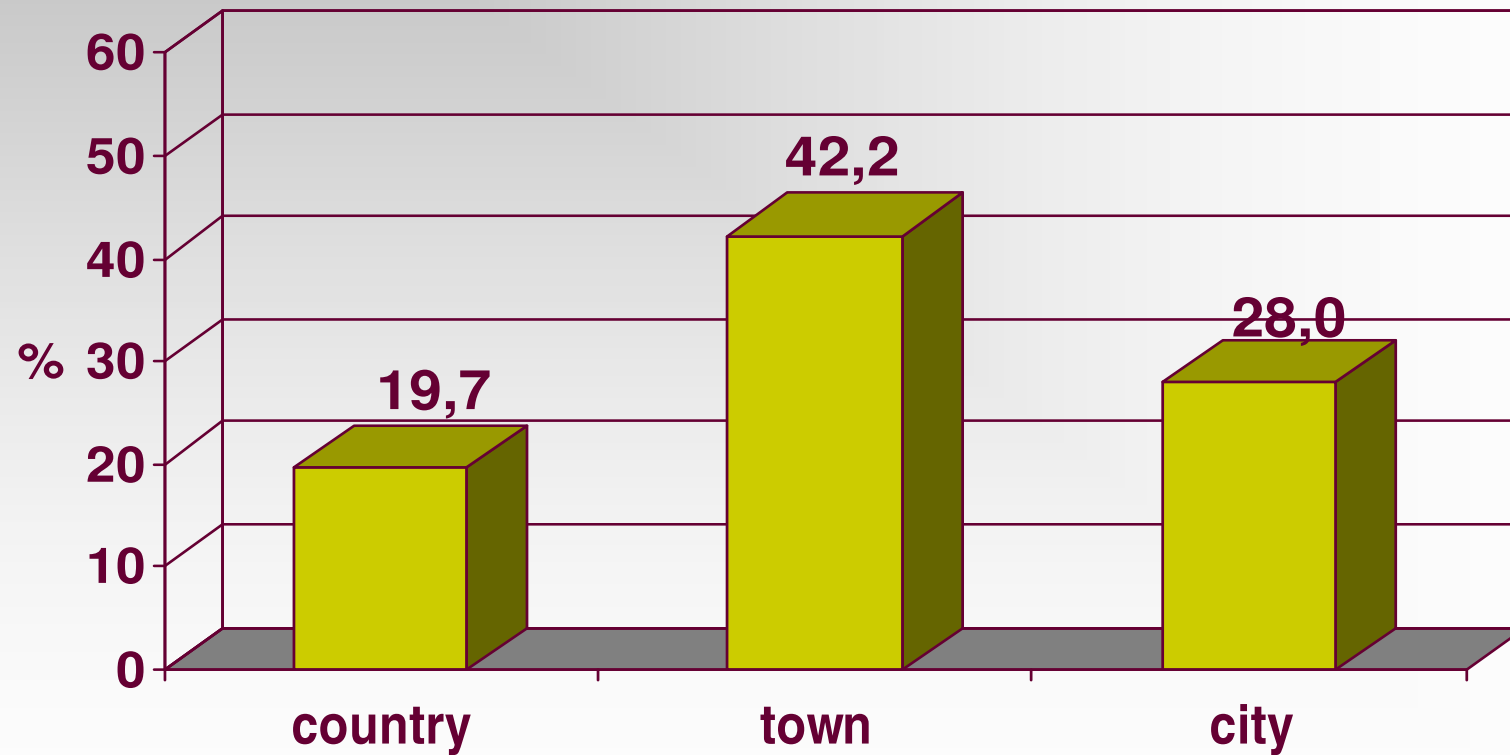
Factors influencing the start of folic acid supplementation before pregnancy:

## Economic status



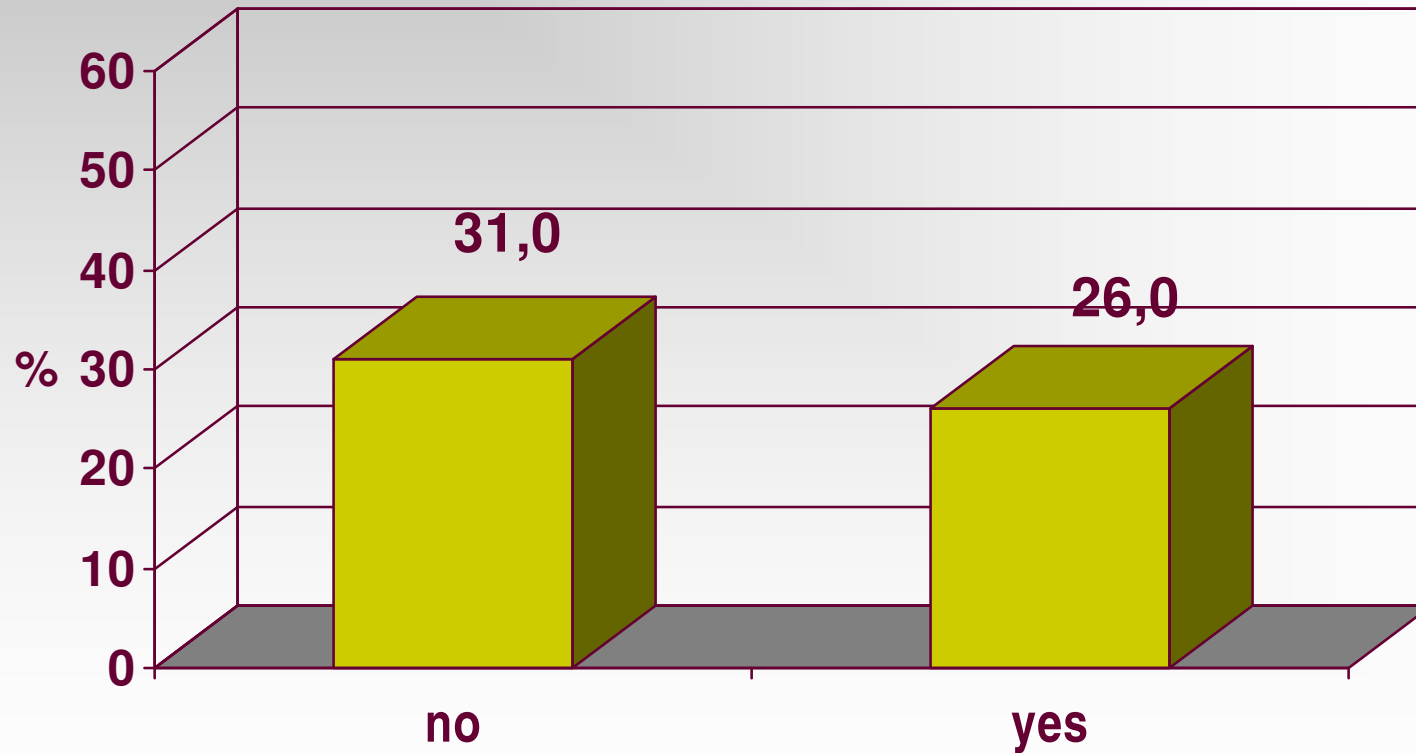
Factors influencing the start of folic acid supplementation before pregnancy:

## Place of residence



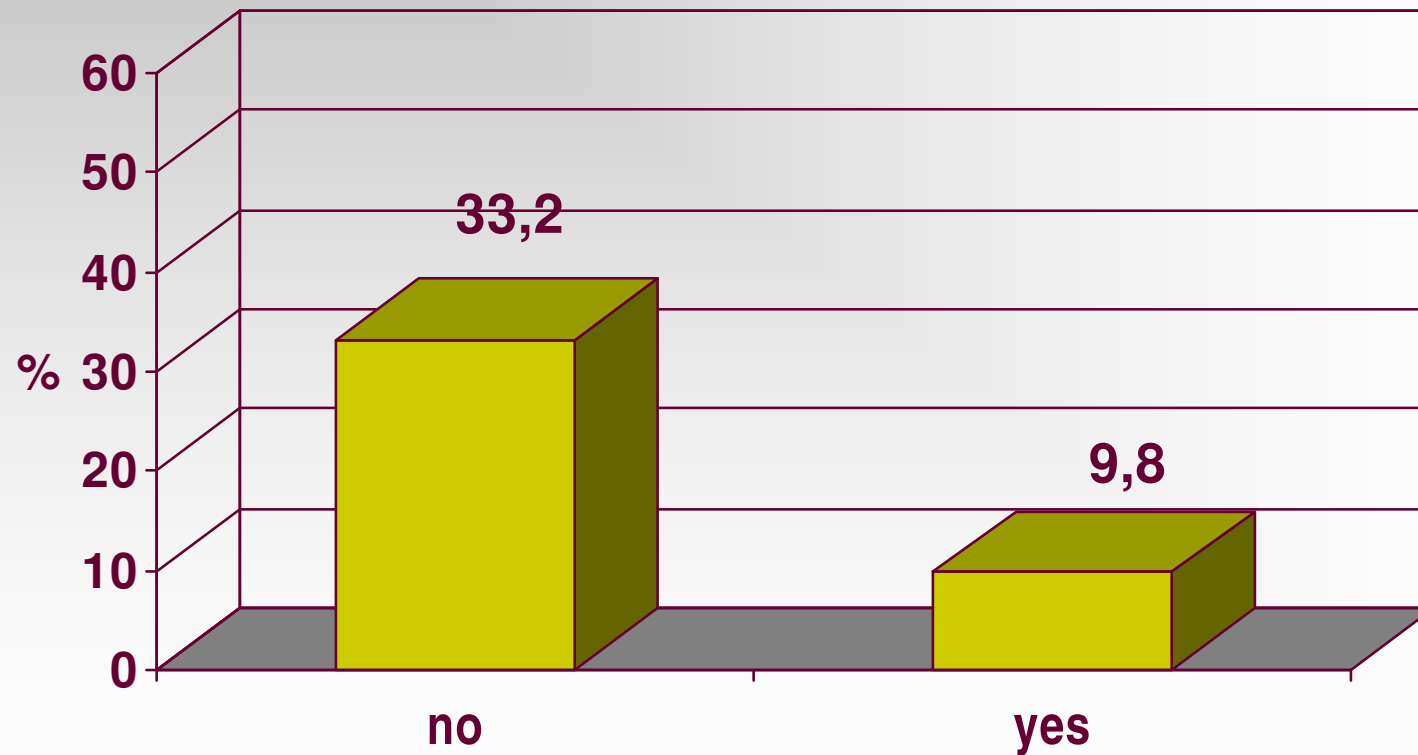
Factors influencing the start of folic acid supplementation before pregnancy:

## Having children before current pregnancy



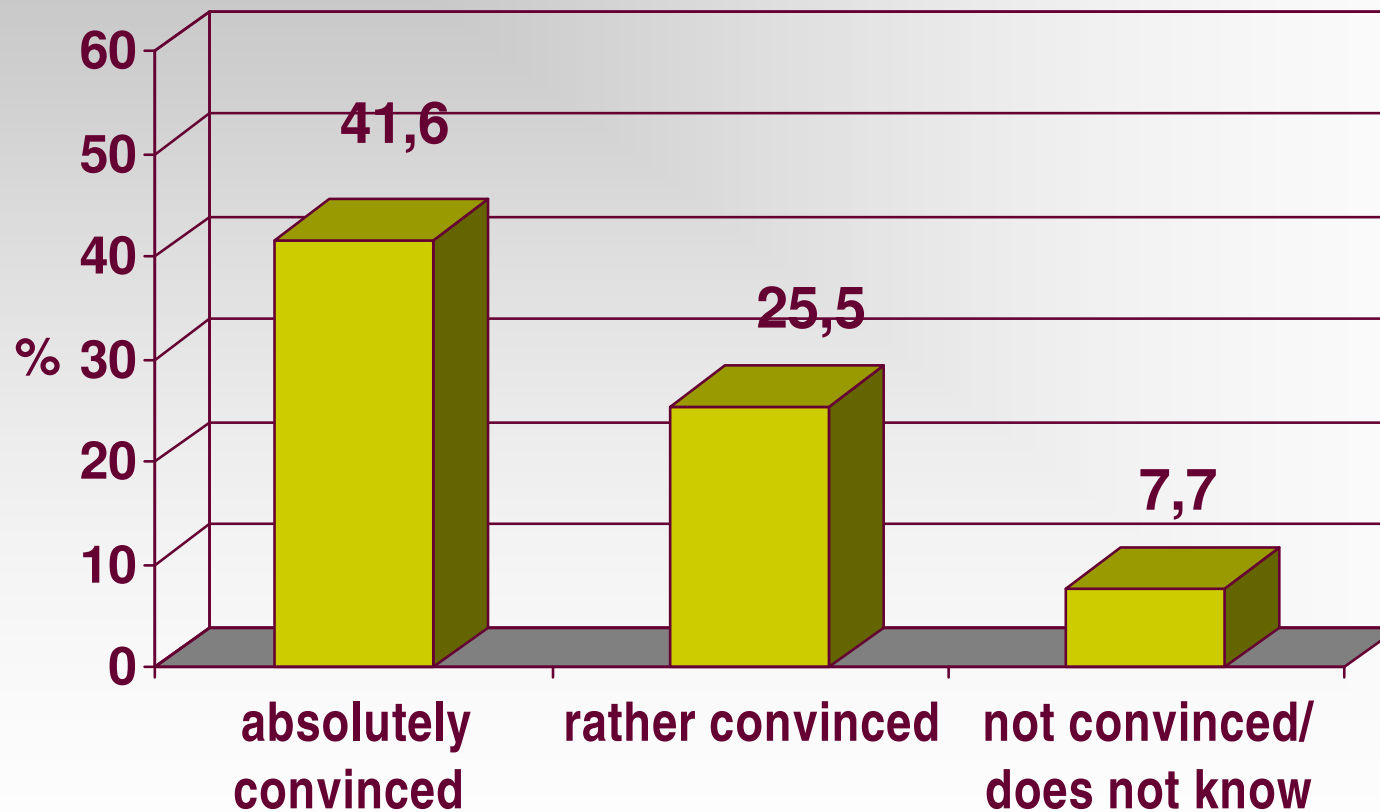
Factors influencing the start of folic acid supplementation before pregnancy:

## Smoking habit



Factors influencing the start of folic acid supplementation before pregnancy:

## Belief, that pregnancy should be planned



# Knowledge about folic acid

1. Have you heard about benefits of folic acid supplementation? What benefits are they?
2. When woman should take folic acid to prevent birth defects in her baby?

## Perfect knowledge:

- knew that folic acid prevented congenital anomalies or it was important for baby's development during pregnancy
- knew that folic acid supplementation should be begun before pregnancy

## Average knowledge:

- 1 proper answer

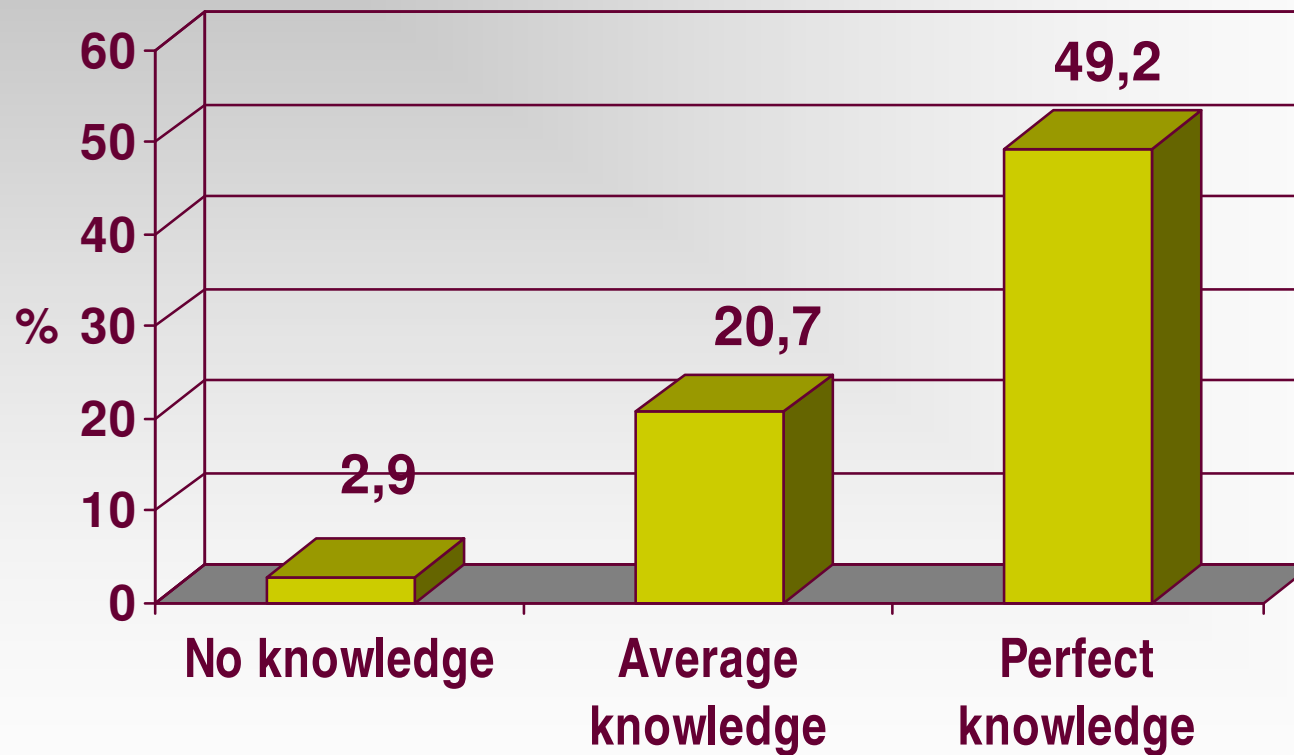
## No knowledge:

- 0 proper answers

- 44,1% of respondents reported perfect knowledge and 25,7% - no knowledge about folic acid

Factors influencing the start of folic acid supplementation before pregnancy:

## Knowledge about folic acid





# Determinants of lack of folic acid supplementation before pregnancy

(statistically significant variables in multiple logistic regression model\*)

<b>VARIABLE</b>		<b>OR</b>	<b>95% CI</b>
ECONOMIC STATUS	average / low	<b>5,9</b>	<b>[1,4 – 24,8]</b>
	high	3,2	[0,9 – 11,9]
	very high	ref.	
KNOWLEDGE ABOUT FOLIC ACID	no knowledge	<b>22,5</b>	<b>[4,9 – 103,9]</b>
	average knowledge	<b>4,1</b>	<b>[1,9 – 8,8]</b>
	perfect knowledge	ref.	
PREGNANCY SHOULD BE PLANNED	no / I don't know	<b>3,6</b>	<b>[1,0 – 12,7]</b>
	rather yes	1,4	[0,7 – 2,9]
	absolutely yes	ref.	
SMOKING HABIT	yes	<b>3,2</b>	<b>[1,0 – 10,1]</b>
	no	ref.	

\* adjusted for age, education level, place of residence, having children before current pregnancy

# Conclusions (1)

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- The survey found rather inadequate folic acid intake in preconceptional period among Polish women in regard to prevention of neural tube defects.
- The lack of supplementation with folic acid before pregnancy results from economic inequalities, but equally important determinants are inappropriate beliefs, knowledge and behaviours concerning pregnancy as well healthy lifestyle.
- Education level, place of residence and fact of having children before current pregnancy do not determine significantly preconceptional consumption of folic acid.

# Conclusions (2)

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- There are comprehensive activities needed in scope of health education and health promotion among women in reproductive age.
- The low cost of even prolonged supplementation with folic acid monovitamin tablet should be emphasized.

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Thank you for your attention