Longitudinal trends in CV mortality and major RF in the Czech population in 1985 to 2007-8

Czech MONICA and Czech post-MONICA study

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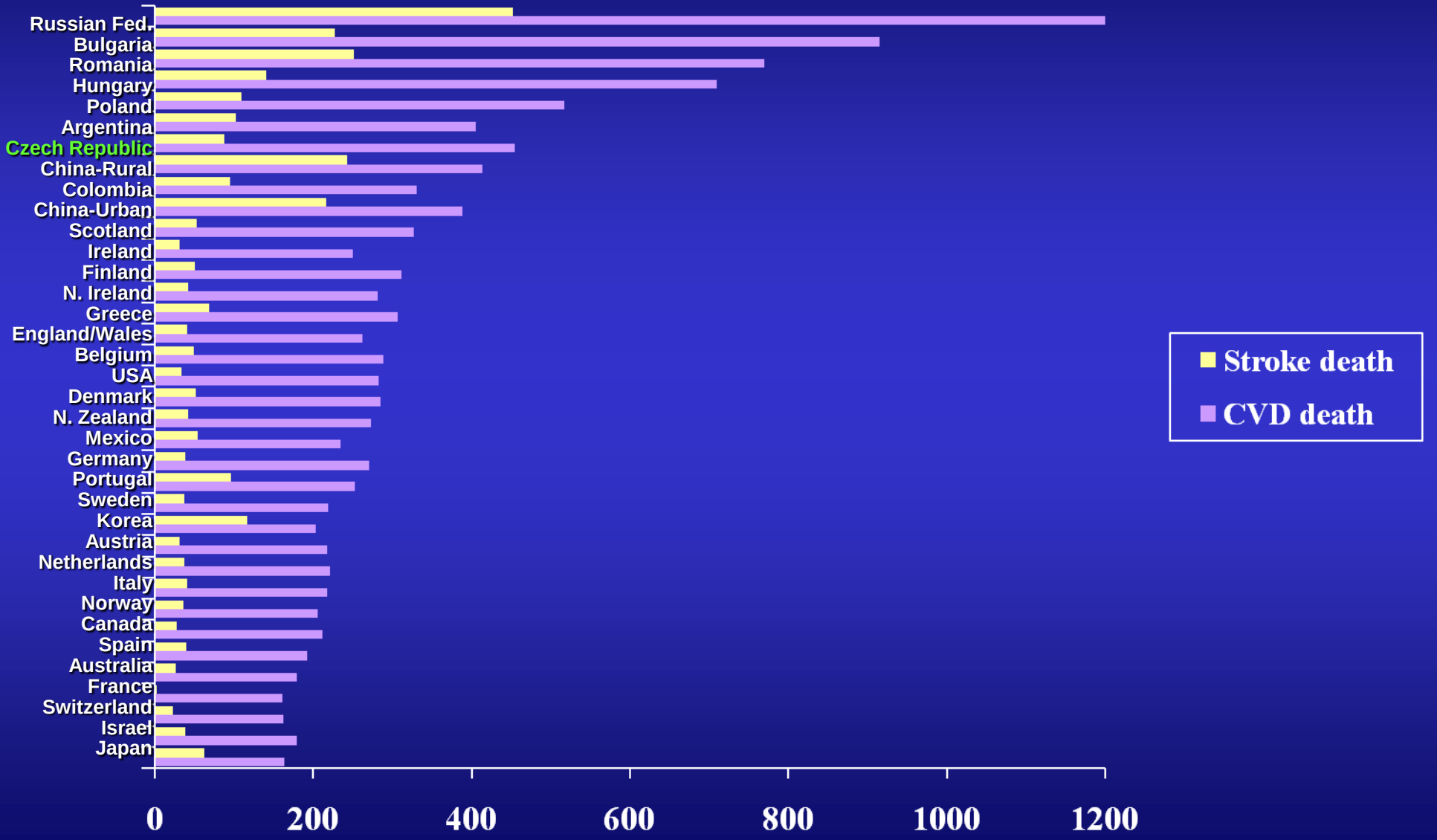
Death Rates for CVD and Stroke

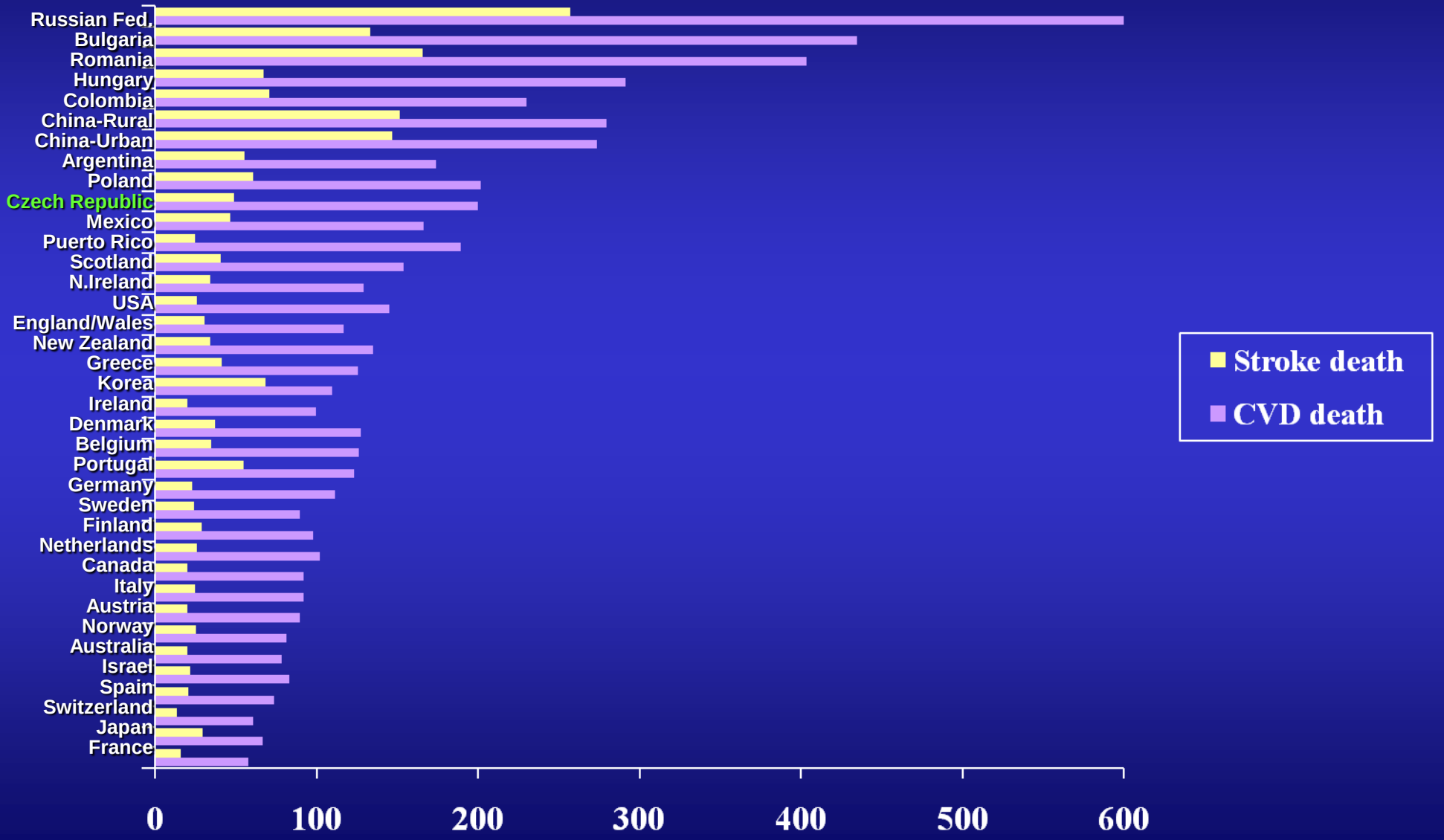
Men, 35-74 yrs



Circulation 2009;119:e21-e181

Death Rates for CVD and Stroke

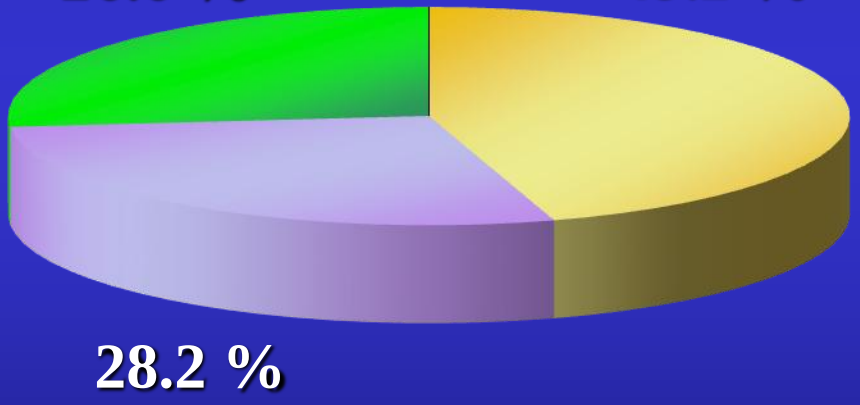
Women, 35-74 yrs



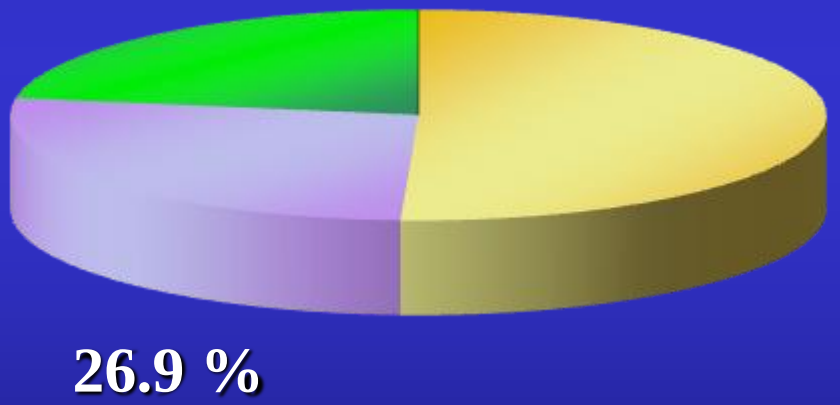
Circulation 2009;119:e21-e181

Standardized mortality
Czech Republic, 2008

Males

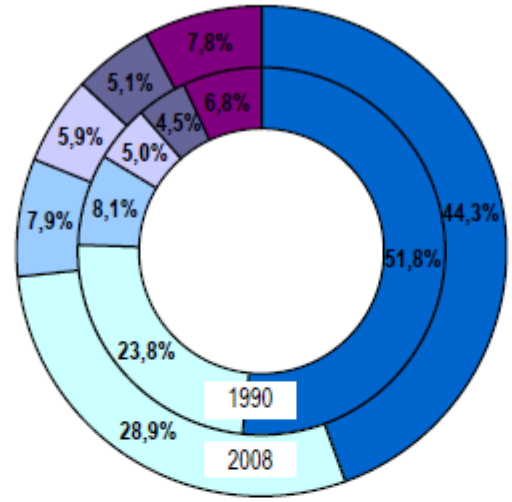


Females



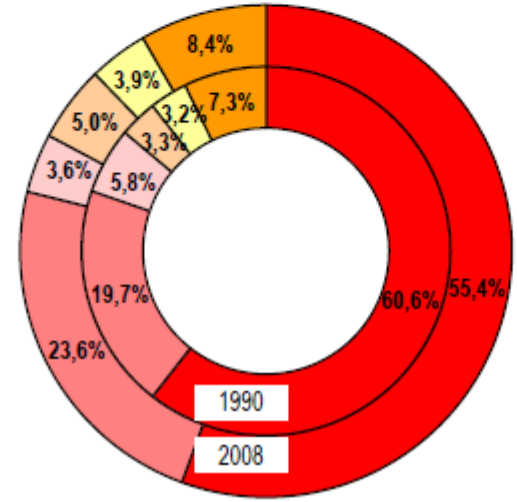
CVD
Malignancies
Other

Structure of standardized death, Czech Republic, 2008



Males

- CVD
- Malignancy
- External causes
- Respiratory d.
- GIT d.
- Others



Females

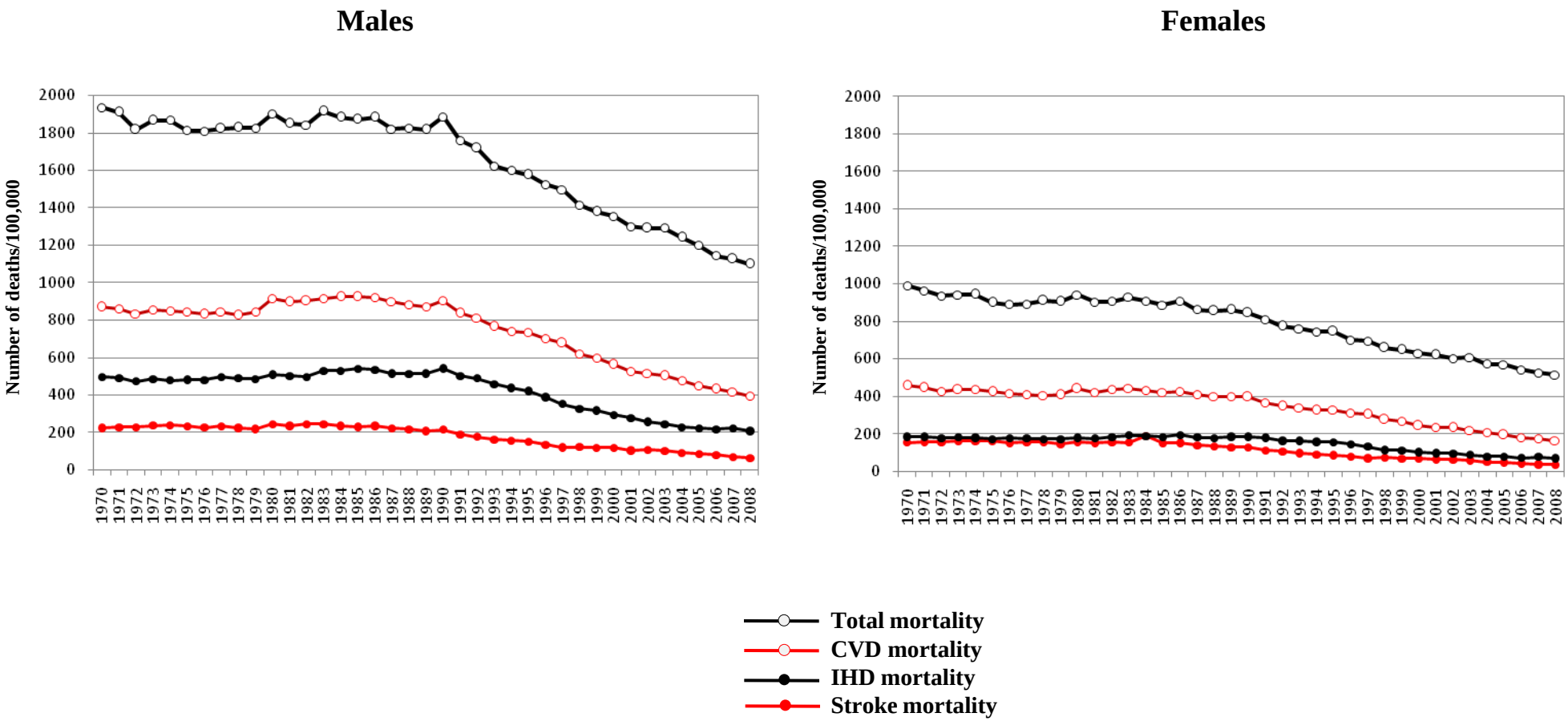
- CVD
- Malignancy
- External causes
- Respiratory d.
- GIT d.
- Others

Zemřelí ČR 2008

Age-adjusted death rates/100,000
Czech Republic, 1985-2008

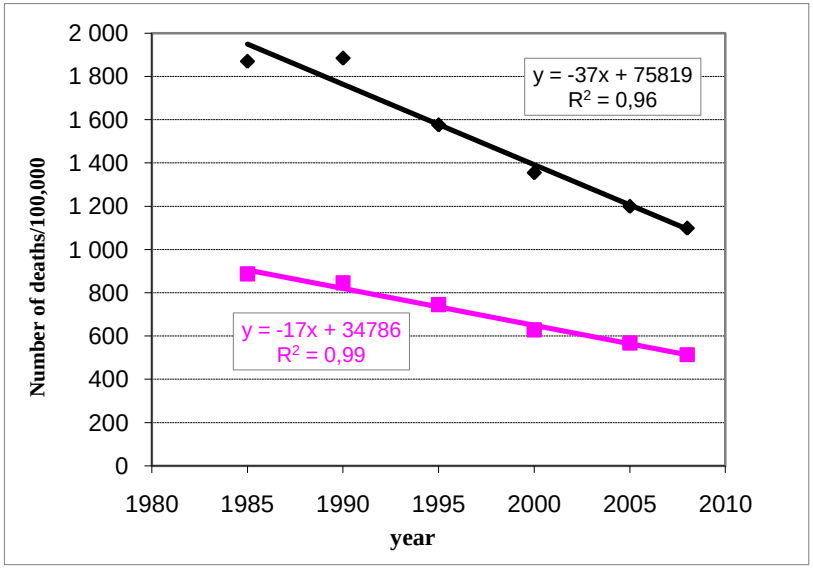
Males	1985	2008	△ %	p
- Total	1581	967	- 38.8	< 0.001
- CVD	844	437	- 48.2	< 0.001
- CHD	436	227	- 47.9	< 0.001
- Stroke	250	87	- 65.2	< 0.001
Females				
- Total	944	577	- 38.9	< 0.001
- CVD	548	292	- 46.7	< 0.001
- CHD	223	137	- 38.6	< 0.001
- Stroke	202	71	- 64.9	< 0.001

Age-stand. total, CVD, IHD, and stroke mortality (age group 35-74 yrs) Czech Republic 1970-2008

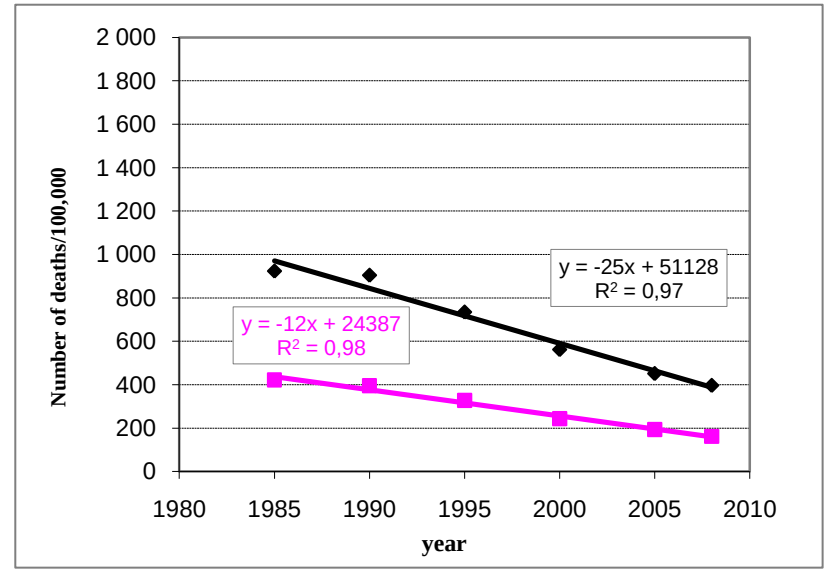


J Hypertens, submitted for publication

Total mortality, age 35-74 years
Males vs Females: p = 0,001

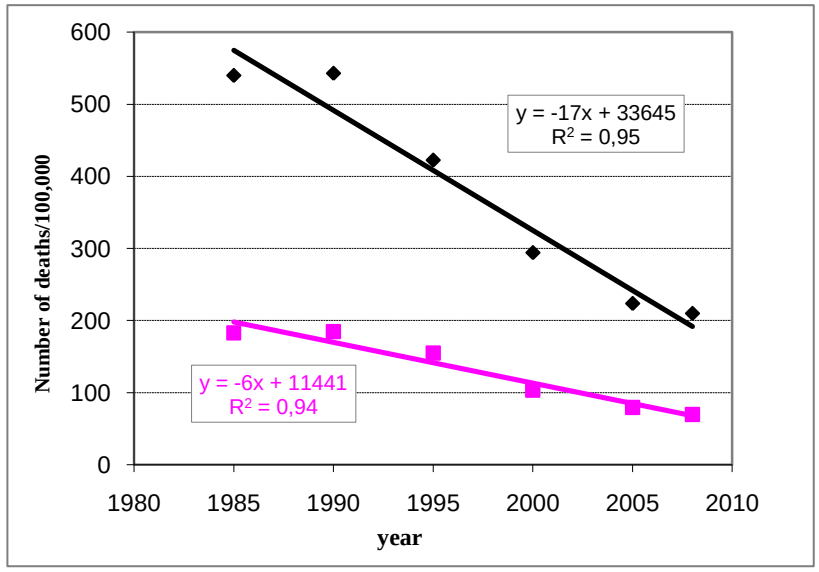


CVD mortality, age 35-74 years
Males vs Females: p = 0,001

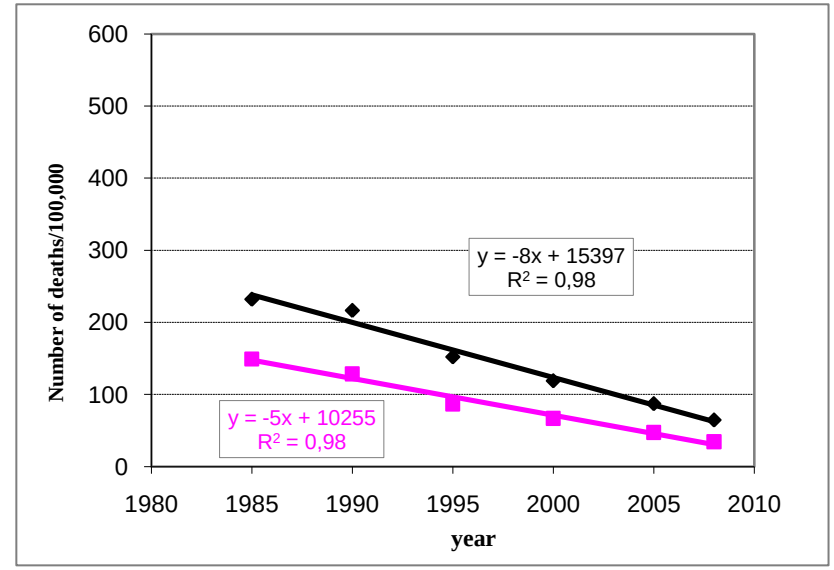


Males
Females

CAD mortality, age 35-74 years
Males vs Females: p = 0,001



Stroke mortality, age 35-74 years
Males vs Females: p = 0,0041

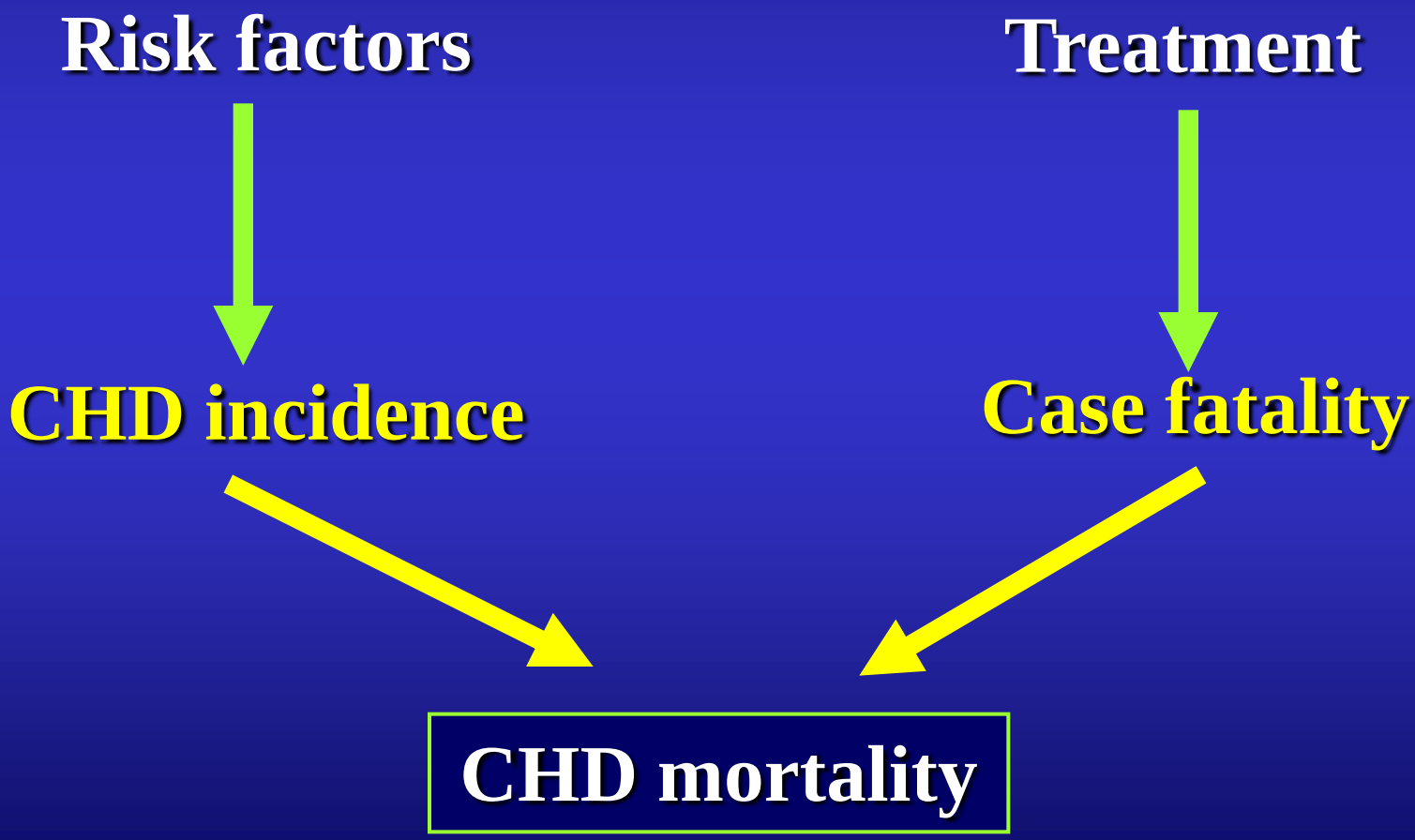


J Hypertens, submitted for publication

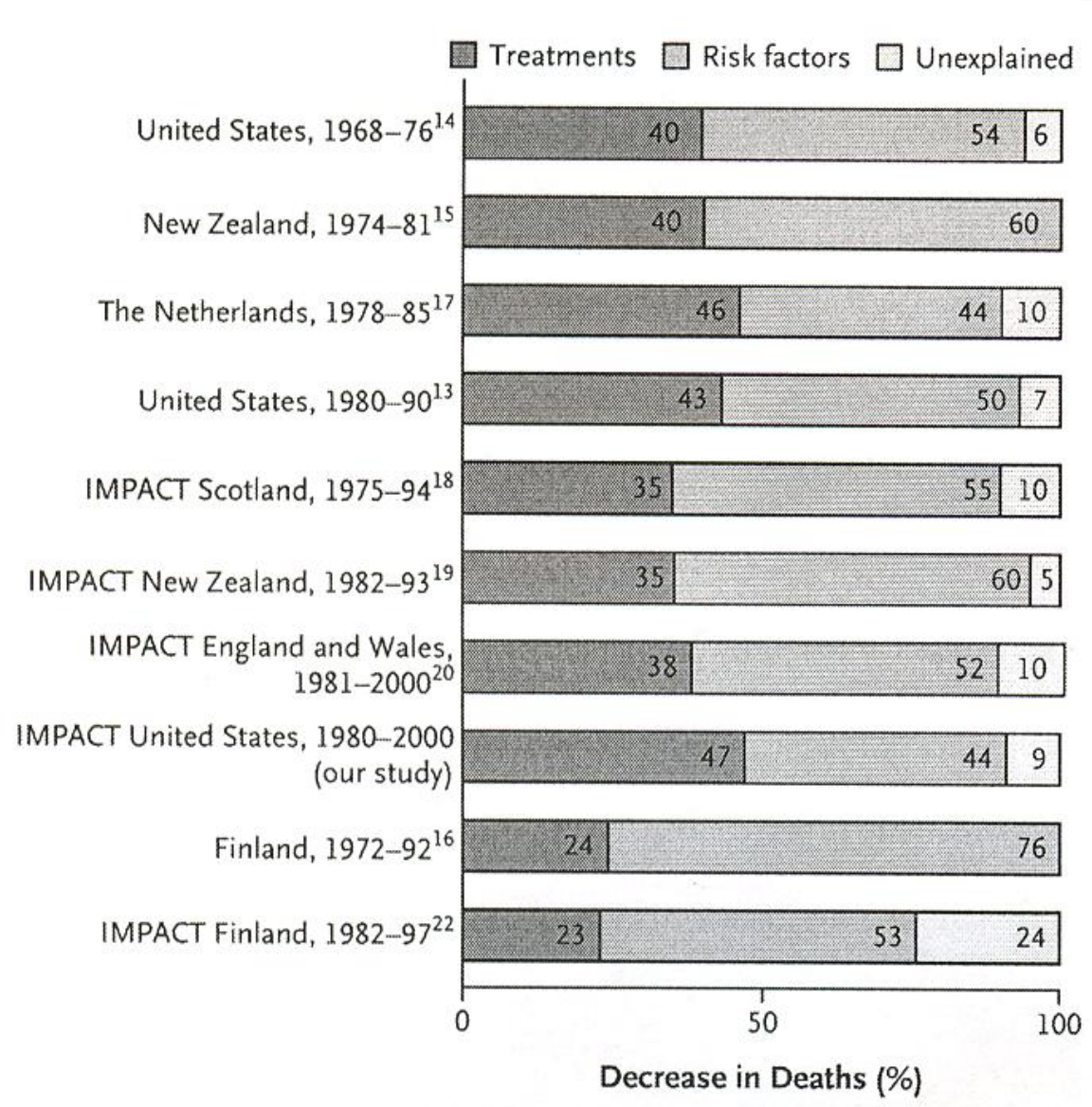
Life Expectancy at Birth

	Males	Females
1981 - 1985	67.1	74.1
1986 - 1990	*67.7*	*74.8*
1991 - 1995	68.9	75.8
1997	*70.5*	*77.5*
2000	*71.7*	*78.4*
2005	*72.9*	*79.1*
2007	*73.7*	*79.9*

Factors affecting CHD mortality



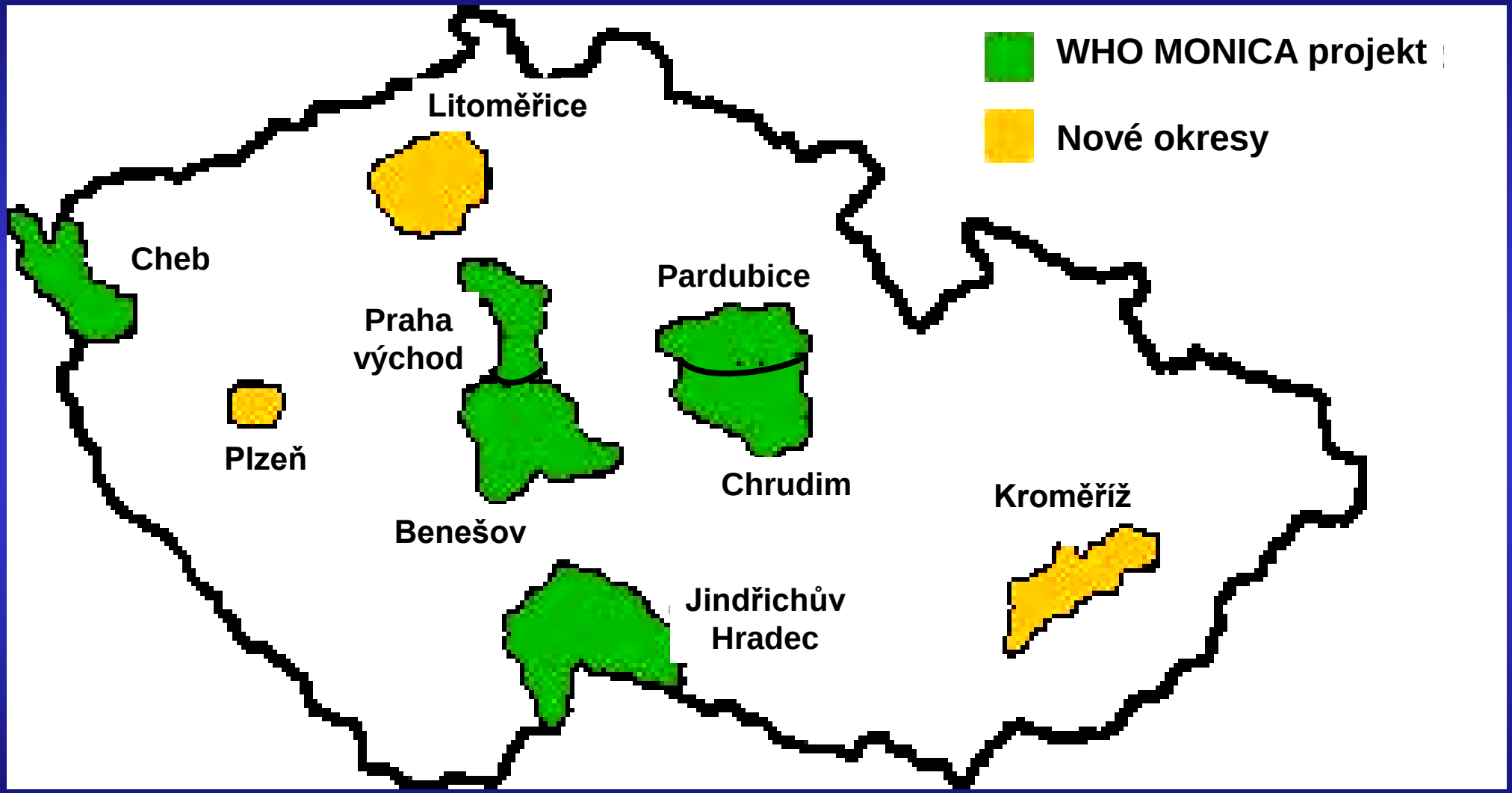
Percentage of the Decrease in Death from CHD Attributed to Treatment and Risk Factor Changes



NEJM 2007;356:2388-98

Lifestyle and CVD risk factors

Lifestyle	Biochemical or physiological characteristics *(modifiable)*	Personal characteristics *(non-modifiable)*
Diet (rich in calories, saturated fats, cholesterol)	Hypertension	Age
Smoking	Elevated total (LDL-) cholesterol	Gender
Low physical activity	Decreased HDL-cholesterol	Family history of premature CVD
Increased alcohol consumption	Elevated triglycerides	Personal history of CVD
	Impaired fasting glucose /diabetes	Genetic markers
	Overweight/obesity	
	Thrombogenic factors	
	Markers of chronic inflammation	


WHO MONICA projekt
Nové okresy
Litoměřice
Cheb
Praha
východ
Pardubice
Plzeň
Chrudim
Kroměříž
Benešov
Jindřichův
Hradec

Sample sizes and response rates

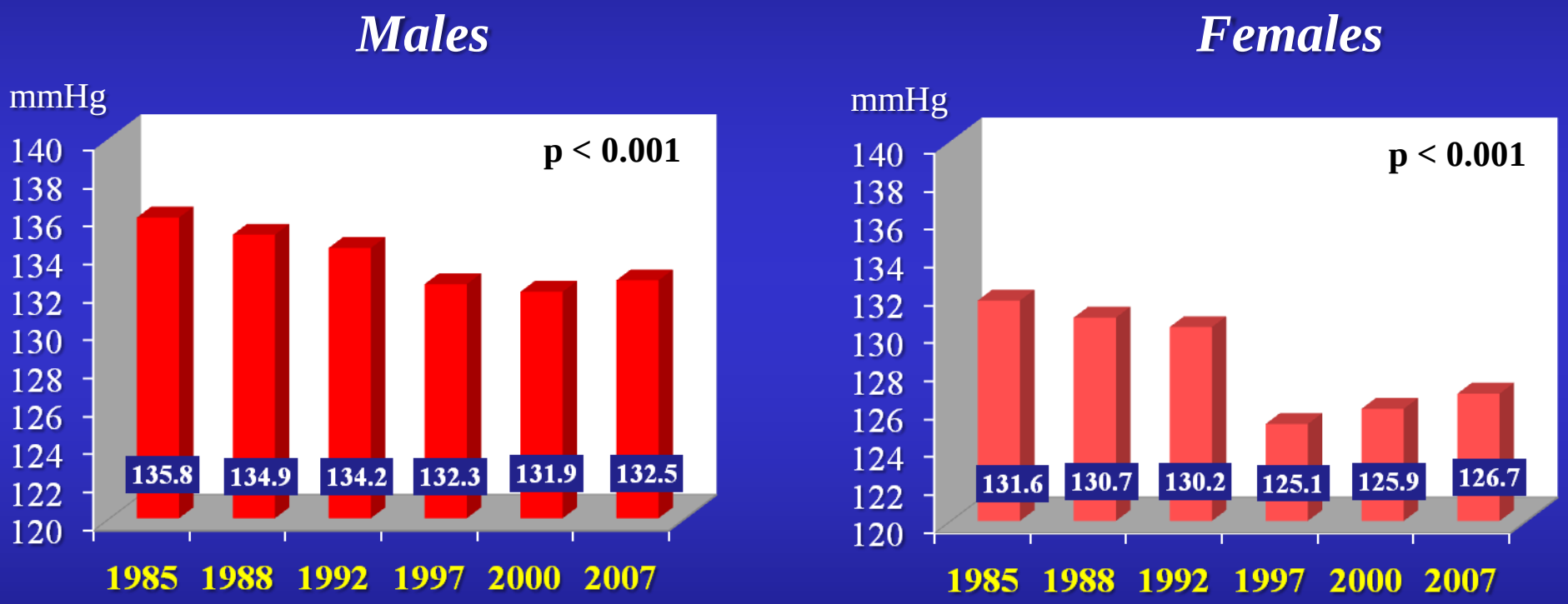
	1985	1988	1992	1997/8	2000/1	2007/8
Total	2570	2768	2343	1990	2055	2246
Males	1253	1357	1134	969	1003	1102
Resp.	*81.5*	*85.5*	*73.2*	*63.2*	*62.0*	*62.7****
Females	1317	1411	1209	1021	1052	1144
Resp.	*85.0*	*88.4*	*76.7*	*66.4*	*63.8*	*63.1****

*** $p < 0.001$ for trend

Methods

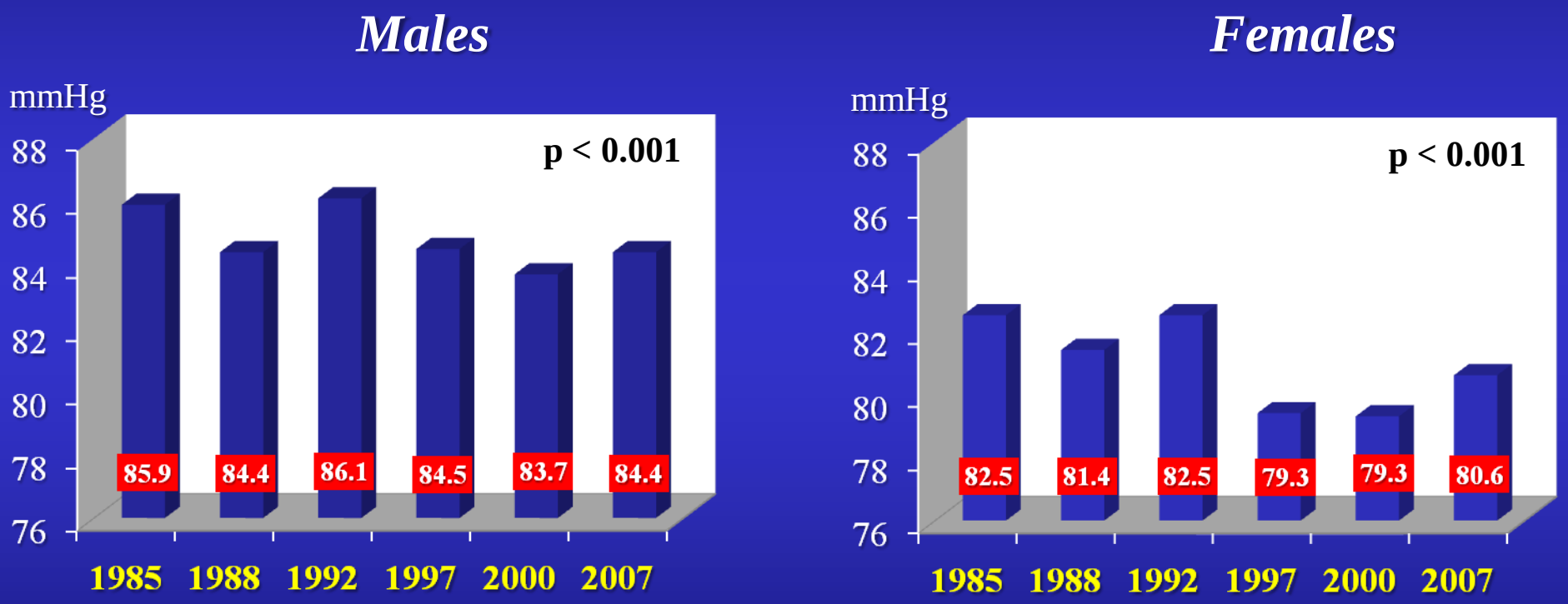
1985	**Physician-completed questionnaire**
1988	**(CVD history)**
1992	**Body weight, height, BP**
	Total cholesterol, HDL-cholesterol
1997/98	**Physician-completed questionnaire**
2000/01	**(CVD history incl. *family history*)**
2007/08	**Body weight, height, BP, *waist/hip ratio***
	Total cholesterol, HDL-cholesterol
	Triglycerides
	Fasting glycemia

Systolic BP



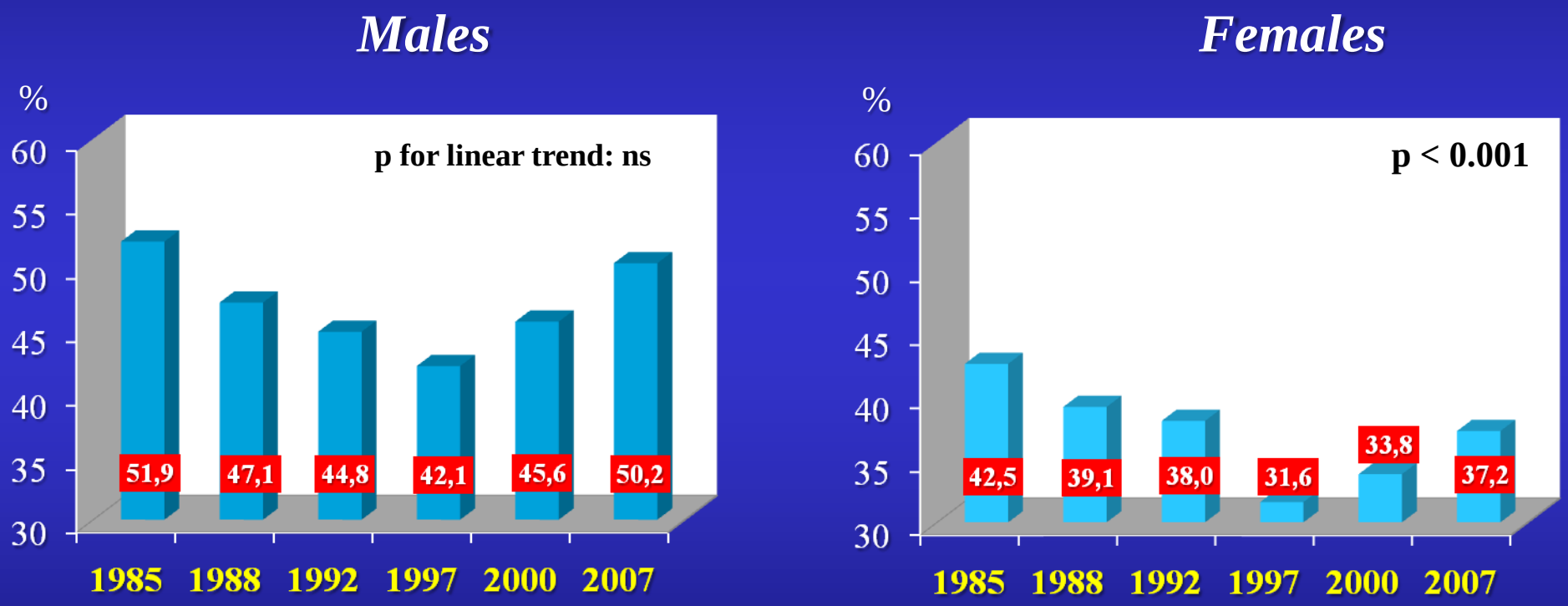
Atherosclerosis (2010), doi:10.1016/j.atherosclerosis.2010.04.007

Diastolic BP



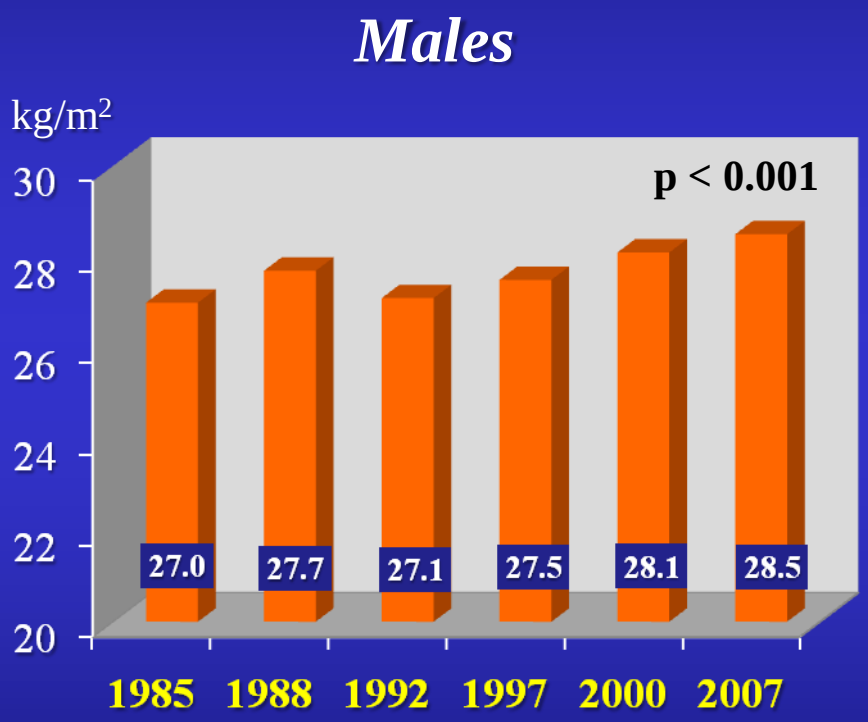
Atherosclerosis (2010), doi:10.1016/j.atherosclerosis.2010.04.007

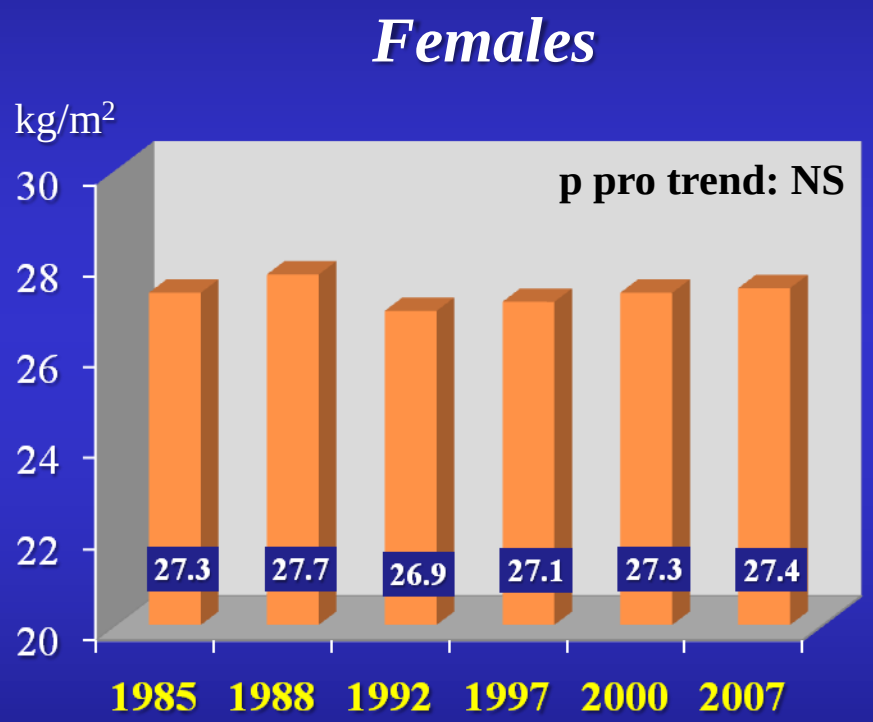
Prevalence of hypertension



Atherosclerosis (2010), doi:10.1016/j.atherosclerosis.2010.04.007

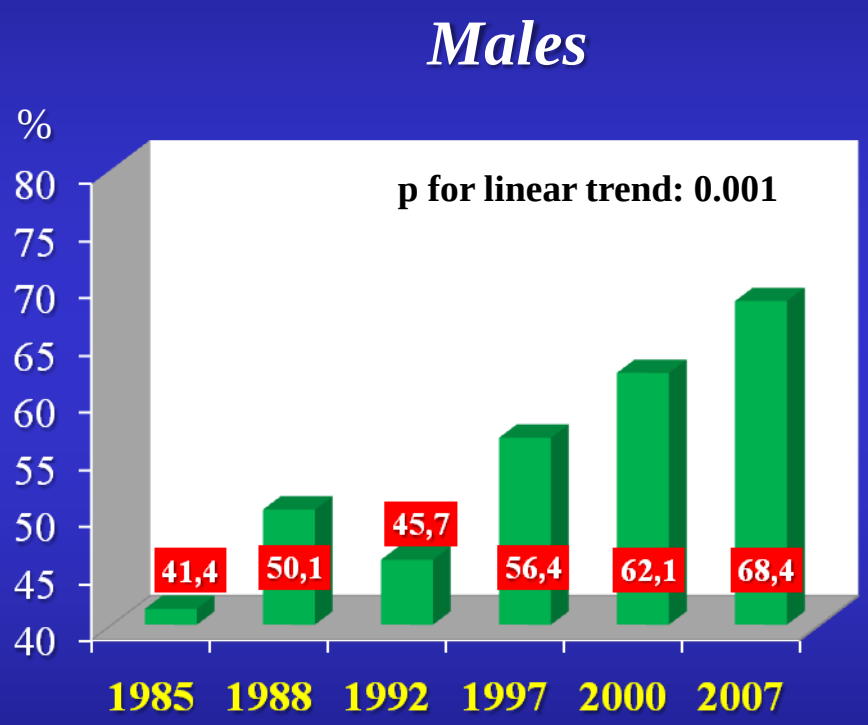
BMI

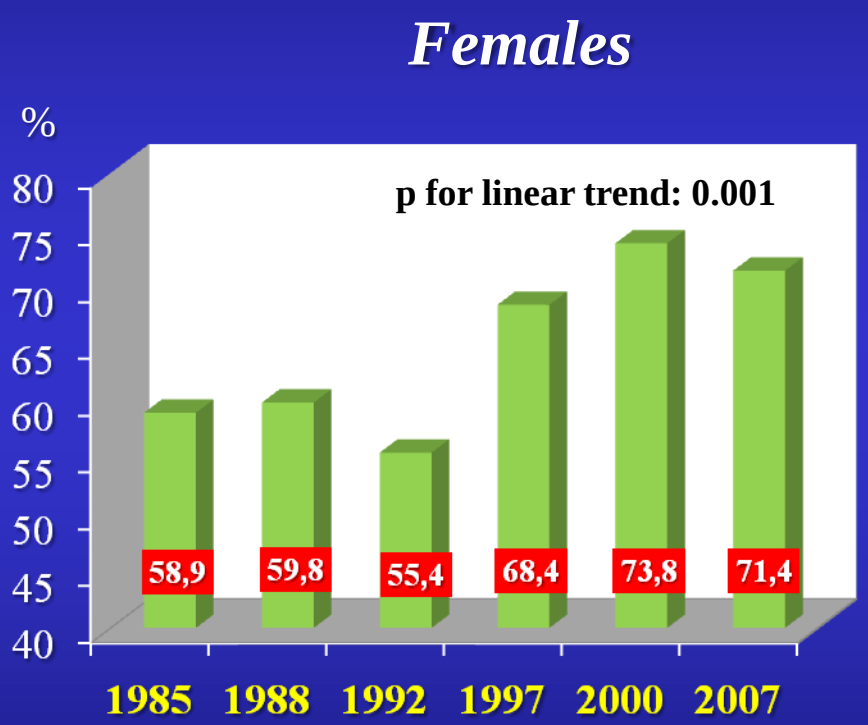




Atherosclerosis (2010), doi:10.1016/j.atherosclerosis.2010.04.007

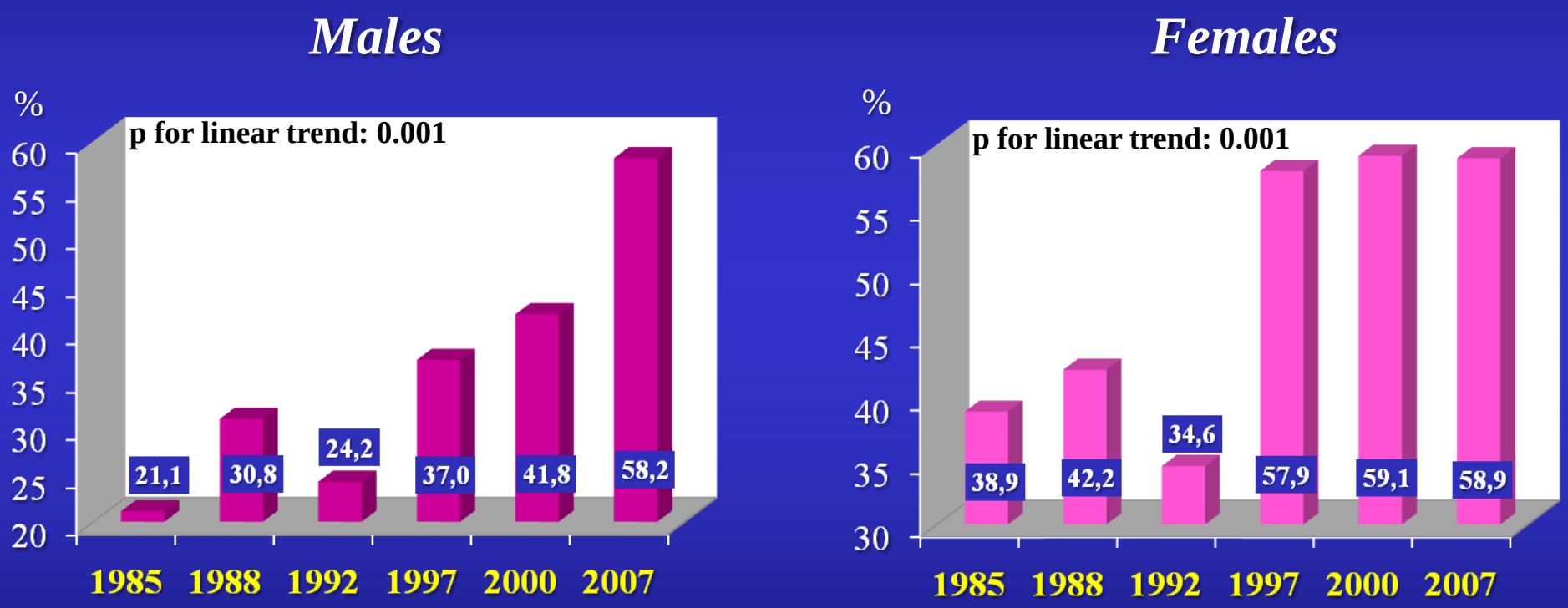
Awareness of hypertension





Atherosclerosis (2010), doi:10.1016/j.atherosclerosis.2010.04.007

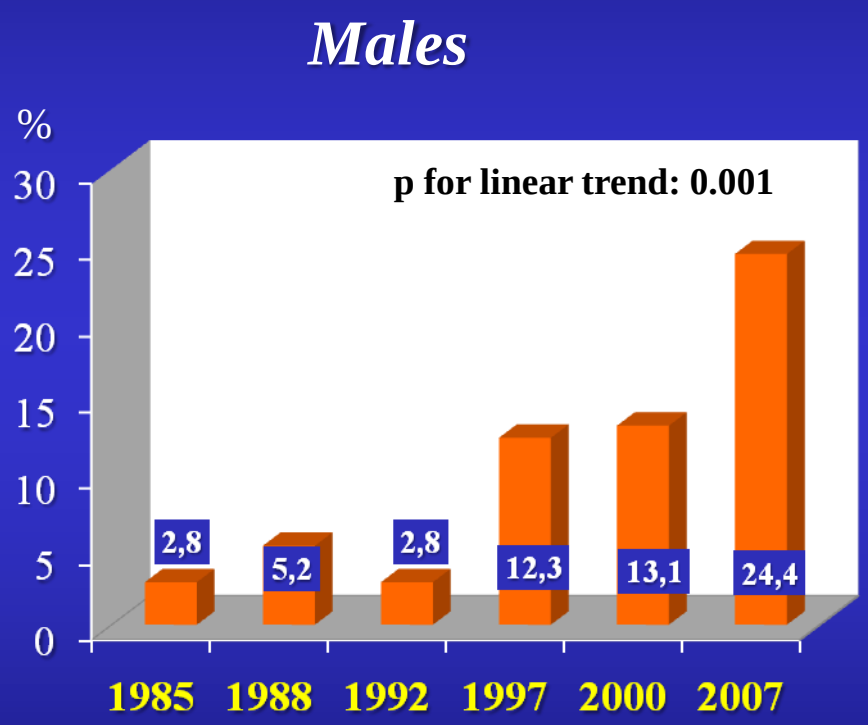
Antihypertensive medication

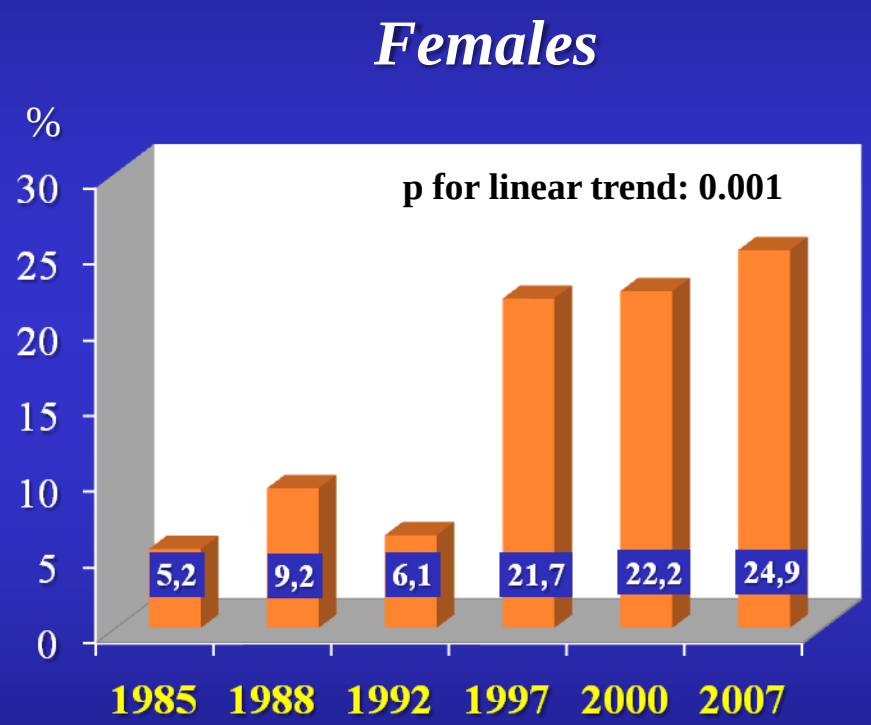


Atherosclerosis (2010), doi:10.1016/j.atherosclerosis.2010.04.007

Hypertension control

BP < 140/90 mmHg of all hypertensives



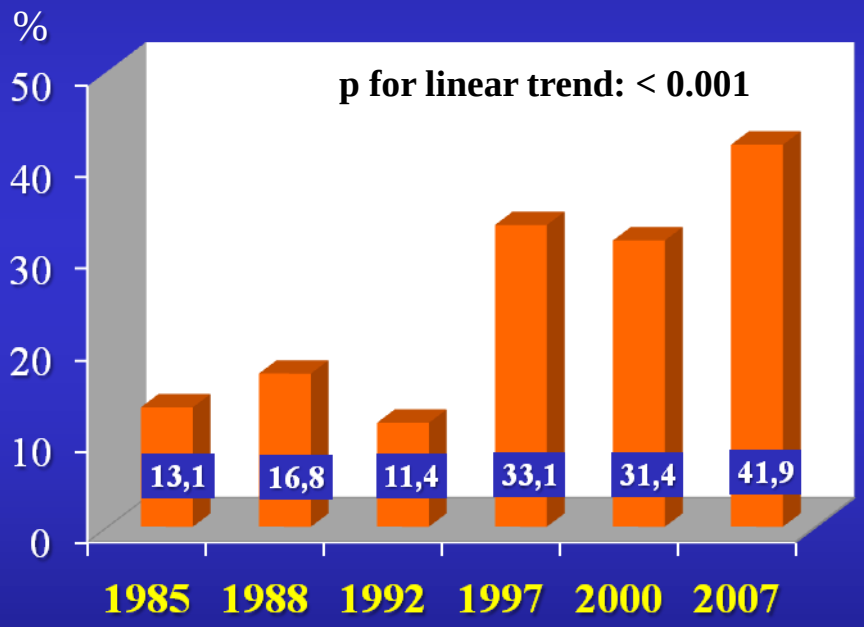


Atherosclerosis (2010), doi:10.1016/j.atherosclerosis.2010.04.007

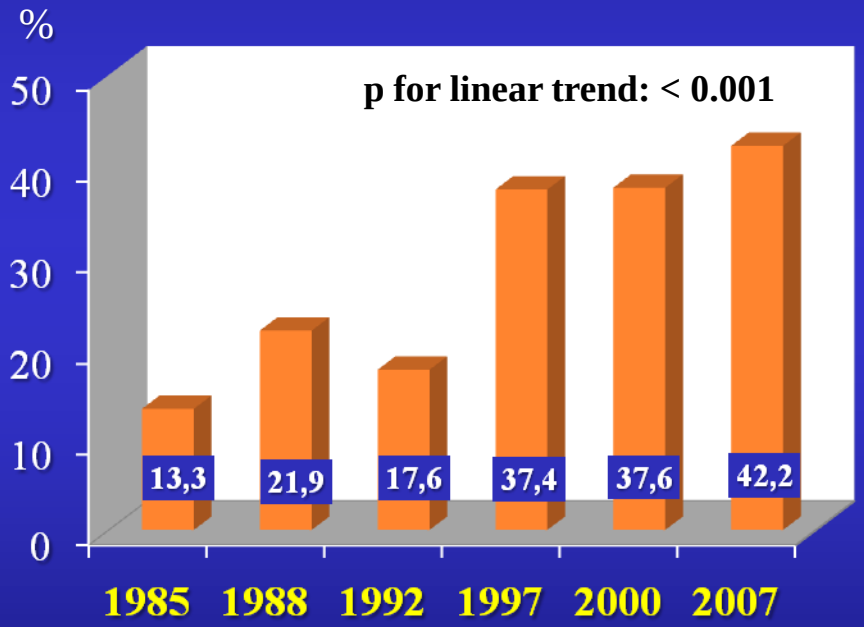
Hypertension control

BP< 140/90 mmHg of all drug-treated hypertensives

Males



Females

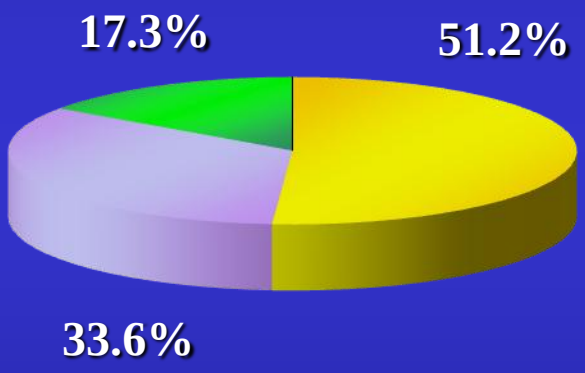


Atherosclerosis (2010), doi:10.1016/j.atherosclerosis.2010.04.007

Antihypertensive medication

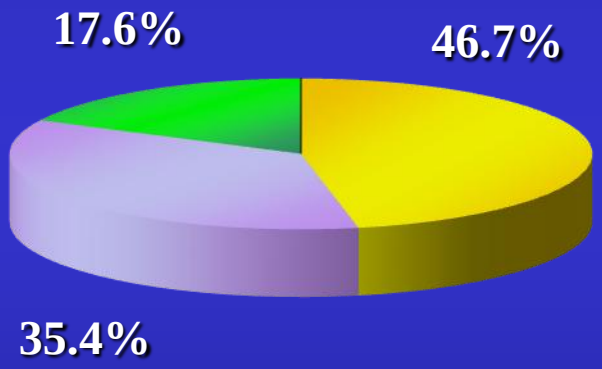
Czech Republic

1997/98



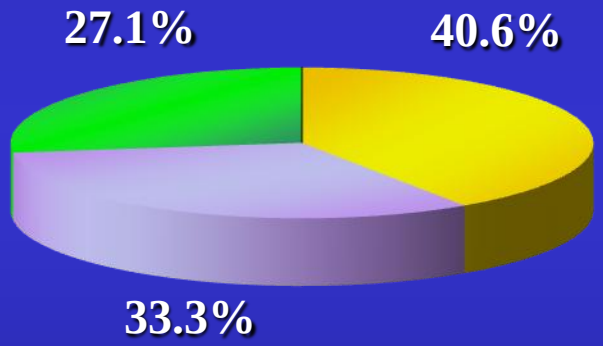
n = 512

2000/01



n = 615

2007/08*

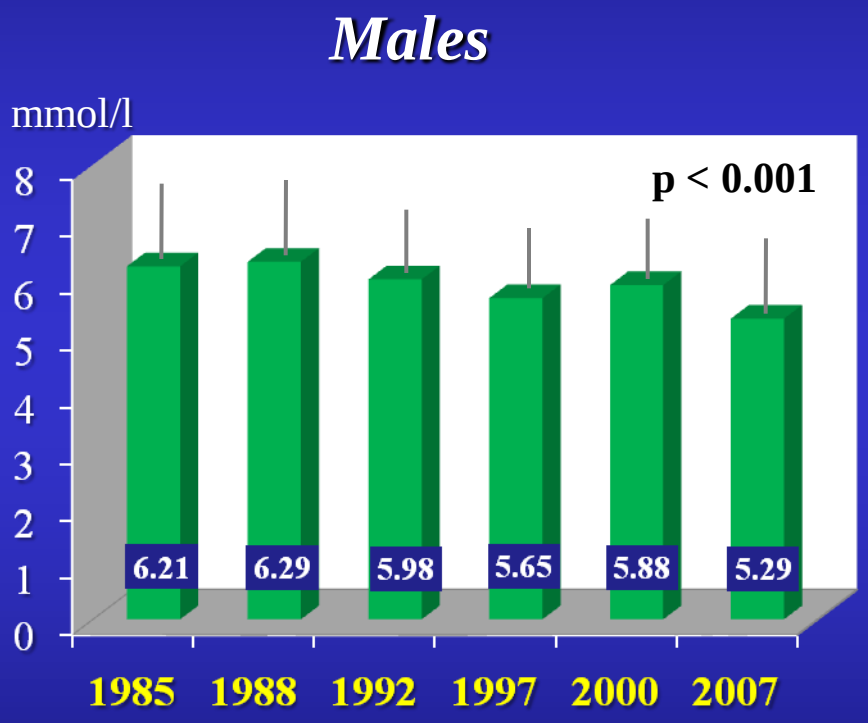


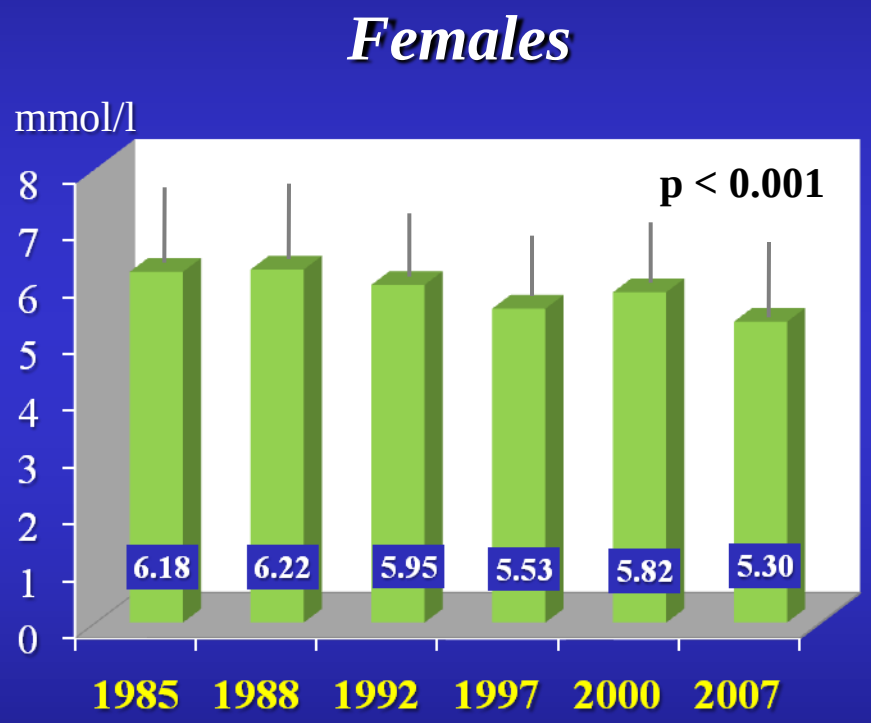
n = 573

monotherapy
combination of 2 drugs
combination of ≥ 3 drugs

* Only 6 districts

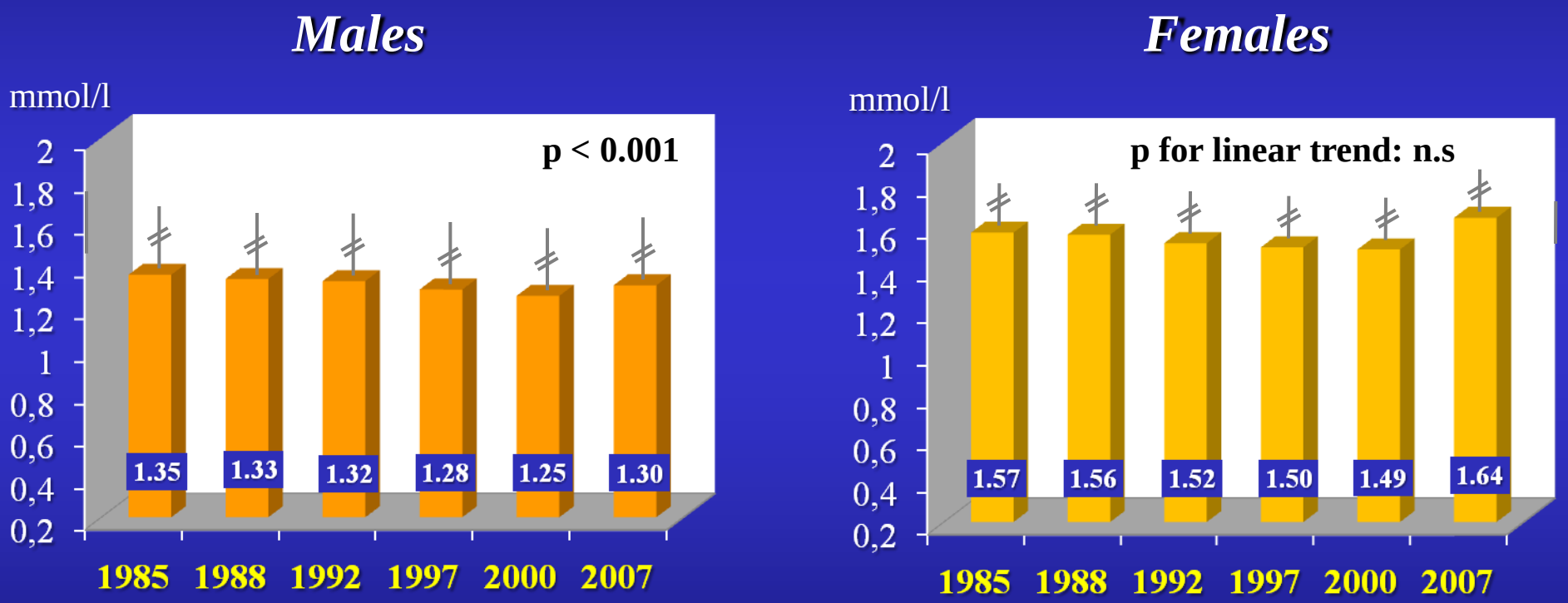
Total cholesterol





Atherosclerosis (2010), doi:10.1016/j.atherosclerosis.2010.04.007

HDL-cholesterol



Atherosclerosis (2010), doi:10.1016/j.atherosclerosis.2010.04.007

Non-HDL-cholesterol

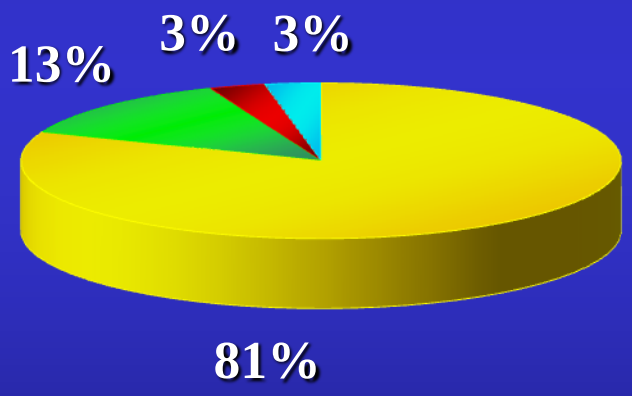
1985 – 2007/2008

	Males	*Females*
1985	4.85 ± 1.35	4.61 ± 1.29
1988	4.96 ± 1.26	4.66 ± 1.25
1992	4.65 ± 1.33	4.44 ± 1.32
1997/98	4.36 ± 1.16	4.03 ± 1.24
2000/01	4.63 ± 1.11	4.33 ± 1.18
2007/08	3.97 ± 1.10	3.65 ± 1.12
p for trend	< 0.001	< 0.001

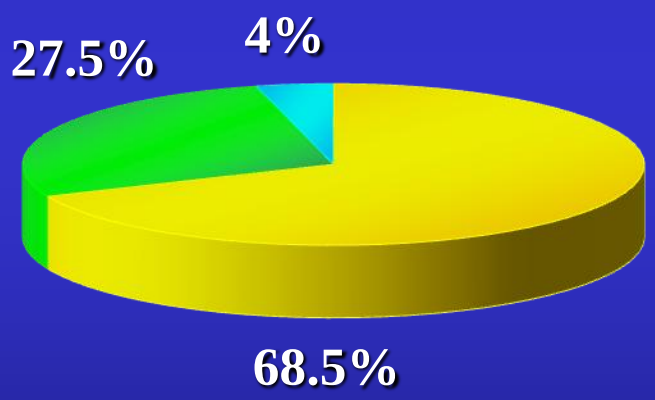
Atherosclerosis (2010), doi:10.1016/j.atherosclerosis.2010.04.007

Lipid-lowering drugs

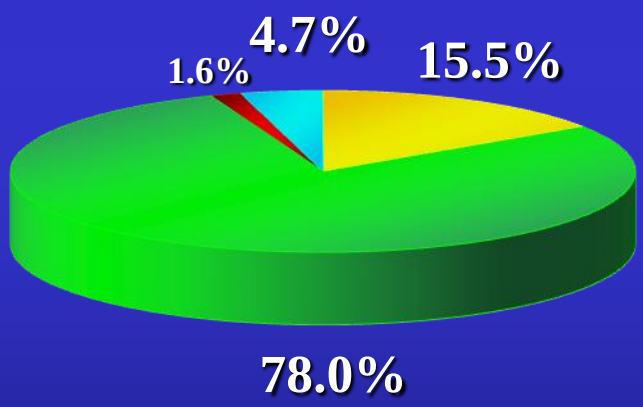
1997/98
n = 130 (3.95%)



2000/01
n = 171 (5.1%)



2007/08
n = 386 (10.7%)

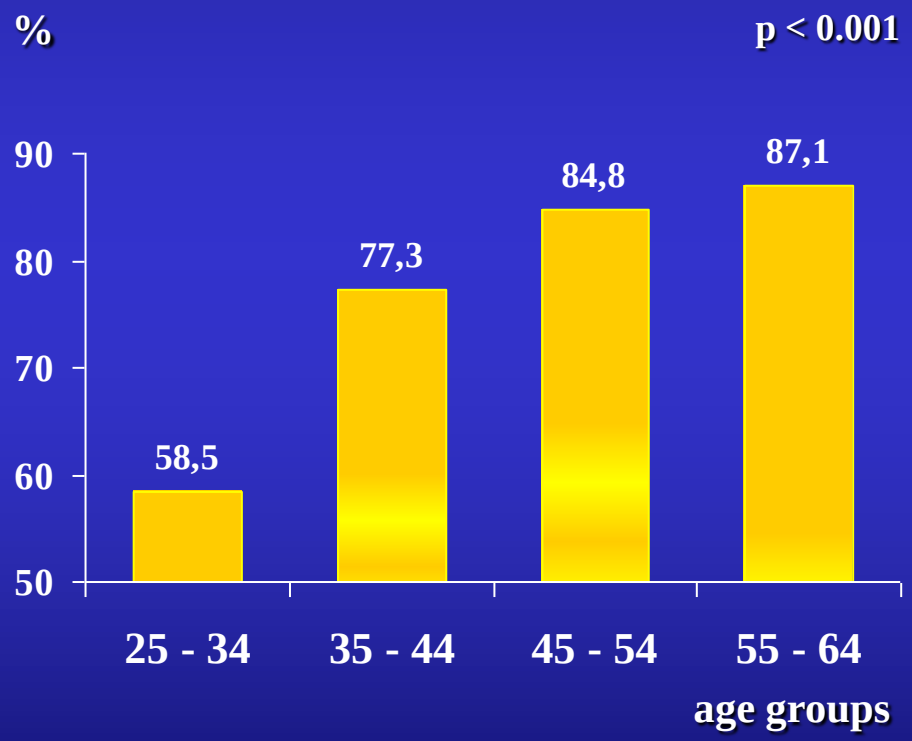


Atherosclerosis (2010), doi:10.1016/j.atherosclerosis.2010.04.007

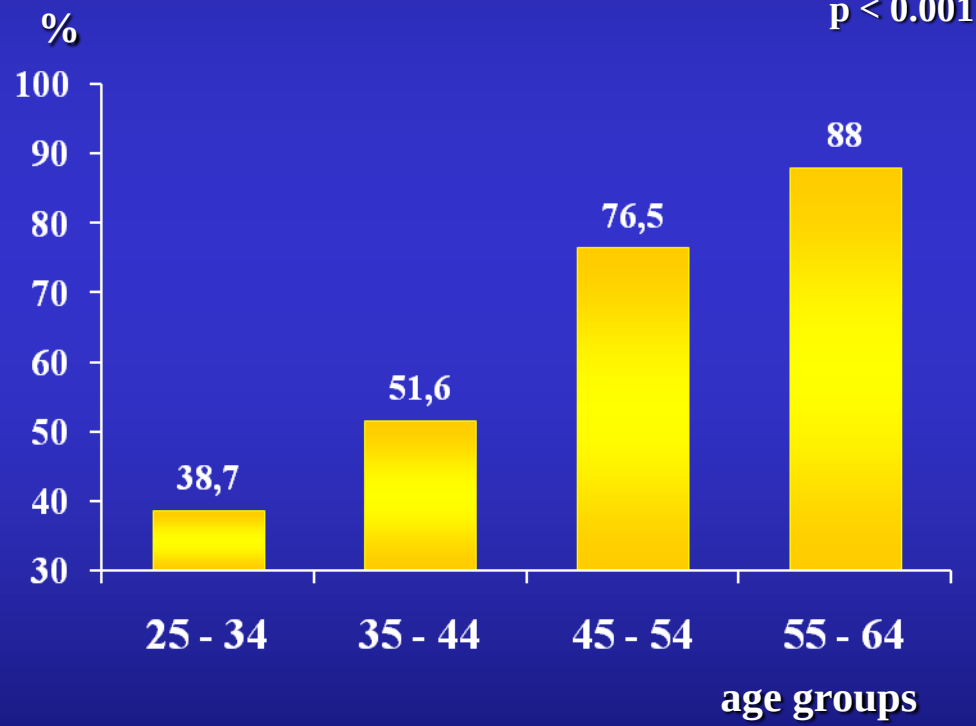
Dyslipidemia* by age groups

Czech Republic 2007/2008

Males

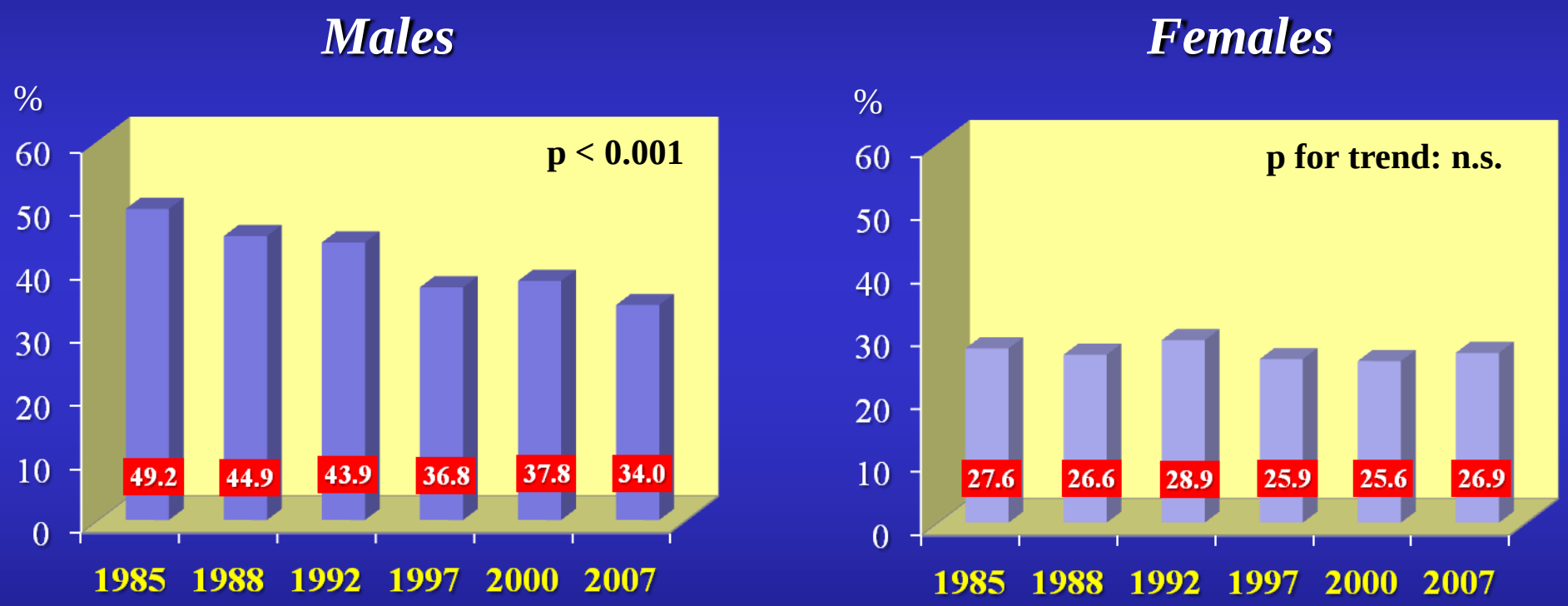


Females



* **Total chol. ≥ 5.0 *or* HDL-chol. < 1.0 *or* LDL-chol. ≥ 3.0 *or* TG ≥ 2 mmol/L *or* use of lipid-lowering drugs**

Smoking



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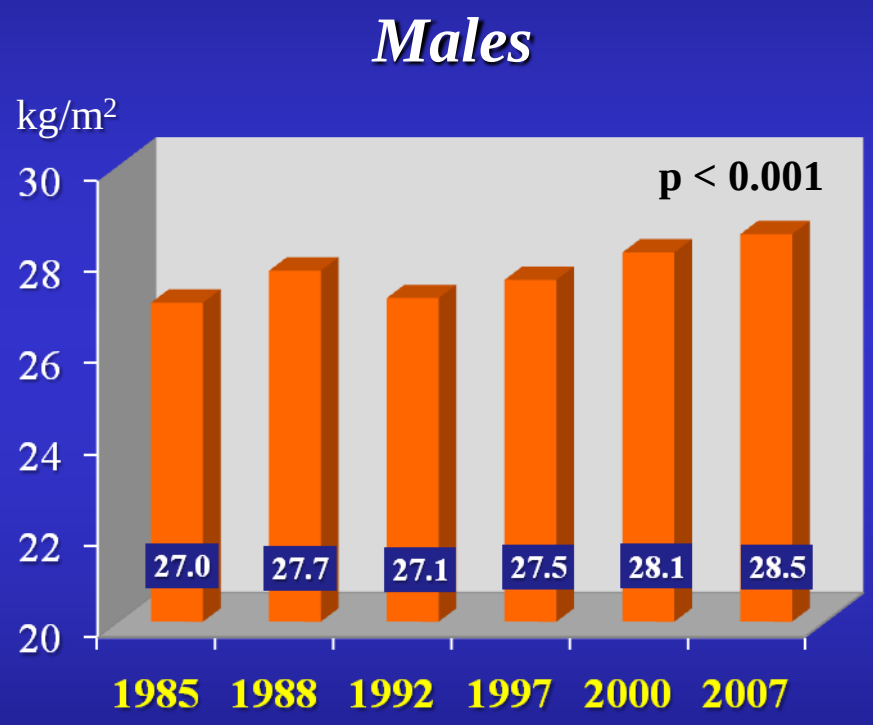
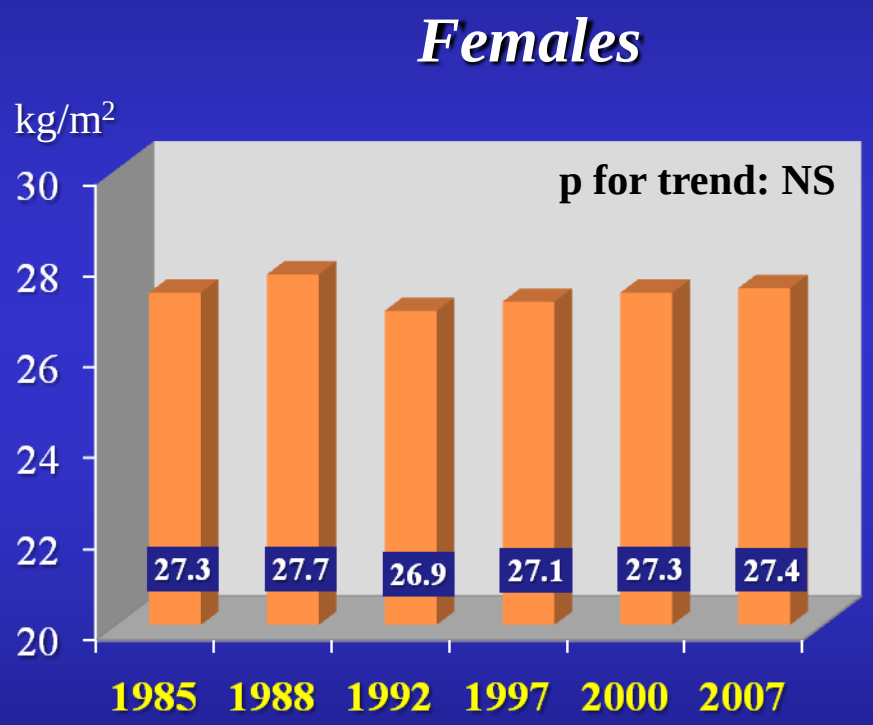
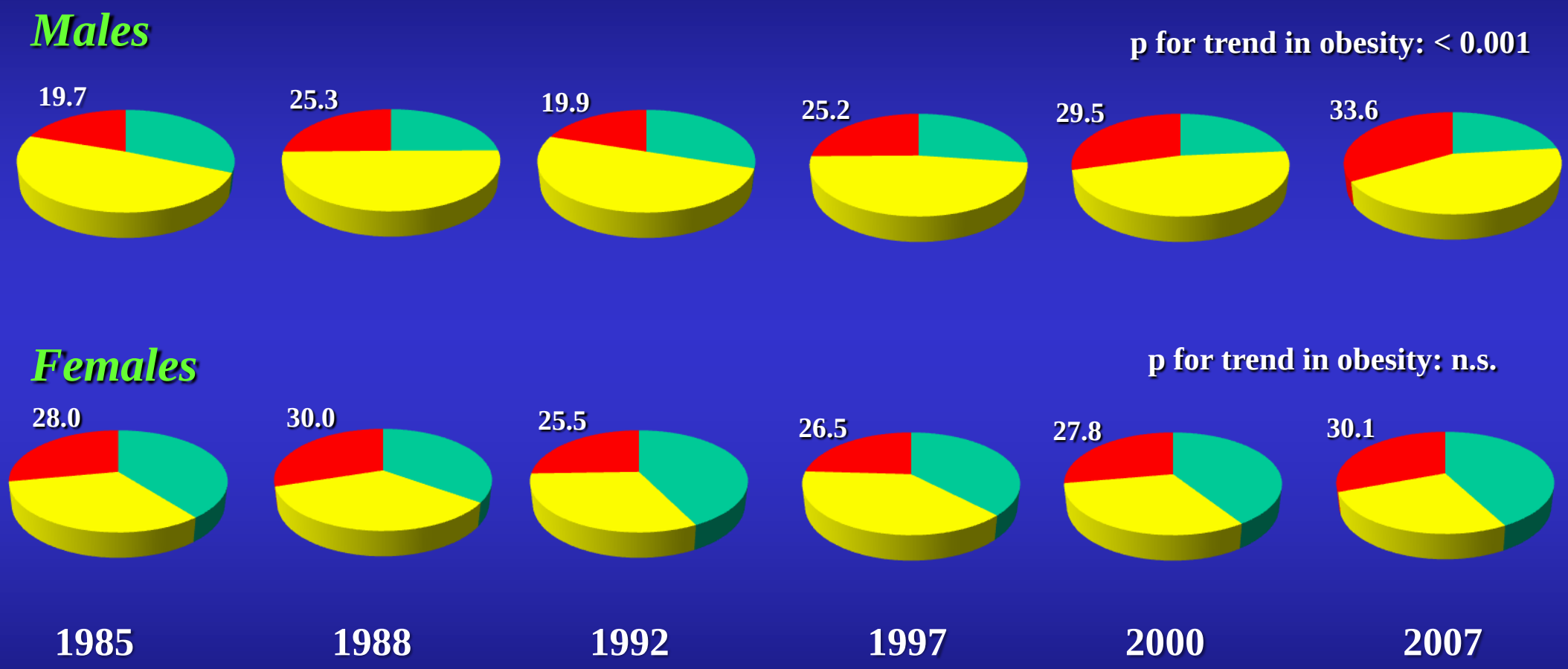
BMI


Males
kg/m2
30
28
26
24
22
20
p < 0.001
27.0
27.7
27.1
27.5
28.1
28.5
1985
1988
1992
1997
2000
2007

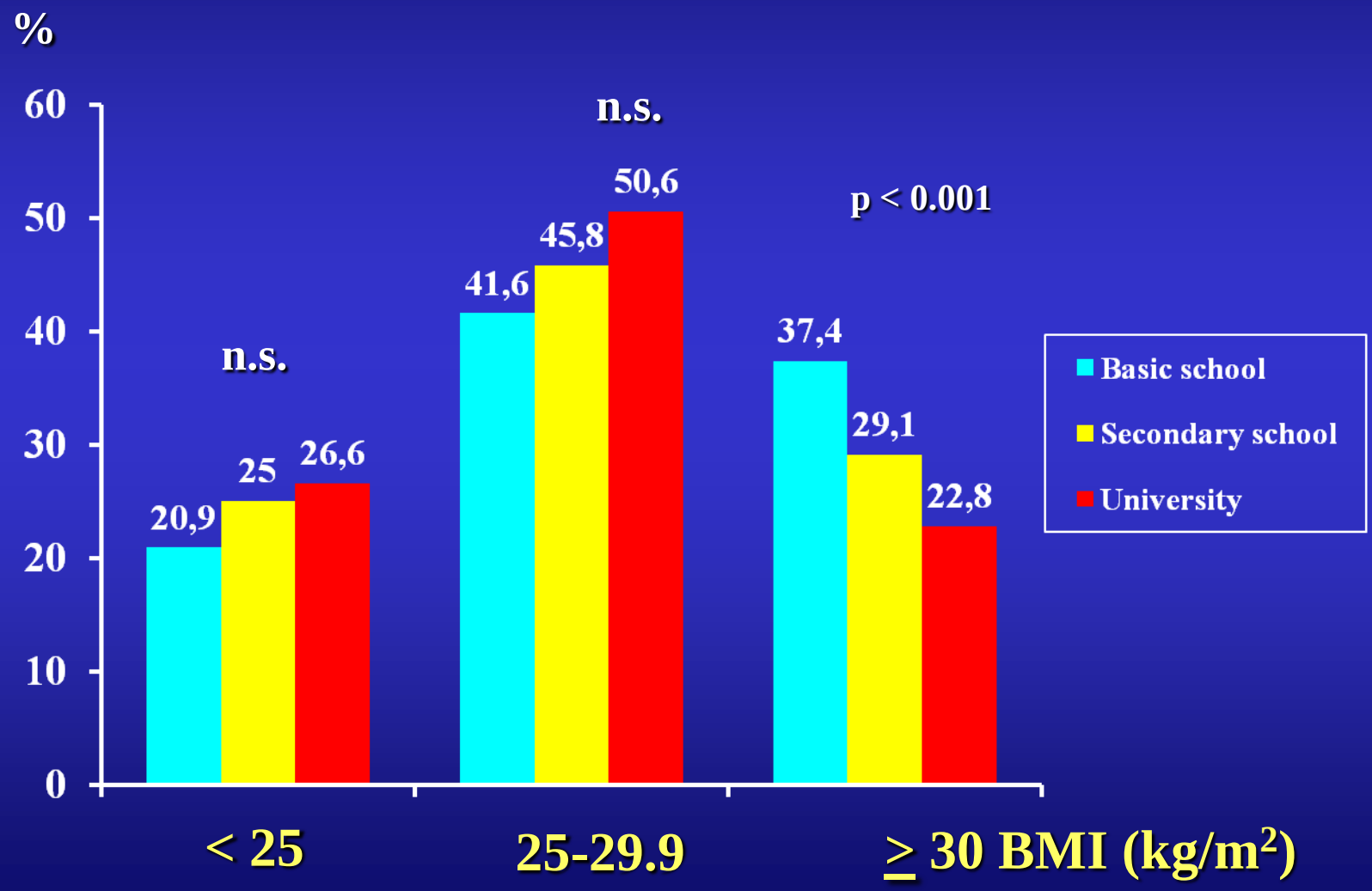

Females
kg/m2
30
28
26
24
22
20
p for trend: NS
27.3
27.7
26.9
27.1
27.3
27.4
1985
1988
1992
1997
2000
2007

BMI in the Czech Republic



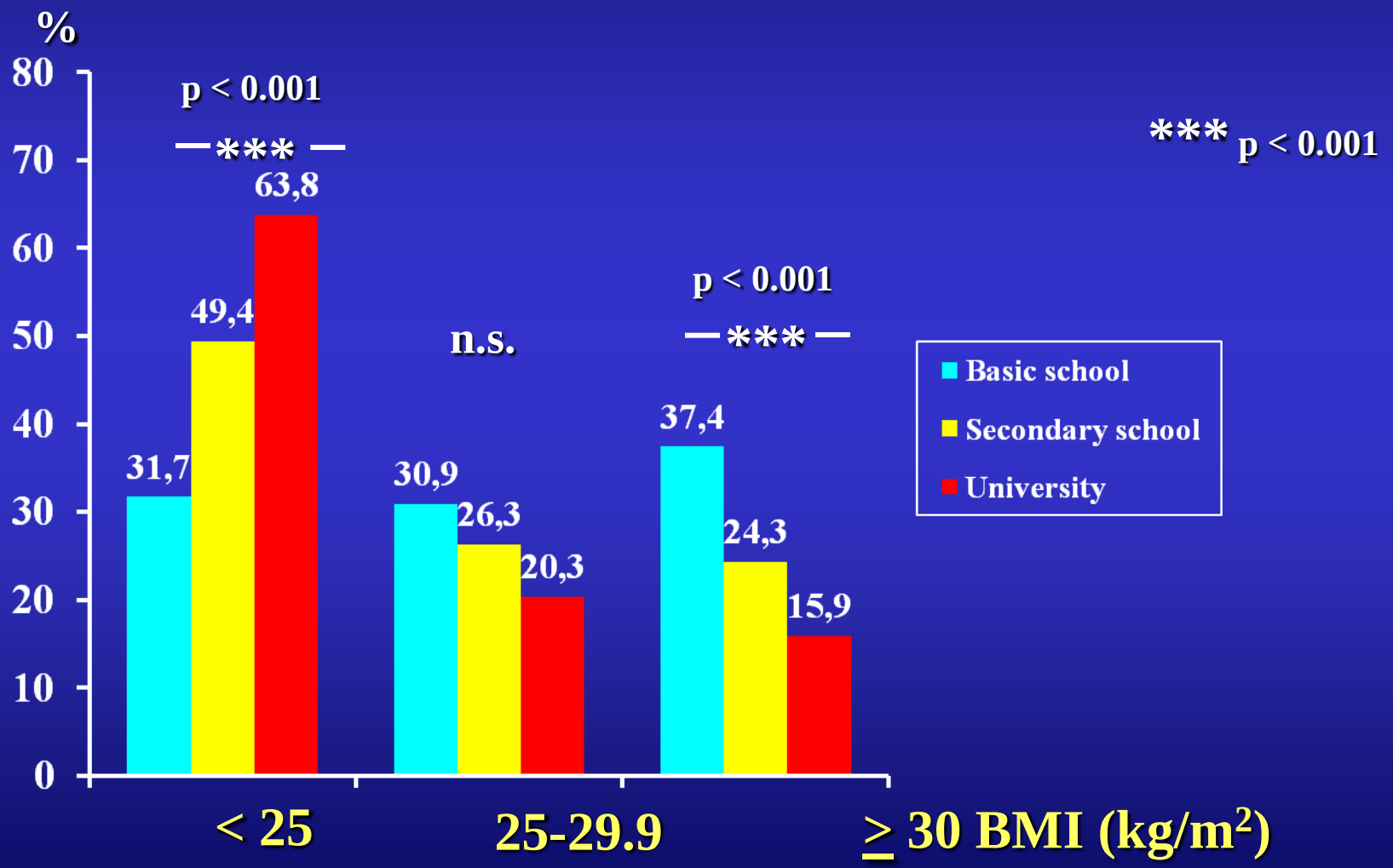
BMI by education level

Males - 9 Czech districts, 2006-2009

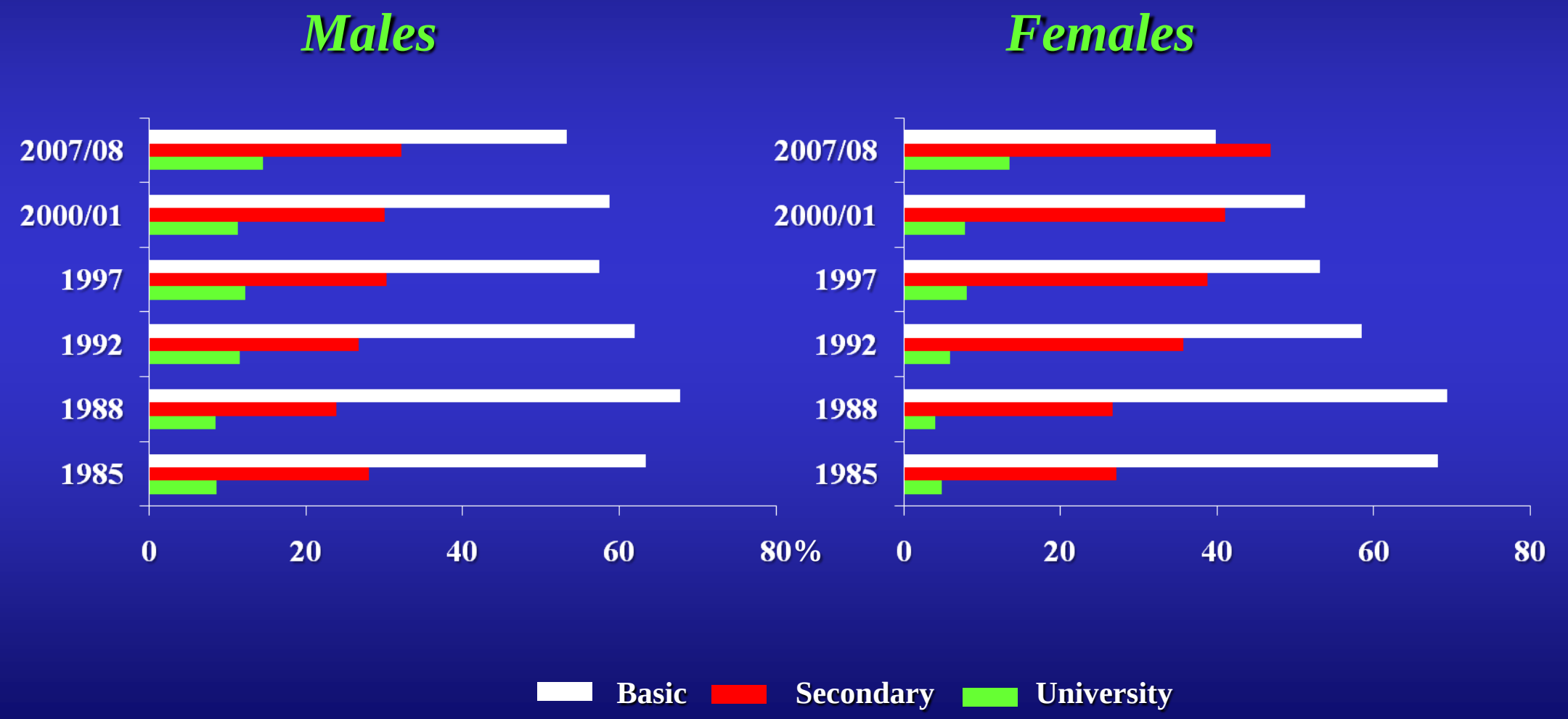


BMI by education level

Females - 9 Czech districts, 2006-2009



Education in the Czech Republic



Conclusions

Total and CV mortality is decreasing in the Czech Republic.

The decrease is due to decreasing stroke and CHD mortality rates.

Conclusions (2)

In a random Czech population sample

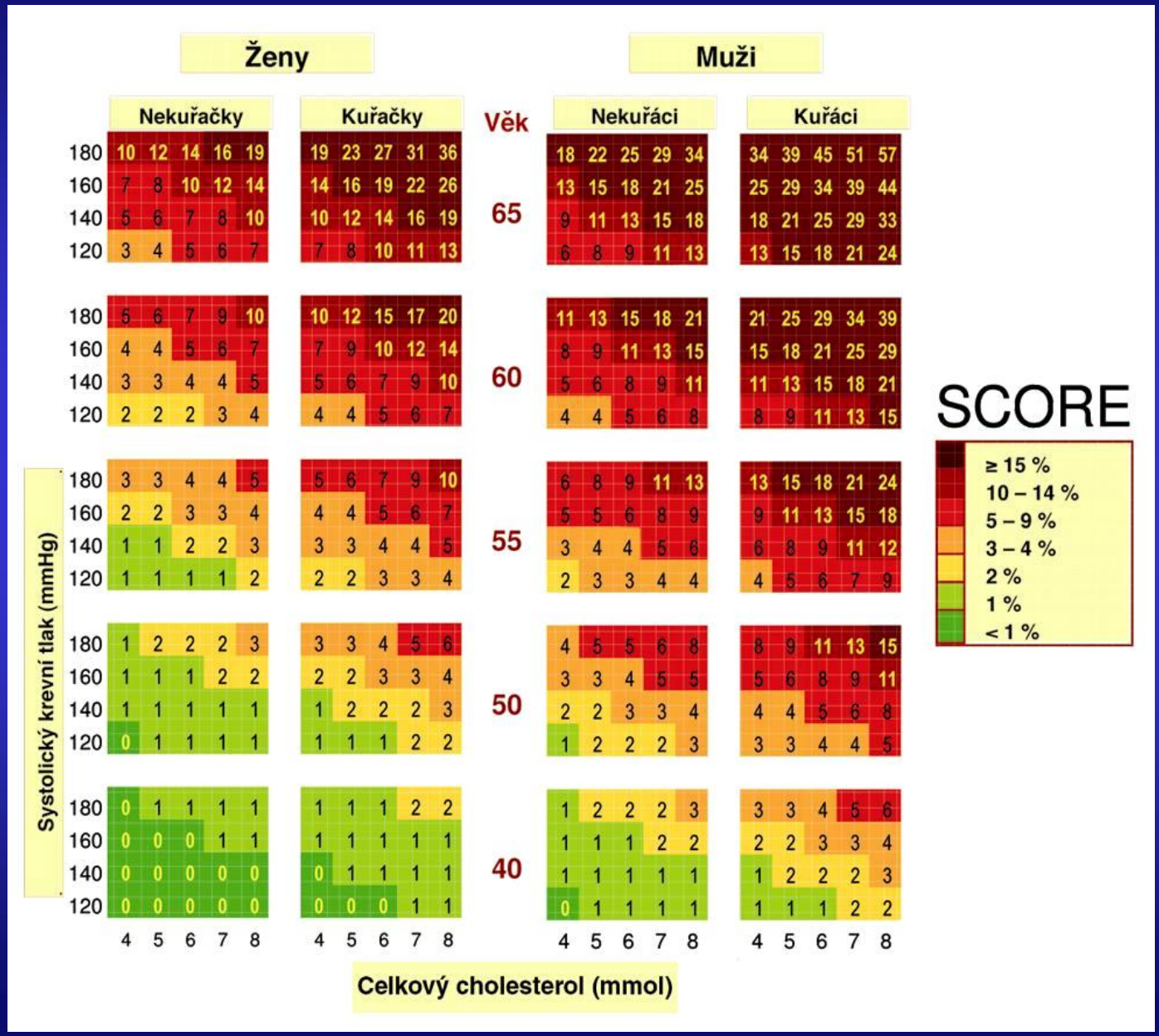
- **mean SBP and DBP decreased**
- **the prevalence of hypertension in females decreased**
- **the number of individuals using antihypertensive agents increased**
- **hypertension control improved over a period of 22-23 years**

Conclusions (3)

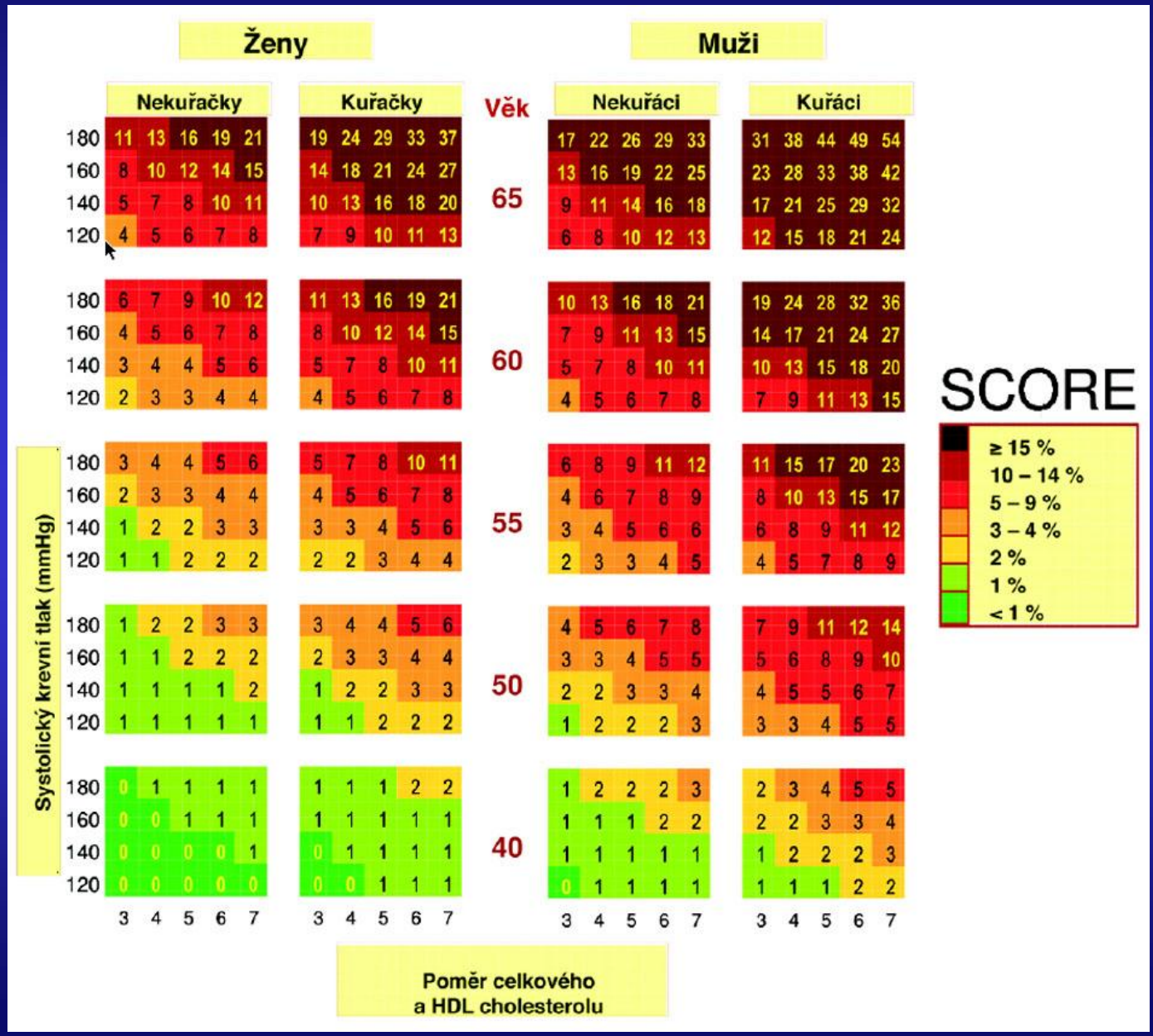
In a random Czech population sample

- **the proportion of male smokers decreased (by a third), with no change in the prevalence of female smokers (25%)**
- **total and non-HDL-cholesterol decreased in both genders; there was a rise in individuals using lipid-lowering drugs**
- **there was an increase in male BMI over a period of 22-23 years**

10-year risk of death from CVD in the Czech population



10-year risk of death from CVD in the Czech population



Vítejte
Upozornění
Komentář
Průvodce pro uživatele
Časté dotazy
Poděkování

Vítejte v české verzi programu HeartScore!

ČESKÁ KARDIOLOGICKÁ SPOLEČNOST HeartScore®

Smyslem programu HeartScore je poskytnout lékařům podporu při optimálním snižování kardiovaskulárního rizika. Jedná se o elektronickou a interaktivní verzi tabulek rizika SCORE z Evropských doporučení pro prevenci KVO, vypracovaných 4. společnou pracovní skupinou evropských společností pro prevenci kardiovaskulárních onemocnění v klinické praxi.

Přístup na on-line verzi
Přístup na verzi pro PC

Program HeartScore pracuje na zabezpečeném serveru a všechny údaje jsou chráněny zákony na ochranu soukromých údajů. Založení účtu uživatele programu HeartScore User je zdarma; uživatelé se musí registrovat cestou „My ESC" (viz úvodní webová stránka ESC, vpravo nahoře).

» Výhody programu HeartScore pro lékaře a pacienty

- Rychlý a snadno použitelný
- Založen na důkazech
- Šitý na míru pacientům
- Nabízí grafické znázornění absolutního kardiovaskulárního rizika
- Zdůrazněné možnosti intervence
- Skýtá možnosti dalšího zdokonalení

» Kontakty

Další informace můžete získat na contact us

Acknowledgment

To all my coworkers from
Department of Preventive Cardiology, IKEM
Atherosclerosis Research Laboratory, IKEM

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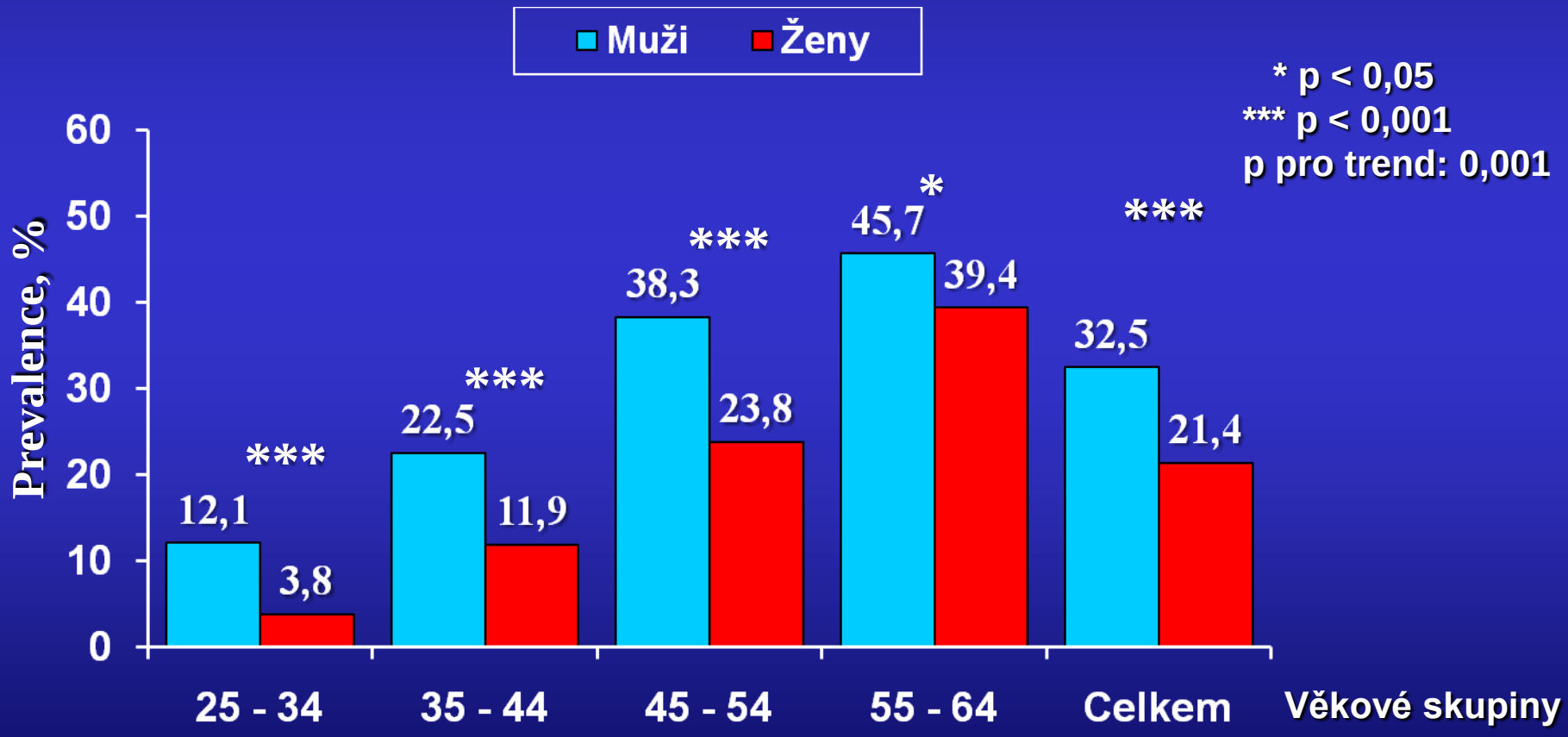
Internal Grant Agency, Ministry of Health, CR

KRKA ČR, s.r.o.

Servier, s.r.o.

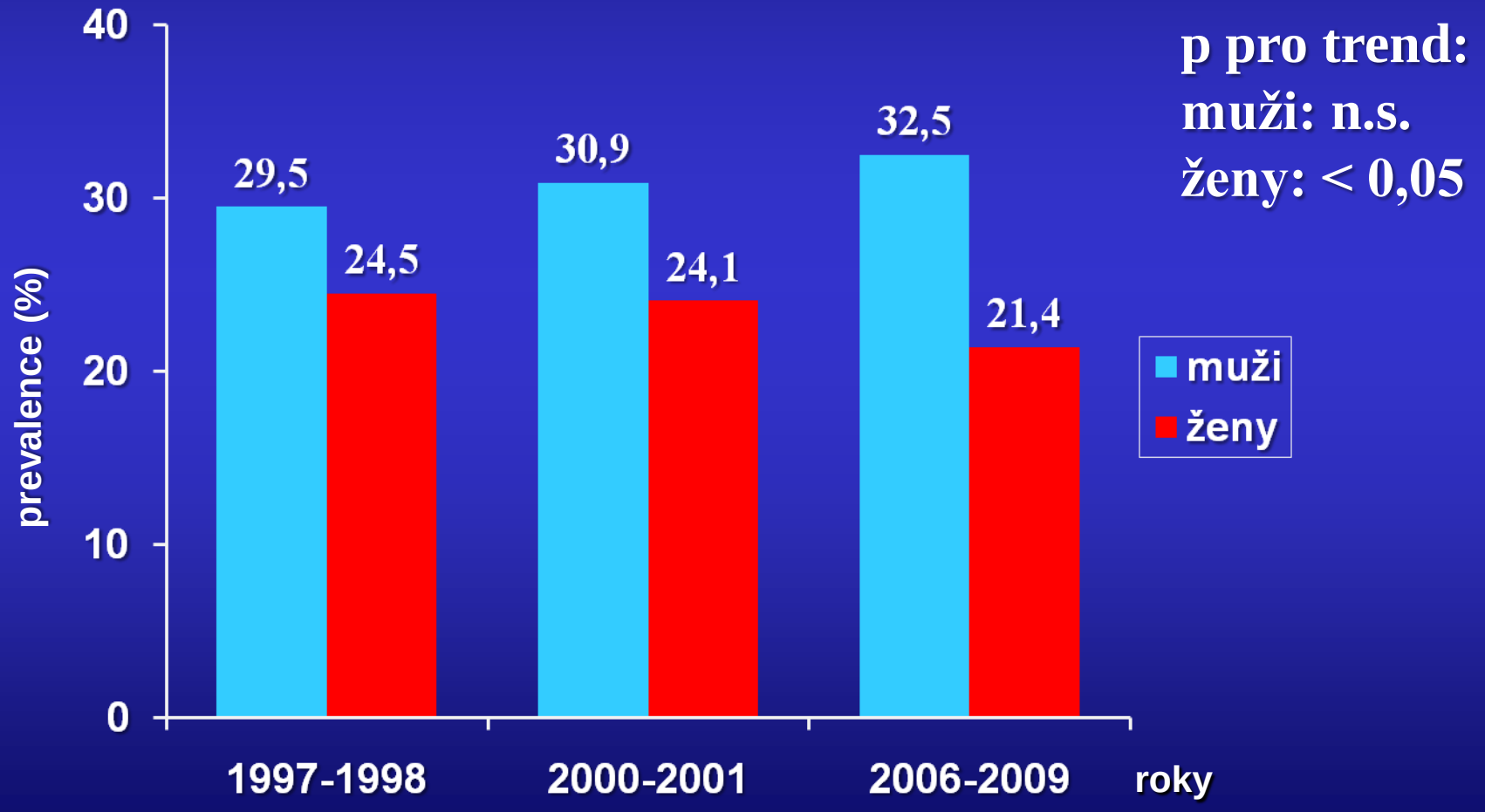
Prevalence metabolického syndromu

Česká republika, 2006-2009



Prevalence metabolického syndromu

Česká republika



p pro trend:
muži: n.s.
ženy: < 0,05

Další vyšetření

- kreatinin v séru, mikroalbuminurie

- EKG, echokardiografické vyšetření,
  UZ vyšetření karotických tepen,
  kotníkové tlaky, vyšetření pulzové vlny

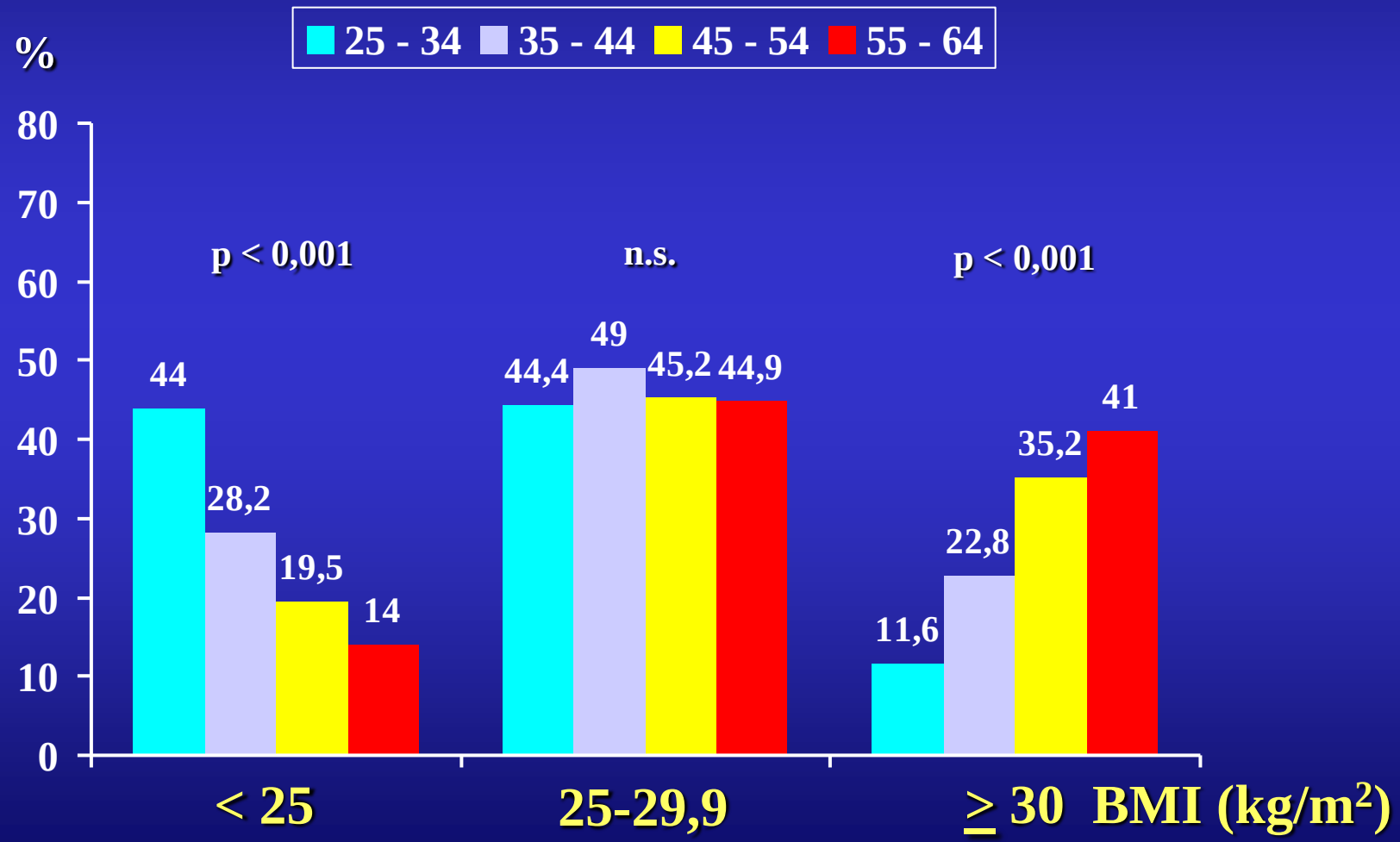
Spolupráce na řešení projektu

II. int. klinika 1.LF UK a VFN, Praha

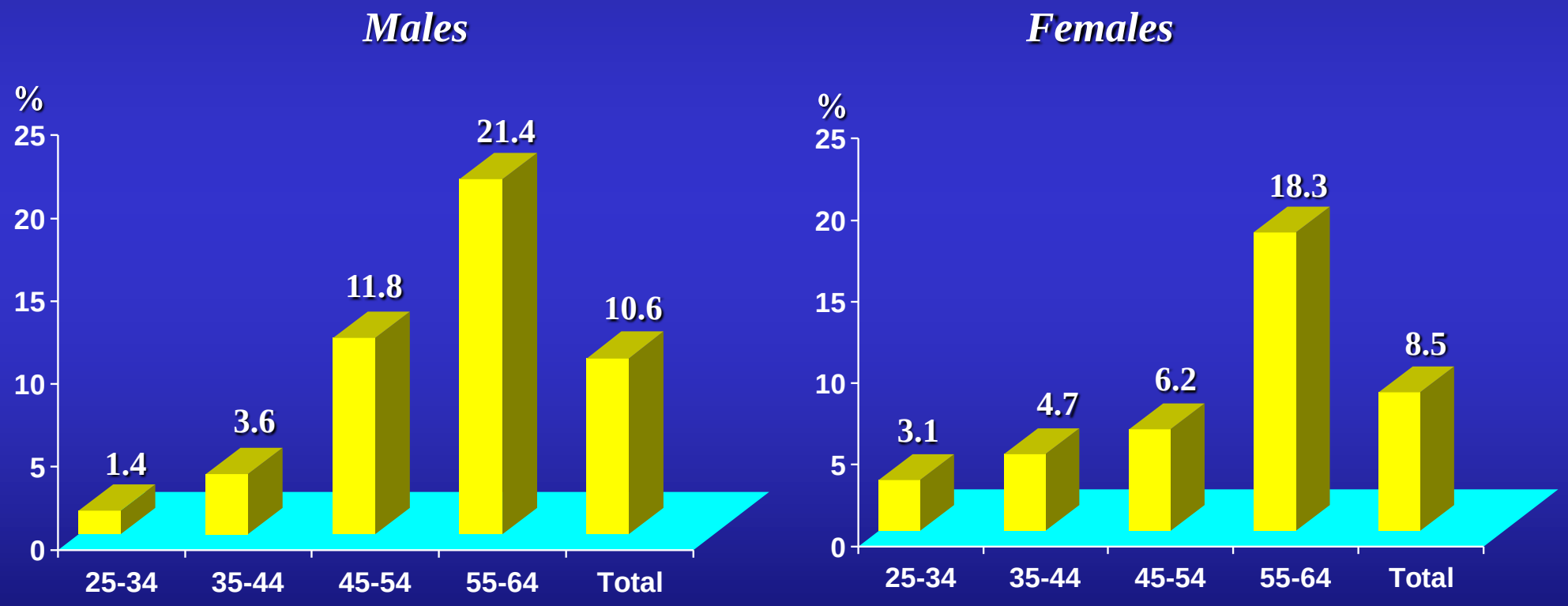
II. int. klinika LF Plzeň

BMI dle věkových dekád

muži - 9 okresů ČR 2000/2001

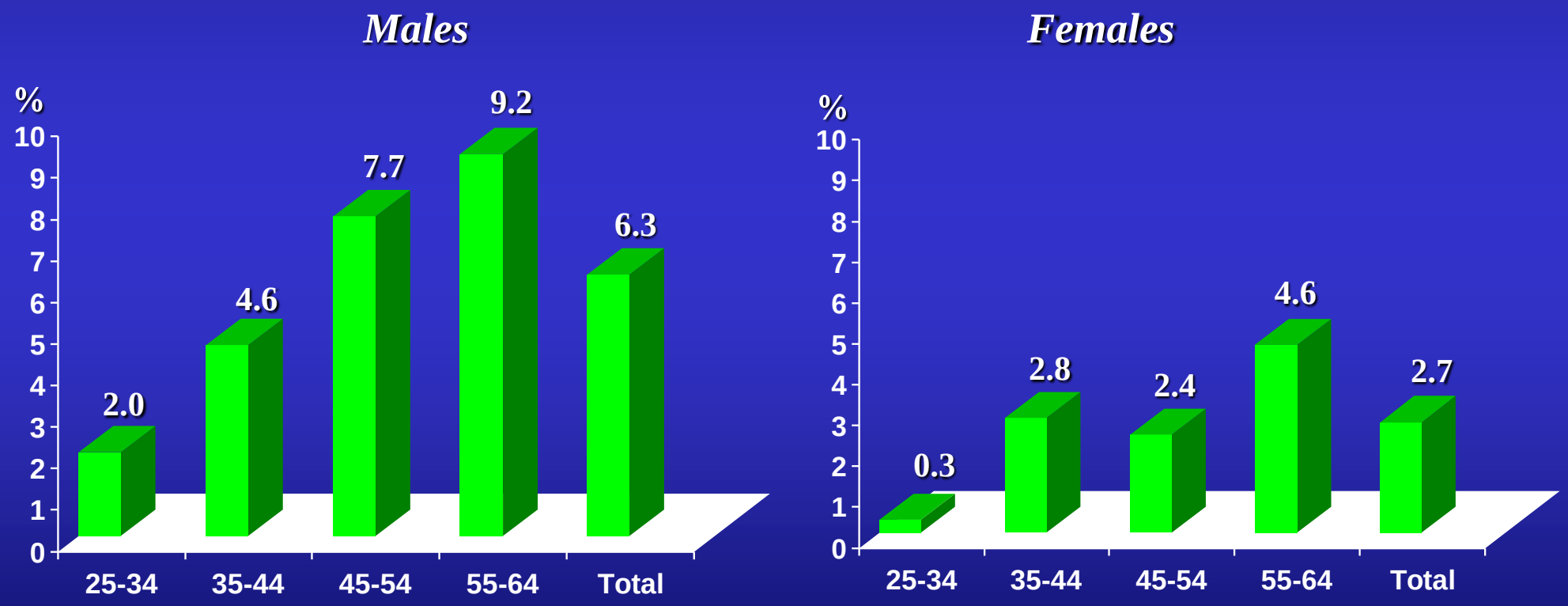


Prevalence of diabetes
by age groups, 2000 – 2001
Czech Republic, 9 districts



p for trend < 0.001

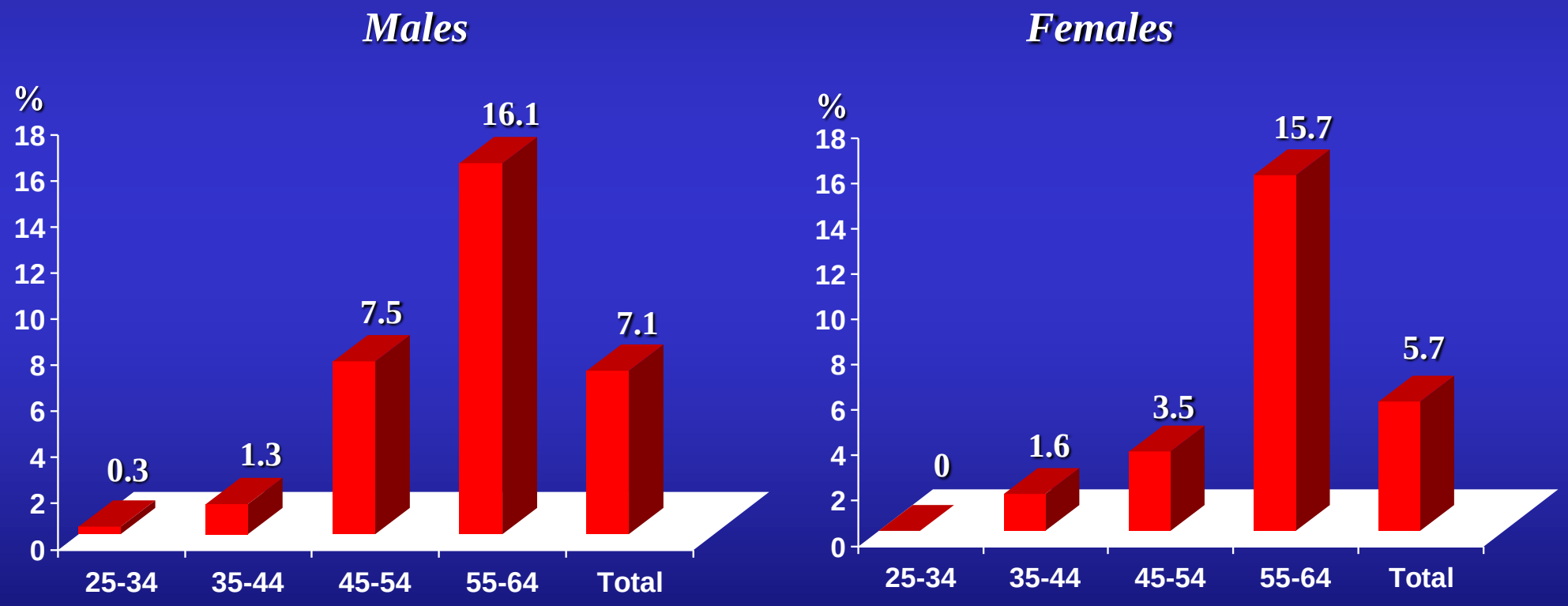
Prevalence of IFG
by age groups, 2000 – 2001
Czech Republic, 9 districts



p for trend < 0.001

Prevalence of hypertension and diabetes
by age groups, 2000–2001

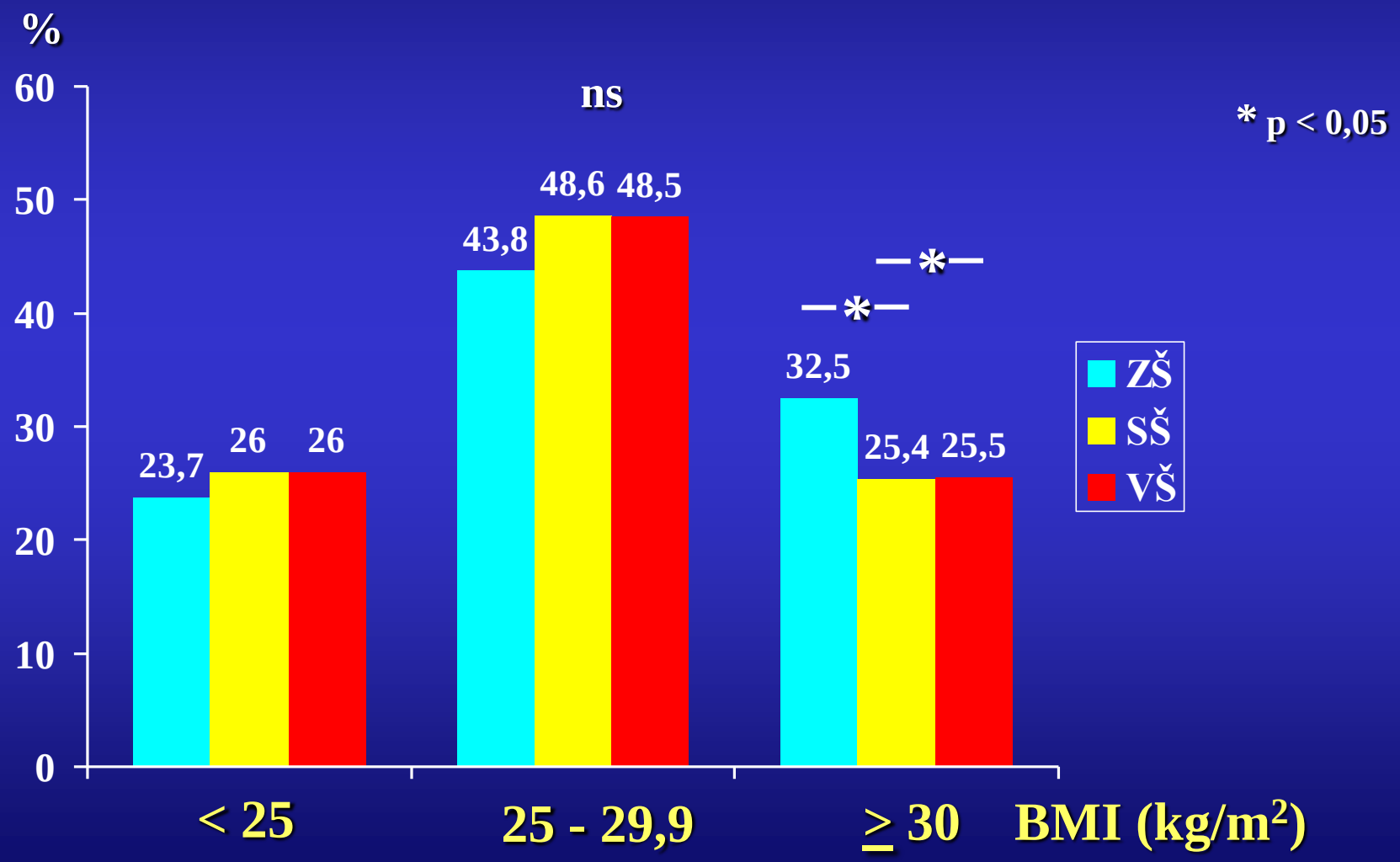
Czech Republic, 9 districts



p for trend < 0.001

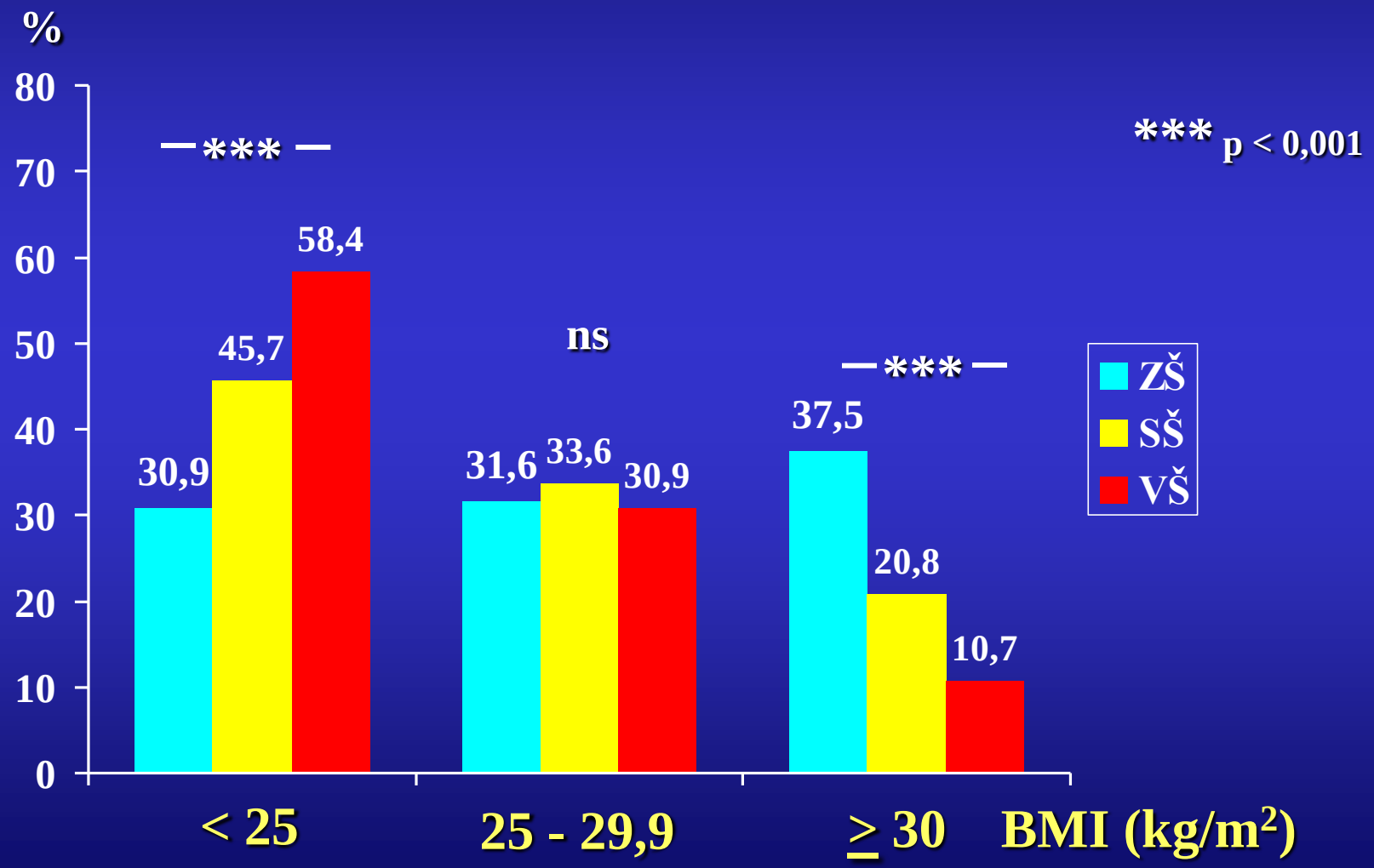
BMI dle vzdělání

muži - 9 okresů ČR 2000/2001



BMI dle vzdělání

ženy - 9 okresů ČR 2000/2001



Znalost, léčba a kontrola hypertenze

	NHANES II 1976-80	NHANES III Fáze 1 1988-91	NHANES III Fáze 2 1991-94
Znalost	51 %	73 %	68.4 %
Léčba	31 %	55 %	53.6 %
Kontrola	10 %	29 %	27.4 %

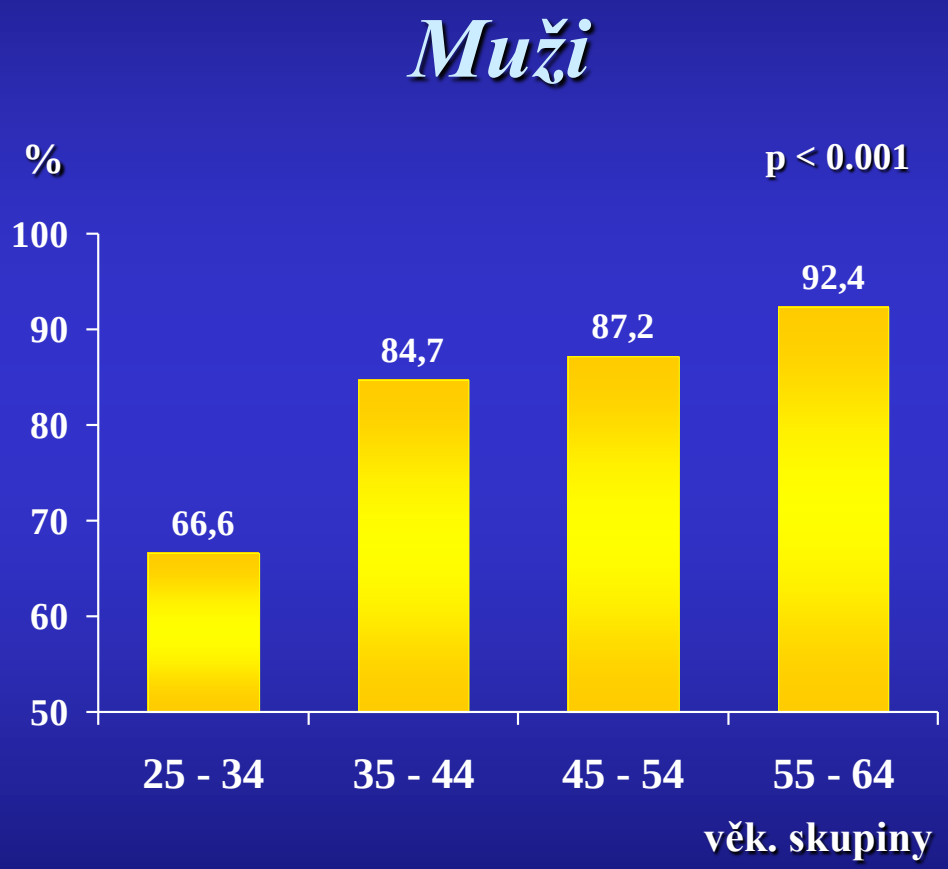
Kontrola hypertenze v různých zemích

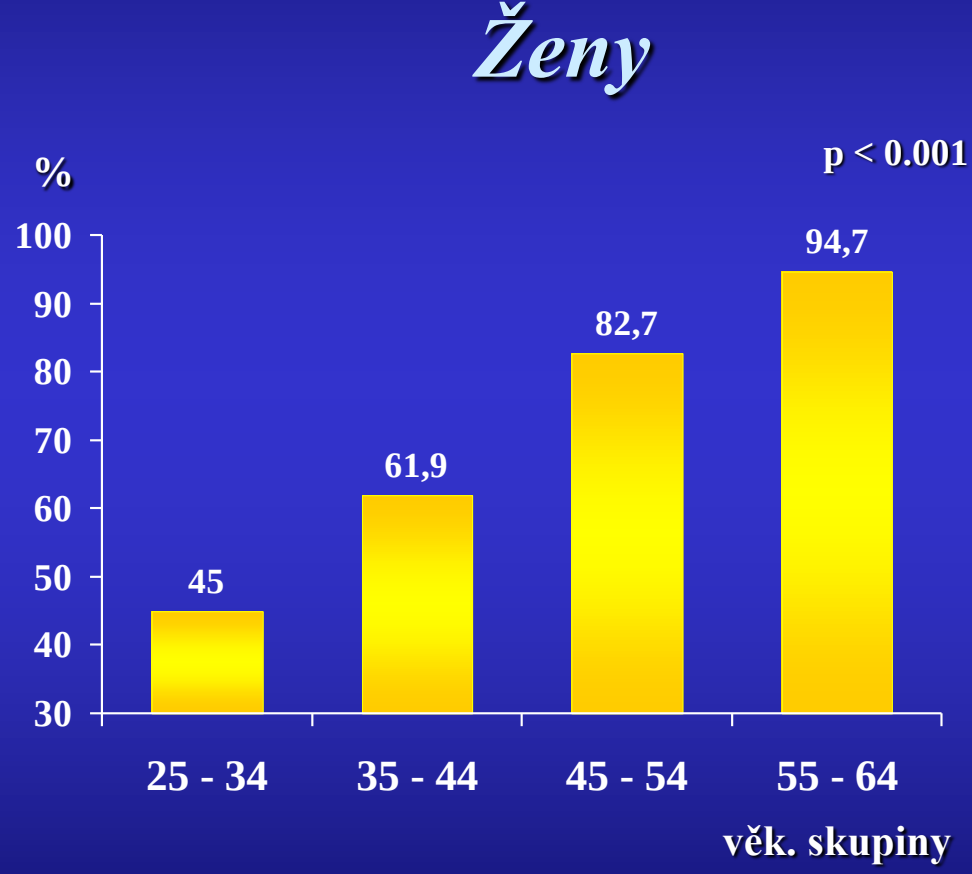
< 140/90 mmHg		*< 160/95 mmHg*	
Kanada	16 %	Austrálie	19 %
Indie	9 %		
Korea	5 %		
Čína	3 %		
Zaire	2,5 %		

Kontrola hypertenze v evropských zemích

< 140/90 mmHg (%)		*< 160/95 mmHg (%)*	
Belgie	25	Finsko	23,5
Česká republika	17,8	Německo	22,5
Anglie	6	Skotsko	17,5
Francie	33		
Itálie	9		
Polsko	4		
Rusko	5,7		
Španělsko	16,3		

Dyslipidemie* podle věkových skupin

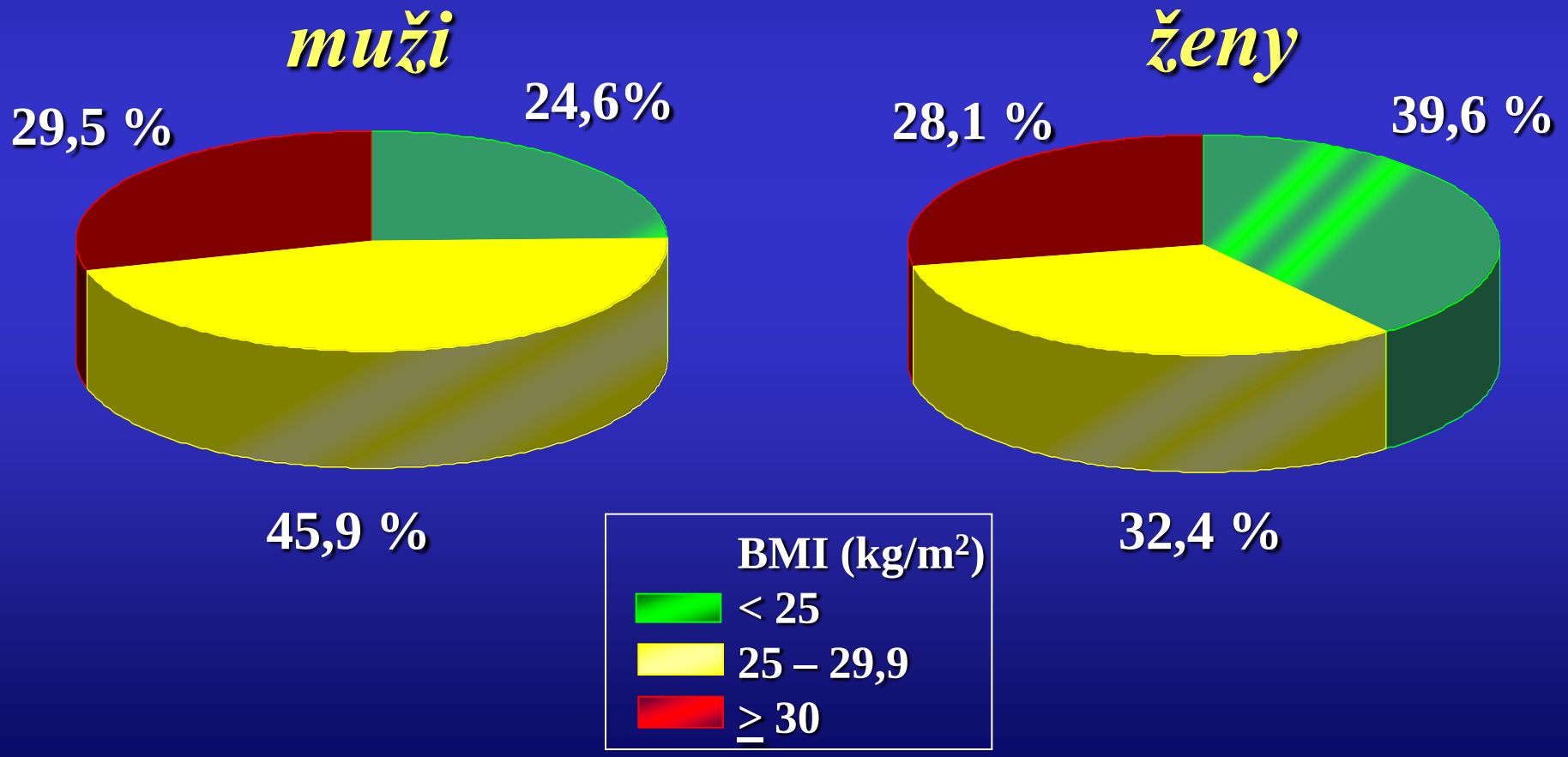




* Celk. chol. ≥ 5.0 *nebo* HDL-chol. < 1.0 *nebo* LDL-chol. ≥ 3.0 *nebo* TG ≥ 2 mmol/L *nebo* užívání hypolipidemik

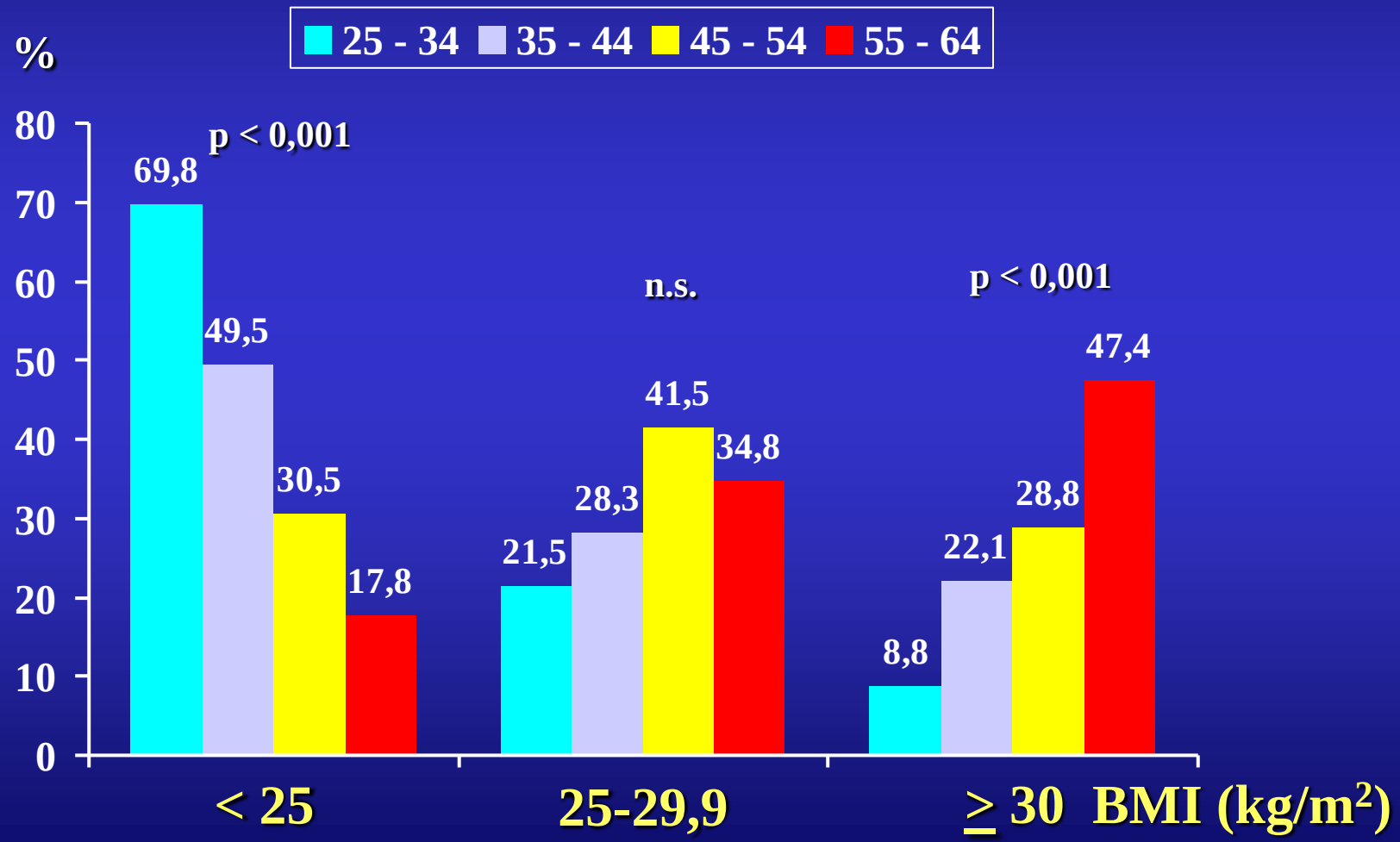
Prevalence obezity a nadváhy v populačním vzorku ČR

9 okresů ČR 2000/2001



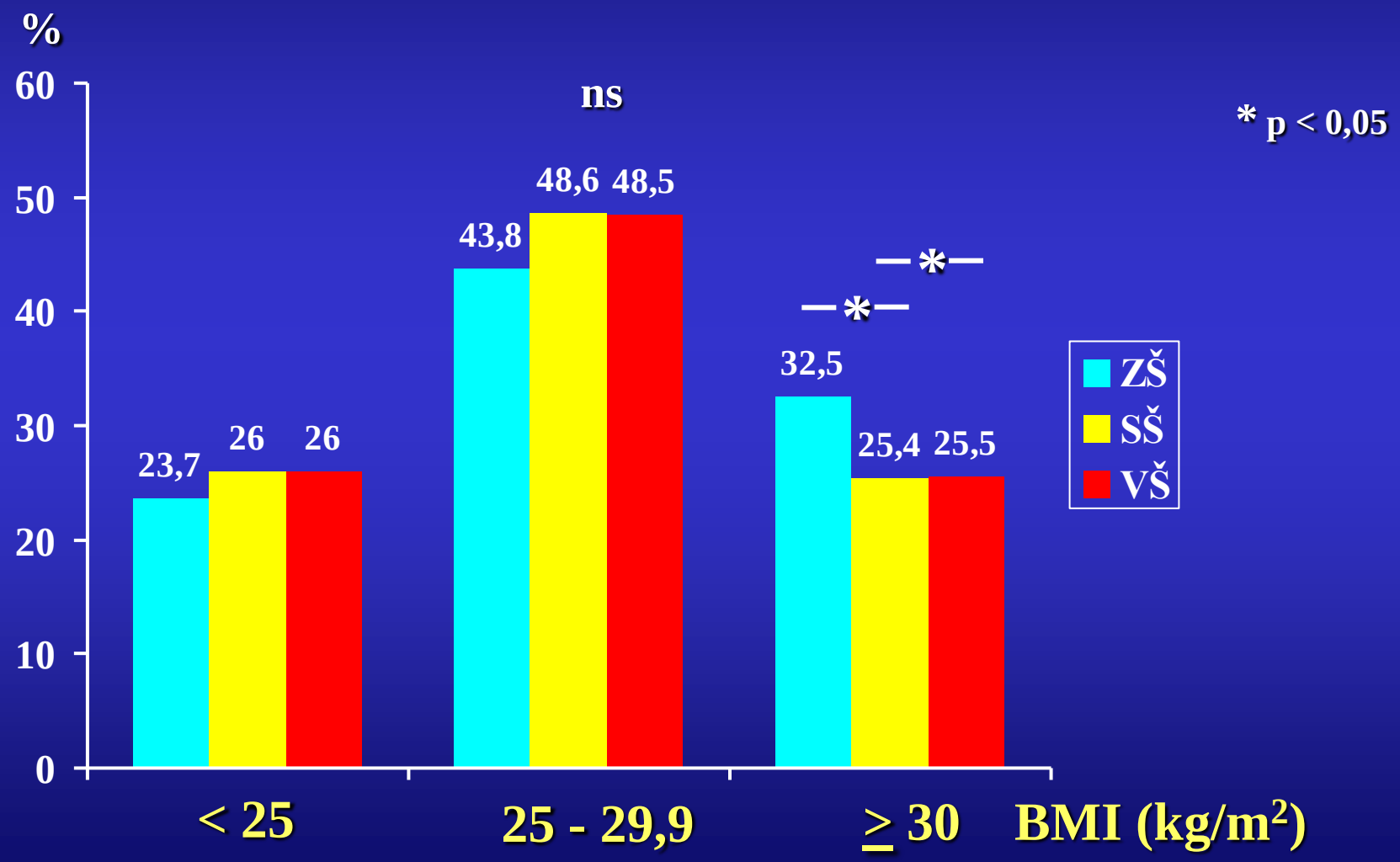
BMI dle věkových dekád

ženy - 9 okresů ČR 2000/2001



BMI dle vzdělání

muži - 9 okresů ČR 2000/2001



BMI dle vzdělání

ženy - 9 okresů ČR 2000/2001