Table S1. Demographic characteristics of men and women with available blood pressure measurements and information on the use of specific drug treatment within the CUORE Project Surveys 1998-2002, 2008-2012 and 2018-2019.

	MEN					
	1998-2002		**2008-2012**		**2018-2019**	
Age class (years)						
	n	**%**	**n**	**%**	**n**	**%**
35-44	717	24	530	24	248	24
45-54	752	25	588	27	248	24
55-64	784	26	564	25	277	27
65-74	732	25	536	24	258	25
Educational level						
	n	**%**	**n**	**%**	**n**	**%**
Higher education	1249	42	1183	54	725	71
Lower education	1730	58	1018	46	303	29

	WOMEN					
	1998-2002		**2008-2012**		**2018-2019**	
Age class (years)						
	n	**%**	**n**	**%**	**n**	**%**
35-44	715	24	514	23	237	22
45-54	769	26	577	26	271	25
55-64	778	26	584	27	280	26
65-74	693	23	529	24	278	26
Educational level						
	n	%	n	%	n	%
Higher education	1052	36	1167	53	725	68
Lower education	1887	64	1017	47	339	32

Pool of the following Italian Regions: Piedmont, Lombardy, Liguria, Emilia Romagna, Tuscany, Lazio, Abruzzo, Basilicata, Calabria, and Sicily. Higher education - high school or college; lower education - primary or middle school.

Table S2. Blood pressure and heart rate measurements mean levels by age class and period. Italian resident men aged 35–74 years, the CUORE Project Surveys 1998-2002, 2008-2012 and 2018-2019.

MEN

Systolic blood pressure (mmHg)

Age class (years)	1998-2002					ANOVA within period sign ***	2008-2012					ANOVA within period sign ***	2018-2019					ANOVA within period sign ***	2018-2019 vs 1998-2002		2018-2019 vs 2008-2012	
	n	mean	DS	95% CI			n	mean	DS	95% CI			n	mean	DS	95% CI			Diff	t-test sign	Diff	t-test sign
35-44	717	128	15	127	129		530	125	13	124	126		248	127	11	126	128		-1	ns	2	*
45-54	752	133	18	131	134		588	131	16	130	132		248	130	16	128	132		-2	*	-1	ns
55-64	784	141	20	139	142		564	135	17	134	136		277	134	14	132	135		-7	***	-1	ns
65-74	732	148	20	146	149		536	141	18	139	142		258	136	17	134	138		-11	***	-4	**

Diastolic blood pressure (mmHg)

Age class (years)	1998-2002					ANOVA within period sign ***	2008-2012					ANOVA within period sign ***	2018-2019					ANOVA within period sign **	2018-2019 vs 1998-2002		2018-2019 vs 2008-2012	
	n	mean	DS	95% CI			n	mean	DS	95% CI			n	mean	DS	95% CI			Diff	t-test sign	Diff	t-test sign
35-44	717	85	11	84	86		530	83	10	82	83		248	76	10	75	77		-9	***	-7	***
45-54	752	87	11	87	88		588	86	10	85	87		248	79	11	77	80		-9	***	-7	***
55-64	784	87	11	87	88		564	84	10	83	85		277	79	9	78	80		-8	***	-5	***
65-74	732	86	10	85	86		536	81	10	80	82		258	76	10	75	77		-10	***	-5	***

Systolic blood pressure not under drug treatment (mmHg)

Age class (years)	1998-2002					ANOVA within period sign ***	2008-2012					ANOVA within period sign ***	2018-2019					ANOVA within period sign ***	2018-2019 vs 1998-2002		2018-2019 vs 2008-2012	
	n	mean	DS	95% CI			n	mean	DS	95% CI			n	mean	DS	95% CI			Diff	t-test sign	Diff	t-test sign
35-44	682	127	14	126	128		504	125	13	123	126		237	127	11	125	128		-0.2	ns	2	*
45-54	640	131	17	130	132		481	129	16	127	130		212	128	14	126	130		-3	*	-1	ns
55-64	581	137	19	136	139		370	133	17	131	135		170	133	14	131	135		-4	**	-0.2	ns
65-74	454	143	20	142	145		252	138	18	136	140		125	138	18	134	141		-6	**	-1	ns

Diastolic blood pressure not under drug treatment (mmHg)

Age class (years)	1998-2002					ANOVA within period sign **	2008-2012					ANOVA within period sign ***	2018-2019					ANOVA within period sign ns	2018-2019 vs 1998-2002		2018-2019 vs 2008-2012	
	n	mean	DS	95% CI			n	mean	DS	95% CI			n	mean	DS	95% CI			Diff	t-test sign	Diff	t-test sign
35-44	682	85	10	84	85		504	82	10	81	83		237	75	10	74	77		-9	***	-7	***
45-54	640	86	11	86	87		481	85	10	84	86		212	77	10	76	78		-9	***	-8	***
55-64	581	86	10	85	87		370	84	10	83	85		170	78	9	77	79		-8	***	-6	***
65-74	454	84	10	83	85		252	81	10	80	82		125	77	11	75	79		-8	***	-4	**

Heart rate (beats per minute)

Age class (years)	1998-2002					ANOVA within period sign ns	2008-2012					ANOVA within period sign ns	2018-2019					ANOVA within period sign ns	2018-2019 vs 1998-2002		2018-2019 vs 2008-2012	
	n	mean	DS	95% CI			n	mean	DS	95% CI			n	mean	DS	95% CI			Diff	t-test sign	Diff	t-test sign
35-44	715	66	10	65	67		530	68	9	67	69		248	72	12	70	73		6	***	4	***
45-54	750	66	11	65	67		588	69	10	68	70		248	72	11	71	74		6	***	3	***
55-64	783	66	11	65	67		564	68	10	68	69		277	72	12	70	73		6	***	3	***
65-74	732	66	11	65	67		536	69	10	68	69		258	70	12	69	72		4	***	2	ns

SD: standard deviation; CI: confidence interval. Diff: mean difference between 2018–2019 and 1998–2002 or 2018–2019 and 2008–2012; the values are approximated taking into account the first decimal of means. ANOVA: Analysis of Variance to compare variables among age classes within periods. t-test to compare variables between periods. *** p-value<0.0001; ** p-value<0.01; *p-value<0.05; ns not significant p-value. Pool of the following Italian Regions: Piedmont, Lombardy, Liguria, Emilia Romagna, Tuscany, Lazio, Abruzzo, Basilicata, Calabria, and Sicily.

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Table S3. Blood pressure and heart rate measurements mean levels by age class and period. Italian resident women aged 35–74 years, the CUORE Project Surveys 1998-2002, 2008-2012 and 2018-2019.

WOMEN

Systolic blood pressure (mmHg)

Age class (years)	1998-2002					ANOVA within period sign ***	2008-2012					ANOVA within period sign ***	2018-2019					ANOVA within period sign ***	2018-2019 vs 1998-2002		2018-2019 vs 2008-2012	
	n	mean	DS	95% CI			n	mean	DS	95% CI			n	mean	DS	95% CI			Diff	t-test sign	Diff	t-test sign
35-44	715	118	14	117	119		514	114	13	113	116		237	113	13	111	114		-6	***	-2	ns
45-54	769	128	18	126	129		577	122	15	121	123		271	120	16	118	121		-8	***	-2	*
55-64	778	139	20	137	140		584	132	18	131	134		280	125	16	123	127		-14	***	-7	***
65-74	693	147	20	146	149		529	143	20	141	144		278	133	19	130	135		-15	***	-10	***

Diastolic blood pressure (mmHg)

Age class (years)	1998-2002					ANOVA within period sign ***	2008-2012					ANOVA within period sign ***	2018-2019					ANOVA within period sign ***	2018-2019 vs 1998-2002		2018-2019 vs 2008-2012	
	n	mean	DS	95% CI			n	mean	DS	95% CI			n	mean	DS	95% CI			Diff	t-test sign	Diff	t-test sign
35-44	715	78	10	77	78		514	75	9	74	75		237	70	10	68	71		-8	***	-5	***
45-54	769	83	11	82	83		577	79	9	78	79		271	74	11	72	75		-9	***	-5	***
55-64	778	85	10	84	85		584	81	10	80	82		280	74	11	73	76		-10	***	-7	***
65-74	693	85	10	84	85		529	81	10	80	82		278	74	11	72	75		-11	***	-7	***

Systolic blood pressure not under drug treatment (mmHg)

Age class (years)	1998-2002					ANOVA within period sign ***	2008-2012					ANOVA within period sign ***	2018-2019					ANOVA within period sign ***	2018-2019 vs 1998-2002		2018-2019 vs 2008-2012	
	n	mean	DS	95% CI			n	mean	DS	95% CI			n	mean	DS	95% CI			Diff	t-test sign	Diff	t-test sign
35-44	698	118	14	116	119		499	114	12	113	115		234	112	13	111	114		-5	***	-1	ns
45-54	657	125	17	124	126		510	120	15	119	122		238	118	15	116	120		-7	***	-2	*
55-64	539	134	18	132	135		401	128	17	126	130		203	123	17	121	126		-10	***	-4	**
65-74	374	142	18	140	144		244	138	20	135	140		122	127	16	124	130		-15	***	-10	***

Diastolic blood pressure not under drug treatment (mmHg)

Age class (years)	1998-2002					ANOVA within period sign ***	2008-2012					ANOVA within period sign ***	2018-2019					ANOVA within period sign **	2018-2019 vs 1998-2002		2018-2019 vs 2008-2012	
	n	mean	DS	95% CI			n	mean	DS	95% CI			n	mean	DS	95% CI			Diff	t-test sign	Diff	t-test sign
35-44	698	77	10	76	78		499	74	8	74	75		234	70	10	68	71		-8	***	-5	***
45-54	657	81	10	81	82		510	78	9	77	79		238	73	11	71	74		-9	***	-5	***
55-64	539	83	10	82	83		401	79	9	79	80		203	73	11	72	75		-9	***	-6	***
65-74	374	83	9	82	83		244	80	9	79	81		122	71	9	70	73		-11	***	-9	***

Heart rate (beats per minute)

Age class (years)	1998-2002					ANOVA within period sign **	2008-2012					ANOVA within period sign ns	2018-2019					ANOVA within period sign ns	2018-2019 vs 1998-2002		2018-2019 vs 2008-2012	
	n	mean	DS	95% CI			n	mean	DS	95% CI			n	mean	DS	95% CI			Diff	t-test sign	Diff	t-test sign
35-44	711	71	11	70	72		514	72	9	71	72		237	74	11	73	75		3	**	2	**
45-54	769	70	10	69	71		577	71	9	70	71		271	73	10	72	74		3	***	3	**
55-64	776	69	10	68	70		584	71	9	70	72		280	72	10	71	73		3	***	1	ns
65-74	690	69	11	68	70		529	71	10	70	72		278	72	11	71	73		3	**	1	ns

SD: standard deviation; CI: confidence interval. Diff: mean difference between 2018–2019 and 1998–2002 or 2018–2019 and 2008–2012; the values are approximated taking into account the first decimal of means. ANOVA: Analysis of Variance to compare variables among age classes within periods. t-test to compare variables between periods. *** p-value<0.0001; ** p-value<0.01; *p-value<0.05; ns not significant p-value. Pool of the following Italian Regions: Piedmont, Lombardy, Liguria, Emilia Romagna, Tuscany, Lazio, Abruzzo, Basilicata, Calabria, and Sicily.

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Table S4. Blood pressure measurements and heart rate mean levels by educational level and period. Italian resident men aged 35–74 years, the CUORE Project Surveys 1998-2002, 2008-2012 and 2018-2019.

MEN

Systolic blood pressure (mmHg)

Educational level	1998-2002					ANOVA within period sign ***	2008-2012					ANOVA within period sign ***	2018-2019					ANOVA within period sign ***	2018-2019		2018-2019	
	n	mean	DS	95% CI			n	mean	DS	95% CI			n	mean	DS	95% CI			Diff	t-test sign	Diff	t-test sign
Higher education	1249	135	17	134	136		1183	130	15	129	131		725	131	14	130	132		-4	***	1	ns
Lower education	1730	136	18	135	137		1018	133	17	132	134		303	134	16	132	135		-3	**	0.2	ns

Diastolic blood pressure (mmHg)

Educational level	1998-2002					ANOVA within period sign ns	2008-2012					ANOVA within period sign ns	2018-2019					ANOVA within period sign ns	2018-2019		2018-2019	
	n	mean	DS	95% CI			n	mean	DS	95% CI			n	mean	DS	95% CI			Diff	t-test sign	Diff	t-test sign
Higher education	1249	87	11	86	87		1183	83	10	83	84		725	77	10	77	78		-9	***	-6	***
Lower education	1730	86	11	86	87		1018	84	10	83	85		303	78	10	77	79		-8	***	-6	***

Systolic blood pressure not under drug treatment (mmHg)

Educational level	1998-2002					ANOVA within period sign ***	2008-2012					ANOVA within period sign ***	2018-2019					ANOVA within period sign ***	2018-2019		2018-2019	
	n	mean	DS	95% CI			n	mean	DS	95% CI			n	mean	DS	95% CI			Diff	t-test sign	Diff	t-test sign
Higher education	1046	133	16	132	134		913	129	15	128	130		537	130	13	129	131		-3	***	1	ns
Lower education	1305	134	17	133	135		680	131	16	130	133		205	133	15	131	135		-1	ns	1	ns

Diastolic blood pressure not under drug treatment (mmHg)

Educational level	1998-2002					ANOVA within period sign ns	2008-2012					ANOVA within period sign ns	2018-2019					ANOVA within period sign ns	2018-2019		2018-2019	
	n	mean	DS	95% CI			n	mean	DS	95% CI			n	mean	DS	95% CI			Diff	t-test sign	Diff	t-test sign
Higher education	1046	86	10	85	86		913	83	10	82	83		537	77	10	76	78		-9	***	-6	***
Lower education	1305	85	10	85	86		680	83	10	83	84		205	77	9	76	78		-8	***	-6	***

Heart rate (beats per minute)

Educational level	1998-2002					ANOVA within period sign ns	2008-2012					ANOVA within period sign ns	2018-2019					ANOVA within period sign **	2018-2019		2018-2019	
	n	mean	DS	95% CI			n	mean	DS	95% CI			n	mean	DS	95% CI			Diff	t-test sign	Diff	t-test sign
Higher education	1244	66	11	65	67		1183	68	9	68	69		725	71	11	70	72		5	***	2	***
Lower education	1730	66	11	65	67		1018	68	10	68	69		303	74	12	73	76		8	***	6	***

Means and standard deviations age-standardized by ISTAT Italian population 2000, 2010 and 2019 respectively. SD: standard deviation; CI: confidence interval. Diff: mean difference between 2018–2019 and 1998–2002 or 2018–2019 and 2008–2012; the values are approximated taking into account the first decimal of means. Higher education - high school or college; lower education - primary or middle school. ANOVA: Analysis of Variance to compare variables among age classes within periods. t-test to compare variables between periods. *** p-value<0.0001; ** p-value<0.01; *p-value<0.05; ns not significant p-value. Pool of the following Italian Regions: Piedmont, Lombardy, Liguria, Emilia Romagna, Tuscany, Lazio, Abruzzo, Basilicata, Calabria, and Sicily.

Table S5. Blood pressure measurements and heart rate mean levels by educational level and period. Italian resident women aged 35–74 years, the CUORE Project Surveys 1998-2002, 2008-2012 and 2018-2019.

WOMEN

Systolic blood pressure (mmHg)

Educational level	1998-2002					ANOVA within period sign ***	2008-2012					ANOVA within period sign ***	2018-2019					ANOVA within period sign ***	2018-2019 Diff	t-test sign	2018-2019 Diff	t-test sign
	n	mean	std	\	95% CI		n	mean	std	\	95% CI		n	mean	std	\	95% CI					
Higher education	1052	130	16	129	131		1167	124	15	123	124		725	120	15	119	122		-9	***	-3	***
Lower education	1887	133	18	132	134		1017	129	18	128	130		339	126	17	124	127		-7	***	-4	**

Diastolic blood pressure (mmHg)

Educational level	1998-2002					ANOVA within period sign ***	2008-2012					ANOVA within period sign ***	2018-2019					ANOVA within period sign **	2018-2019 Diff	t-test sign	2018-2019 Diff	t-test sign
	n	mean	std	\	95% CI		n	mean	std	\	95% CI		n	mean	std	\	95% CI					
Higher education	1052	81	10	81	82		1167	78	9	77	78		725	72	11	72	73		-9	***	-5	***
Lower education	1887	83	10	82	83		1017	79	10	79	80		339	74	10	73	75		-8	***	-5	***

Systolic blood pressure not under drug treatment (mmHg)

Educational level	1998-2002					ANOVA within period sign ***	2008-2012					ANOVA within period sign ***	2018-2019					ANOVA within period sign ***	2018-2019 Diff	t-test sign	2018-2019 Diff	t-test sign
	n	mean	std	\	95% CI		n	mean	std	\	95% CI		n	mean	std	\	95% CI					
Higher education	928	128	16	127	129		992	121	14	120	122		593	119	15	118	120		-9	***	-2	**
Lower education	1331	129	16	129	130		651	127	16	126	128		203	124	16	121	126		-6	***	-3	*

Diastolic blood pressure not under drug treatment (mmHg)

Educational level	1998-2002					ANOVA within period sign ***	2008-2012					ANOVA within period sign ***	2018-2019					ANOVA within period sign *	2018-2019 Diff	t-test sign	2018-2019 Diff	t-test sign
	n	mean	std	\	95% CI		n	mean	std	\	95% CI		n	mean	std	\	95% CI					
Higher education	928	81	10	80	81		992	77	9	76	78		593	71	10	71	72		-9	***	-6	***
Lower education	1331	81	10	81	82		651	78	9	78	79		203	73	10	72	75		-8	***	-5	***

Heart rate (beats per minute)

Educational level	1998-2002					ANOVA within period sign ns	2008-2012					ANOVA within period sign ns	2018-2019					ANOVA within period sign ns	2018-2019 Diff	t-test sign	2018-2019 Diff	t-test sign
	n	mean	std	\	95% CI		n	mean	std	\	95% CI		n	mean	std	\	95% CI					
Higher education	1047	69	11	69	70		1167	71	9	70	72		725	73	10	72	73		3	***	2	**
Lower education	1884	70	11	69	70		1017	71	10	71	72		339	73	11	72	74		3	***	2	**

Means and standard deviations age-standardized by ISTAT Italian population 2000, 2010 and 2019 respectively. SD: standard deviation; CI: confidence interval. Diff: mean difference between 2018–2019 and 1998–2002 or 2018–2019 and 2008–2012; the values are approximated taking into account the first decimal of means. Higher education - high school or college; lower education - primary or middle school. ANOVA: Analysis of Variance to compare variables among age classes within periods. t-test to compare variables between periods. *** p-value<0.0001; ** p-value<0.01; *p-value<0.05; ns not significant p-value. Pool of the following Italian Regions: Lombardy, Piedmont, Liguria, Emilia Romagna, Tuscany, Lazio, Abruzzo, Basilicata, Calabria, and Sicily.

Table S6. Prevalence of blood pressure treatment, raised blood pressure, hypertension and state of hypertension control based on measurements, by age class and period. Italian resident men aged 35–74 years, the CUORE Project Surveys 1998-2002, 2008-2012 and 2018-2019.

MEN

Blood pressure drug treatment

Age class (years)	1998-2002 n	%	95% CI		Chi² within period	2008-2012 n	%	95% CI		Chi² within period	2018-2019 n	%	95% CI		Chi² within period	2018-2019 vs 1998-2002 Diff	chi² sign	2018-2019 vs 2008-2012 Diff	chi² sign
					***					***					***				
35-44	717	5	3	6		530	5	3	7		248	4	2	7		-0.4	ns	-0.5	ns
45-54	752	15	12	17		588	18	15	21		248	15	10	19		-0.4	ns	-4	ns
55-64	784	26	23	29		564	34	30	38		277	39	33	44		13	***	4	ns
65-74	732	38	34	41		536	53	49	57		258	52	45	58		14	**	-1	ns

Raised blood pressure

Age class (years)	1998-2002 n	%	95% CI		Chi² within period	2008-2012 n	%	95% CI		Chi² within period	2018-2019 n	%	95% CI		Chi² within period	2018-2019 vs 1998-2002 Diff	chi² sign	2018-2019 vs 2008-2012 Diff	chi² sign
					***					***					***				
35-44	717	33	30	37		530	26	22	29		248	19	14	23		-15	***	-7	*
45-54	752	46	43	50		588	40	36	44		248	26	20	31		-21	***	-14	***
55-64	784	59	56	63		564	46	41	50		277	35	29	40		-25	***	-11	**
65-74	732	70	67	73		536	55	51	60		258	43	37	49		-27	***	-12	**

Hypertension

Age class (years)	1998-2002 n	%	95% CI		Chi² within period	2008-2012 n	%	95% CI		Chi² within period	2018-2019 n	%	95% CI		Chi² within period	2018-2019 vs 1998-2002 Diff	chi² sign	2018-2019 vs 2008-2012 Diff	chi² sign
					***					***					**				
35-44	717	35	31	38		530	28	24	32		248	21	16	26		-14	***	-7	*
45-54	752	51	47	54		588	46	42	50		248	32	26	38		-19	***	-14	**
55-64	784	64	61	68		564	62	58	66		277	58	53	64		-6	ns	-3	ns
65-74	732	76	72	79		536	76	72	80		258	74	69	79		-2	ns	-2	ns

Undiagnosed hypertension

Age class (years)	1998-2002 n	%	95% CI		Chi² within period	2008-2012 n	%	95% CI		Chi² within period	2018-2019 n	%	95% CI		Chi² within period	2018-2019 vs 1998-2002 Diff	chi² sign	2018-2019 vs 2008-2012 Diff	chi² sign
					**					***					***				
35-44	249	67	62	73		149	54	46	62		52	62	48	75		-6	ns	8	ns
45-54	380	52	47	57		269	40	34	46		79	35	25	46		-16	**	-4	ns
55-64	505	48	44	52		349	32	27	37		162	23	17	30		-25	***	-8	ns
65-74	553	39	35	43		407	25	20	29		191	21	16	27		-18	***	-3	ns

Diagnosed but untreated hypertension

Age class (years)	1998-2002 n	%	95% CI		Chi² within period	2008-2012 n	%	95% CI		Chi² within period	2018-2019 n	%	95% CI		Chi² within period	2018-2019 vs 1998-2002 Diff	chi² sign	2018-2019 vs 2008-2012 Diff	chi² sign
					***					***					ns				
35-44	249	18	14	23		149	29	22	36		52	17	7	28		-1	ns	-12	ns
45-54	380	19	15	23		269	20	16	25		79	19	10	28		0.0	ns	-1	ns
55-64	505	12	9	14		349	13	9	16		162	10	6	15		-1	ns	-2	ns
65-74	553	10	8	13		407	6	3	8		191	9	5	13		-1	ns	3	ns

Uncontrolled hypertension

Age class (years)	1998-2002 n	%	95% CI		Chi² within period	2008-2012 n	%	95% CI		Chi² within period	2018-2019 n	%	95% CI		Chi² within period	2018-2019 vs 1998-2002 Diff	chi² sign	2018-2019 vs 2008-2012 Diff	chi² sign
					***					***					ns				
35-44	249	10	7	14		149	9	4	13		52	10	2	18		-1	ns	1	ns
45-54	380	21	17	25		269	27	22	32		79	27	17	36		5	ns	-1	ns
55-64	505	32	28	37		349	29	24	34		162	25	19	32		-7	ns	-4	ns
65-74	553	43	39	47		407	43	38	48		191	28	22	35		-15	**	-14	**

Controlled hypertension

Age class (years)	1998-2002 n	%	95% CI		Chi² within period	2008-2012 n	%	95% CI		Chi² within period	2018-2019 n	%	95% CI		Chi² within period	2018-2019 vs 1998-2002 Diff	chi² sign	2018-2019 vs 2008-2012 Diff	chi² sign
					ns					***					***				
35-44	249	4	1	6		149	9	4	13		52	12	3	20		8	*	3	ns
45-54	380	8	5	11		269	13	9	17		79	19	10	28		11	**	6	ns
55-64	505	8	5	10		349	26	22	31		162	41	33	48		33	***	14	**
65-74	553	7	5	9		407	27	23	31		191	41	34	48		34	***	14	**

CI: confidence interval. Diff: prevalence difference between 2018–2019 and 1998–2002 or 2018–2019 and 2008–2012; the values are approximated taking into account the first decimal of prevalence. Chi-squared test to compare prevalences between periods and among age classes within the period. Raised blood pressure: systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg. Hypertension: systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg and/or under specific pharmacological treatment. Hypertension is divided into 'undiagnosed, 'diagnosed but untreated', 'uncontrolled' (treated and SBP≥ 140 mmHg or DBP≥ 90 mmHg) and 'controlled' (treated and SBP < 140 mmHg and DBP < 90 mmHg). Pool of the following Italian Regions: Piedmont, Lombardy, Liguria, Emilia Romagna, Tuscany, Lazio, Abruzzo, Basilicata, Calabria, and Sicily.

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Table S7. Prevalence of blood pressure treatment, raised blood pressure, hypertension and state of hypertension control based on measurements, by age class and period. Italian resident women aged 35–74 years, the CUORE Project Surveys 1998-2002, 2008-2012 and 2018-2019.

WOMEN

Blood pressure drug treatment

Age class (years)	1998-2002 n	%	95% CI		Chi-squared test within period sign ***	2008-2012 n	%	95% CI		Chi-squared test within period sign ***	2018-2019 n	%	95% CI		2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
35-44	715	2	1	3		514	3	1	4		237	1	0	3	-1	ns	-2	ns
45-54	769	15	12	17		577	12	9	14		271	12	8	16	-2	ns	1	ns
55-64	778	31	27	34		584	31	28	35		280	28	22	33	-3	ns	-4	ns
65-74	693	46	42	50		529	54	50	58		278	56	50	62	10	**	2	ns

Raised blood pressure

Age class (years)	1998-2002 n	%	95% CI		Chi-squared test within period sign ***	2008-2012 n	%	95% CI		Chi-squared test within period sign ***	2018-2019 n	%	95% CI		2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
35-44	715	15	12	17		514	6	4	9		237	5	2	8	-9	**	-1	ns
45-54	769	33	30	37		577	18	15	21		271	13	9	16	-21	***	-5	*
55-64	778	50	47	54		584	34	30	38		280	20	15	25	-30	***	-14	***
65-74	693	68	65	72		529	54	50	58		278	31	25	36	-38	***	-23	***

Hypertension

Age class (years)	1998-2002 n	%	95% CI		Chi-squared test within period sign ***	2008-2012 n	%	95% CI		Chi-squared test within period sign ***	2018-2019 n	%	95% CI		2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
35-44	715	15	13	18		514	8	6	11		237	6	3	9	-9	**	-2	ns
45-54	769	38	35	41		577	25	21	28		271	21	17	26	-17	***	-4	ns
55-64	778	58	55	61		584	49	45	53		280	40	35	46	-18	***	-8	*
65-74	693	77	74	80		529	73	69	76		278	64	59	70	-12	***	-8	*

Undiagnosed hypertension

Age class (years)	1998-2002 n	%	95% CI		Chi-squared test within period sign ***	2008-2012 n	%	95% CI		Chi-squared test within period sign ***	2018-2019 n	%	95% CI		2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
35-44	110	62	53	71		43	40	25	54		15	47	21	72	-15	ns	7	ns
45-54	292	45	40	51		144	39	31	47		58	29	18	41	-16	*	-10	ns
55-64	451	33	29	38		285	24	19	28		113	21	14	29	-12	*	-2	ns
65-74	532	32	28	36		384	20	16	23		179	11	6	15	-22	***	-9	**

Diagnosed but untreated hypertension

Age class (years)	1998-2002 n	%	95% CI		Chi-squared test within period sign ***	2008-2012 n	%	95% CI		Chi-squared test within period sign **	2018-2019 n	%	95% CI		2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
35-44	110	23	15	31		43	26	13	39		15	33	9	57	11	ns	8	ns
45-54	292	16	12	21		144	15	9	20		58	14	5	23	-3	ns	-1	ns
55-64	451	14	10	17		285	12	8	16		113	11	5	16	-3	ns	-2	ns
65-74	532	8	6	10		384	6	4	9		179	2	0	4	-6	***	-4	***

Uncontrolled hypertension

Age class (years)	1998-2002 n	%	95% CI		Chi-squared test within period sign ***	2008-2012 n	%	95% CI		Chi-squared test within period sign ***	2018-2019 n	%	95% CI		2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
35-44	110	10	4	16		43	12	2	21		15	0	0	0	-10	–	-12	–
45-54	292	26	21	31		144	19	12	25		58	16	6	25	-11	ns	-3	ns
55-64	451	39	35	44		285	33	28	39		113	18	11	25	-22	***	-16	**
65-74	532	49	45	53		384	48	43	53		179	35	28	42	-14	***	-14	***

Controlled hypertension

Age class (years)	1998-2002 n	%	95% CI		Chi-squared test within period sign ns	2008-2012 n	%	95% CI		Chi-squared test within period sign ns	2018-2019 n	%	95% CI		2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
35-44	110	5	1	10		43	23	11	36		15	20	0	40	15	*	-3	ns
45-54	292	12	8	16		144	28	20	35		58	41	29	54	29	***	14	ns
55-64	451	14	10	17		285	31	26	36		113	50	41	60	37	***	20	**
65-74	532	11	8	14		384	26	21	30		179	53	45	60	41	***	27	*

CI: confidence interval. Diff: prevalence difference between 2018–2019 and 1998–2002 or 2018–2019 and 2008–2012; the values are approximated taking into account the first decimal of prevalence. Chi-squared test to compare prevalences between periods and among age classes within the period. Raised blood pressure: systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg. Hypertension: systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg and/or under specific pharmacological treatment. Hypertension is divided into 'undiagnosed, 'diagnosed but untreated', 'uncontrolled' (treated and SBP≥ 140 mmHg or DBP≥ 90 mmHg) and 'controlled' (treated and SBP < 140 mmHg and DBP < 90 mmHg). Pool of the following Italian Regions: Piedmont, Lombardy, Liguria, Emilia Romagna, Tuscany, Lazio, Abruzzo, Basilicata, Calabria, and Sicily.

Table S8. Prevalence of blood pressure treatment, raised blood pressure, hypertension and state of hypertension control based on measurements, by educational class and period. Italian resident men aged 35–74 years, the CUORE Project Surveys 1998-2002, 2008-2012 and 2018-2019.

MEN

Blood pressure drug treatment

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					ns					ns					ns				
Higher education	1249	18	16	20		1183	24	22	27		725	26	23	29		8	***	2	ns
Lower education	1730	19	18	21		1018	25	22	28		303	24	19	29		5	ns	-1	ns

Raised blood pressure

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					ns					**					ns				
Higher education	1249	48	45	51		1183	35	33	38		725	28	25	31		-20	***	-7	**
Lower education	1730	51	49	54		1018	43	40	46		303	34	29	39		-17	***	-9	**

Hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					*					ns					ns				
Higher education	1249	51	49	54		1183	48	45	51		725	43	40	47		-8	**	-4	ns
Lower education	1730	55	53	58		1018	51	48	54		303	46	40	52		-9	**	-5	ns

Undiagnosed hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					ns					ns					ns				
Higher education	621	53	49	57		555	38	34	42		314	36	30	41		-18	***	-2	ns
Lower education	1063	54	51	57		610	40	36	44		168	38	30	45		-16	**	-2	ns

Diagnosed but untreated hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					ns					ns					ns				
Higher education	621	16	13	19		555	20	17	23		314	13	10	17		-3	ns	-6	*
Lower education	1063	15	13	17		610	16	13	19		168	16	10	21		1	***	-0.4	ns

Uncontrolled hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					ns					**					ns				
Higher education	621	24	21	28		555	21	18	25		314	21	17	26		-3	ns	0.1	ns
Lower education	1063	25	22	27		610	29	25	32		168	26	20	33		2	***	-2	ns

Controlled hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					ns					**					*				
Higher education	621	6	4	8		555	21	18	25		314	30	25	35		24	***	8	**
Lower education	1063	7	5	8		610	15	12	18		168	20	14	26		13	**	5	ns

Prevalence are age-standardized by ISTAT Italian population 2000, 2010 and 2019 respectively. CI: confidence interval. Diff: prevalence difference between 2018–2019 and 1998–2002 or 2018–2019 and 2008–2012; the values are approximated taking into account the first decimal of prevalence. Higher education - high school or college; lower education - primary or middle school. Chi-squared test to compare prevalences between periods and among age classes within the period. Raised blood pressure: systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg. Hypertension: systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg and/or under specific pharmacological treatment. Hypertension is divided into 'undiagnosed, 'diagnosed but untreated', 'uncontrolled' (treated and SBP≥ 140 mmHg or DBP≥ 90 mmHg) and 'controlled' (treated and SBP < 140 mmHg and DBP < 90 mmHg). Pool of the following Italian Regions: Piedmont, Lombardy, Liguria, Emilia Romagna, Tuscany, Lazio, Abruzzo, Basilicata, Calabria, and Sicily.

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Table S9. Prevalence of blood pressure treatment, raised blood pressure, hypertension and state of hypertension control based on measurements, by educational class and period. Italian resident women aged 35–74 years, the CUORE Project Surveys 1998-2002, 2008-2012 and 2018-2019.

WOMEN

Blood pressure drug treatment

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					***					***					**				
Higher education	1052	16	14	19		1167	19	16	21		725	19	17	22		3	ns	1	ns
Lower education	1887	23	22	25		1017	26	23	28		339	27	23	32		4	ns	2	ns

Raised blood pressure

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					**					***					**				
Higher education	1052	35	32	38		1167	22	19	24		725	14	12	17		-21	***	-7	***
Lower education	1887	42	40	44		1017	29	26	32		339	21	17	25		-21	***	-8	**

Hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					**					***					**				
Higher education	1052	40	37	43		1167	31	28	34		725	28	25	31		-12	***	-3	ns
Lower education	1887	47	45	49		1017	40	37	43		339	39	34	44		-8	**	-1	ns

Undiagnosed hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					ns					**					ns				
Higher education	337	47	42	53		311	36	31	42		192	27	21	34		-20	***	-9	*
Lower education	1037	43	40	46		534	25	21	28		172	29	23	36		-14	**	5	ns

Diagnosed but untreated hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					ns					ns					ns				
Higher education	337	19	14	23		311	15	11	19		192	16	11	22		-2	ns	1	ns
Lower education	1037	15	13	18		534	17	13	20		172	13	8	18		-3	***	-4	*

Uncontrolled hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					**					ns					ns				
Higher education	337	23	19	28		311	22	18	27		192	15	10	20		-8	*	-7	*
Lower education	1037	31	29	34		534	28	25	32		172	17	12	23		-14	***	-11	ns

Controlled hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					ns					ns					ns				
Higher education	337	11	7	14		311	26	21	31		192	41	34	48		31	***	15	**
Lower education	1037	10	8	12		534	31	27	34		172	40	33	48		30	***	10	ns

Prevalence are age-standardized by ISTAT Italian population 2000, 2010 and 2019 respectively. CI: confidence interval. Diff: prevalence difference between 2018–2019 and 1998–2002 or 2018–2019 and 2008–2012; the values are approximated taking into account the first decimal of prevalence. Higher education - high school or college; lower education - primary or middle school. Chi-squared test to compare prevalences between periods and among age classes within the period. Raised blood pressure: systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg. Hypertension: systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90. Hypertension is divided into 'undiagnosed, 'diagnosed but untreated', 'uncontrolled' (treated and SBP≥ 140 mmHg or DBP≥ 90 mmHg) and 'controlled' (treated and SBP < 140 mmHg and DBP < 90 mmHg). Pool of the following Italian Regions: Piedmont, Lombardy, Liguria, Emilia Romagna, Tuscany, Lazio, Abruzzo, Basilicata, Calabria, and Sicily.

Table S10. Age-standardized blood pressure mean values, and prevalence of raised blood pressure, hypertension and controlled hypertension based on measurements by sex and Italian Region. Italian resident men and women aged 35–74 years, the CUORE Project Survey 2018-2019.

2018-2019

MEN

Italian Region	n	Systolic blood pressure (mmHg) mean	SD	95%CI		Diastolic blood pressure (mmHg) mean	SD	95%CI		Raised blood pressure %	95% CI		Hypertension %	95% CI		Controlled hypertension %	95% CI	
Abruzzo	102	134	14	132	137	78	10	76	80	36	27	45	47	37	56	18	10	25
Calabria	101	132	13	130	135	76	9	75	78	31	22	40	49	39	59	31	22	40
Liguria	104	127	12	125	130	76	10	74	78	20	12	27	40	30	49	31	22	40
Lazio	99	130	13	127	133	79	10	77	81	29	20	38	47	37	57	31	22	40
Lombardy	98	134	15	131	137	78	9	76	80	37	27	46	48	38	58	19	11	26
Piedmont	104	129	13	126	131	75	9	73	77	18	11	26	35	26	45	43	34	53
Emilia Romagna	104	134	15	131	137	79	10	77	81	30	21	39	42	33	51	20	12	27
Basilicata	106	134	15	132	137	80	10	78	82	35	26	44	48	39	58	27	19	36
Tuscany	108	129	13	127	132	77	9	75	79	28	20	37	40	31	50	25	17	33
Sicily	105	132	13	129	134	78	10	76	80	33	24	42	44	35	54	27	18	35

WOMEN

Italian Region	n	Systolic blood pressure (mmHg) mean	SD	95%CI		Diastolic blood pressure (mmHg) mean	SD	95%CI		Raised blood pressure %	95% CI		Hypertension %	95% CI		Controlled hypertension %	95% CI	
Abruzzo	104	122	17	118	125	73	10	71	75	14	8	21	31	22	40	45	35	54
Calabria	109	121	14	119	124	70	10	68	72	16	9	23	40	31	50	48	38	57
Liguria	107	117	15	114	120	72	11	70	74	15	8	22	30	21	38	32	23	40
Lazio	114	124	14	122	127	76	9	74	78	16	9	22	35	26	43	68	60	77
Lombardy	100	127	18	124	131	75	11	73	77	24	16	33	37	27	46	35	25	44
Piedmont	113	117	13	115	119	70	9	68	71	8	3	13	16	10	23	43	34	53
Emilia Romagna	106	127	16	124	130	76	11	74	78	24	16	32	40	30	49	32	23	41
Basilicata	114	121	16	118	124	72	10	70	74	16	9	23	31	23	39	22	15	30
Tuscany	97	120	15	117	123	72	9	70	74	15	8	23	22	14	31	22	14	30
Sicily	102	124	14	121	127	74	9	72	76	17	10	24	37	27	46	63	54	73

SD: standard deviations. Means, standard deviations and prevalences were age-standardized by Italian National Institute of Statistics-ISTAT Italian population 2019. Raised blood pressure: systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg. Hypertension: systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg and/or under specific pharmacological treatment. Controlled hypertension: treated and SBP < 140 mmHg and DBP < 90 mmHg. Regional data for 1998–2002 and 2008–2012 CUORE Project surveys were available at http://www.cuore.iss.it/eng/survey/cuoredata.

Table S11. Blood pressure and heart rate measurements and prevalence of blood pressure treatment, raised blood pressure, hypertension and state of hypertension control, (age-adjusted using the European standard population) by sex and period. Italian resident men and women aged 35–74 years, the CUORE Project Surveys 1998-2002, 2008-2012 and 2018-2019.

MEN

	1998-2002 n=2985			2008-2012 n=2218			2018-2019 n=1031			2018-2019 vs 1998-2002		2018-2019 vs 2008-2012	
	mean	SD	95% CI	mean	SD	95% CI	mean	SD	95% CI	Diff	t-test p-value	Diff	t-test p-value
Systolic blood pressure - SBP (mmHg)	136	18	136 137	132	16	132 133	132	14	131 132	-5	***	-1	ns
Diastolic blood pressure - DBP (mmHg)	86	11	86 87	84	10	83 84	77	10	77 78	-9	***	-6	***
SBP not under drug treatment (mmHg)	134	17	133 135	131	16	130 131	131	14	130 132	-3	***	0.3	ns
DBP not under drug treatment (mmHg)	85	10	85 86	83	10	83 84	77	10	76 77	-9	***	-6	***
Heart rate (beats per minute)	66	11	66 66	69	10	68 69	72	12	71 72	6	***	3	***
	%		95% CI	%		95% CI	%		95% CI	Diff	chi-squared p-value	Diff	chi-squared p-value
Blood pressure drug treatment	20		18 21	26		24 27	25		23 28	6	**	-0.4	ns
Raised blood bressure	51		49 53	41		39 43	30		27 32	-21	***	-11	***
Hypertension	55		53 57	51		49 53	44		41 47	-11	***	-7	**
Hypertension													
Undiagnosed	53		50 55	39		36 41	37		32 41	-16	***	-2	ns
Diagnosed but untreated	15		14 17	18		16 20	14		11 17	-1	ns	-3	ns
Uncontrolled	26		23 28	26		23 28	22		18 26	-4	ns	-4	ns
Controlled	7		5 8	18		16 20	27		23 31	20	***	9	***

WOMEN

	1998-2002 n=2951			2008-2012 n=2185			2018-2019 n=1066			2018-2019 vs 1998-2002		2018-2019 vs 2008-2012	
	mean	SD	95% CI	mean	SD	95% CI	mean	SD	95% CI	Diff	t-test p-value	Diff	t-test p-value
Systolic blood pressure - SBP (mmHg)	132	18	131 132	127	17	126 127	122	16	121 123	-10	***	-5	***
Diastolic blood pressure - DBP (mmHg)	82	10	82 83	79	9	78 79	73	11	72 73	-9	***	-6	***
SBP not under drug treatment (mmHg)	129	16	128 129	124	15	123 125	120	15	119 121	-9	***	-4	***
DBP not under drug treatment (mmHg)	81	10	80 81	78	9	77 78	72	10	71 72	-9	***	-6	***
Heart rate (beats per minute)	70	11	69 70	71	9	71 71	73	11	72 73	3	***	2	***
	%		95% CI	%		95% CI	%		95% CI	Diff	chi-squared p-value	Diff	chi-squared p-value
Blood pressure drug treatment	22		20 23	23		21 25	22		19 24	0.3	ns	-1	ns
Raised blood bressure	40		38 41	26		24 28	16		14 18	-23	***	-10	***
Hypertension	45		43 46	36		34 38	31		28 34	-14	***	-5	**
Hypertension													
Undiagnosed	44		42 47	31		28 34	28		24 33	-16	***	-3	ns
Diagnosed but untreated	16		14 18	15		13 18	16		12 20	0.3	ns	1	ns
Uncontrolled	30		27 32	26		24 29	16		12 19	-14	***	-11	***
Controlled	10		9 12	27		24 30	40		35 45	30	***	13	***

Means, standard deviation and prevalence are age-standardized by European standard population 2013. SD: standard deviation. CI: confidence interval. Diff: mean or percentage difference between 2018–2019 and 1998–2002 or 2018–2019 and 2008–2012; the values are approximated taking into account the first decimal of means or prevalence. t-test to compare mean values between periods. Chi-squared test to compare prevalences between periods. Raised blood pressure: systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg. Hypertension: systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg and/or under specific pharmacological treatment. Hypertension is divided into 'undiagnosed, 'diagnosed but untreated', 'uncontrolled' (treated and SBP≥ 140 mmHg or DBP≥ 90 mmHg) and 'controlled' (treated and SBP < 140 mmHg and DBP < 90 mmHg). Pool of the following Italian Regions: Piedmont, Lombardy, Liguria, Emilia Romagna, Tuscany, Lazio, Abruzzo, Basilicata, Calabria, and Sicily.

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Table S12. Blood pressure measurements and heart rate mean levels by educational level and period (age-adjusted using the European standard population). Italian resident men aged 35–74 years, the CUORE Project Surveys 1998–2002, 2008–2012, and 2018–2019.

MEN

Systolic blood pressure (mmHg)

Educational level	1998-2002					ANOVA within period sign ***	2008-2012					ANOVA within period sign ***	2018-2019					ANOVA within period sign ***	2018-2019 vs 1998-2002		2018-2019 vs 2008-2012	
	n	mean	SD	95% CI			n	mean	SD	95% CI			n	mean	SD	95% CI			Diff	t-test sign	Diff	t-test sign
Higher education	1249	**135**	17	135	136		1183	**131**	15	130	131		725	**131**	14	130	132		-5	***	0.1	ns
Lower education	1730	**137**	18	136	138		1018	**134**	17	133	135		303	**134**	16	132	135		-3	**	-0.3	ns

Diastolic blood pressure (mmHg)

Educational level	1998-2002					ANOVA within period sign ns	2008-2012					ANOVA within period sign ns	2018-2019					ANOVA within period sign ns	2018-2019 vs 1998-2002		2018-2019 vs 2008-2012	
	n	mean	SD	95% CI			n	mean	SD	95% CI			n	mean	SD	95% CI			Diff	t-test sign	Diff	t-test sign
Higher education	1249	**87**	11	86	87		1183	**83**	10	83	84		725	**77**	10	77	78		-9	***	-6	***
Lower education	1730	**86**	11	86	87		1018	**84**	10	83	84		303	**78**	10	77	79		-8	***	-6	***

Systolic blood pressure not under drug treatment (mmHg)

Educational level	1998-2002					ANOVA within period sign ***	2008-2012					ANOVA within period sign ***	2018-2019					ANOVA within period sign ***	2018-2019 vs 1998-2002		2018-2019 vs 2008-2012	
	n	mean	SD	95% CI			n	mean	SD	95% CI			n	mean	SD	95% CI			Diff	t-test sign	Diff	t-test sign
Higher education	1046	**134**	16	133	135		913	**129**	15	128	130		537	**130**	13	129	131		-4	***	1	ns
Lower education	1305	**134**	17	133	135		680	**132**	16	131	133		205	**133**	15	131	135		-1	ns	1	ns

Diastolic blood pressure not under drug treatment (mmHg)

Educational level	1998-2002					ANOVA within period sign ns	2008-2012					ANOVA within period sign ns	2018-2019					ANOVA within period sign ns	2018-2019 vs 1998-2002		2018-2019 vs 2008-2012	
	n	mean	SD	95% CI			n	mean	SD	95% CI			n	mean	SD	95% CI			Diff	t-test sign	Diff	t-test sign
Higher education	1046	**86**	10	85	86		913	**83**	10	82	83		537	**77**	10	76	78		-9	***	-6	***
Lower education	1305	**85**	10	85	86		680	**83**	10	83	84		205	**77**	9	76	78		-8	***	-6	***

Heart rate (beats per minute)

Educational level	1998-2002					ANOVA within period sign ns	2008-2012					ANOVA within period sign ns	2018-2019					ANOVA within period sign **	2018-2019 vs 1998-2002		2018-2019 vs 2008-2012	
	n	mean	SD	95% CI			n	mean	SD	95% CI			n	mean	SD	95% CI			Diff	t-test sign	Diff	t-test sign
Higher education	1244	**66**	11	65	67		1183	**66**	11	65	67		725	**71**	11	70	71		5	***	5	***
Lower education	1730	**66**	11	65	67		1018	**66**	12	66	67		303	**74**	12	73	76		8	***	8	***

Means and standard deviations age-standardized by European standard population 2013. SD: standard deviation; CI: confidence interval. Diff: mean difference between 2018–2019 and 1998–2002 or 2018–2019 and 2008–2012; the values are approximated taking into account the first decimal of means. Higher education - high school or college; lower education - primary or middle school. ANOVA: Analysis of Variance to compare variables among age classes within periods. t-test to compare variables between periods. *** p-value<0.0001; ** p-value<0.01; *p-value<0.05; ns not significant p-value. Pool of the following Italian Regions: Piedmont, Lombardy, Liguria, Emilia Romagna, Tuscany, Lazio, Abruzzo, Basilicata, Calabria, and Sicily.

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Table S13. Blood pressure measurements and heart rate mean levels by educational level and period (age-adjusted using the European standard population). Italian resident women aged 35–74 years, the CUORE Project Surveys 1998–2002, 2008–2012, and 2018–2019.

WOMEN

Systolic blood pressure (mmHg)

Educational level	1998-2002			95% CI	ANOVA within period sign	2008-2012			95% CI	ANOVA within period sign	2018-2019			95% CI	ANOVA within period sign	2018-2019 vs 1998-2002 Diff	t-test sign	2018-2019 vs 2008-2012 Diff	t-test sign
	n	mean	SD		***	n	mean	SD		***	n	mean	SD		***				
Higher education	1052	**130**	16	129 131		1167	**124**	15	123 125		725	**120**	15	119 121		-10	***	-4	***
Lower education	1887	**133**	18	132 134		1017	**130**	18	129 131		339	**125**	17	123 127		-8	***	-4	***

Diastolic blood pressure (mmHg)

Educational level	1998-2002			95% CI	ANOVA within period sign	2008-2012			95% CI	ANOVA within period sign	2018-2019			95% CI	ANOVA within period sign	2018-2019 vs 1998-2002 Diff	t-test sign	2018-2019 vs 2008-2012 Diff	t-test sign
	n	mean	SD		***	n	mean	SD		***	n	mean	SD		**				
Higher education	1052	**81**	10	81 82		1167	**78**	9	77 78		725	**72**	11	72 73		-9	***	-6	***
Lower education	1887	**83**	10	82 83		1017	**79**	10	79 80		339	**74**	10	73 75		-9	***	-5	***

Systolic blood pressure not under drug treatment (mmHg)

Educational level	1998-2002			95% CI	ANOVA within period sign	2008-2012			95% CI	ANOVA within period sign	2018-2019			95% CI	ANOVA within period sign	2018-2019 vs 1998-2002 Diff	t-test sign	2018-2019 vs 2008-2012 Diff	t-test sign
	n	mean	SD		***	n	mean	SD		***	n	mean	SD		***				
Higher education	928	**128**	16	127 129		992	**122**	14	121 122		593	**119**	15	117 120		-9	***	-3	***
Lower education	1331	**129**	16	129 130		651	**127**	16	126 128		203	**123**	16	121 125		-6	***	-4	**

Diastolic blood pressure not under drug treatment (mmHg)

Educational level	1998-2002			95% CI	ANOVA within period sign	2008-2012			95% CI	ANOVA within period sign	2018-2019			95% CI	ANOVA within period sign	2018-2019 vs 1998-2002 Diff	t-test sign	2018-2019 vs 2008-2012 Diff	t-test sign
	n	mean	SD		***	n	mean	SD		***	n	mean	SD		*				
Higher education	928	**81**	10	80 81		992	**77**	9	77 78		593	**71**	10	70 72		-9	***	-6	***
Lower education	1331	**81**	10	81 82		651	**78**	9	78 79		203	**73**	10	72 75		-8	***	-5	***

Heart rate (beats per minute)

Educational level	1998-2002			95% CI	ANOVA within period sign	2008-2012			95% CI	ANOVA within period sign	2018-2019			95% CI	ANOVA within period sign	2018-2019 vs 1998-2002 Diff	t-test sign	2018-2019 vs 2008-2012 Diff	t-test sign
	n	mean	SD		ns	n	mean	SD		ns	n	mean	SD		ns				
Higher education	1047	**69**	11	69 70		1167	**71**	9	70 71		725	**73**	10	72 73		3	***	2	**
Lower education	1884	**70**	11	69 70		1017	**71**	9	71 72		339	**73**	11	72 75		4	***	2	**

Means and standard deviations age-standardized by European standard population 2013. SD: standard deviation; CI: confidence interval. Diff: mean difference between 2018–2019 and 1998–2002 or 2018–2019 and 2008–2012; the values are approximated taking into account the first decimal of means. Higher education - high school or college; lower education - primary or middle school. ANOVA: Analysis of Variance to compare variables among age classes within periods. t-test to compare variables between periods. *** p-value<0.0001; ** p-value<0.01; *p-value<0.05; ns not significant p-value. Pool of the following Italian Regions: Piedmont, Lombardy, Liguria, Emilia Romagna, Tuscany, Lazio, Abruzzo, Basilicata, Calabria, and Sicily.

Table S14. Prevalence of blood pressure treatment, raised blood pressure, hypertension and state of hypertension control based on measurements, by educational class and period (age-adjusted using the European standard population). Italian resident men aged 35–74 years, the CUORE Project Surveys 1998-2002, 2008-2012 and 2018-2019.

MEN

Blood pressure drug treatment

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					ns					ns					ns				
Higher education	1249	19	16	21		1183	26	23	28		725	26	23	29		7	**	0.2	ns
Lower education	1730	20	18	22		1018	26	24	29		303	24	19	29		4	ns	-2	ns

Raised blood pressure

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					ns					**					ns				
Higher education	1249	49	46	52		1183	36	33	39		725	28	25	31		-21	***	-8	**
Lower education	1730	52	50	55		1018	44	41	47		303	34	29	39		-18	***	-10	**

Hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					*					ns					ns				
Higher education	1249	53	50	55		1183	49	46	52		725	43	40	47		-9	***	-6	*
Lower education	1730	56	54	59		1018	53	50	56		303	46	40	52		-10	**	-7	*

Undiagnosed hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					ns					ns					ns				
Higher education	621	53	49	57		555	36	32	40		314	36	31	41		-17	***	-0.2	ns
Lower education	1063	53	50	56		610	39	35	43		168	38	31	46		-15	**	-1	ns

Diagnosed but untreated hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					ns					ns					ns				
Higher education	621	16	13	19		555	19	16	22		314	13	10	17		-2	ns	-6	*
Lower education	1063	15	12	17		610	16	13	18		168	15	10	21		1	***	-0.1	ns

Uncontrolled hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					ns					**					ns				
Higher education	621	25	22	29		555	22	19	26		314	21	17	26		-4	ns	-1	ns
Lower education	1063	26	23	28		610	30	26	33		168	26	19	33		0.5	***	-4	ns

Controlled hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign	2008-2012 n	%	95% CI		Chi-squared test within period sign	2018-2019 n	%	95% CI		Chi-squared test within period sign	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
					ns					**					*				
Higher education	621	6	4	8		555	22	19	26		314	30	24	35		23	***	7	*
Lower education	1063	7	5	8		610	15	12	18		168	20	14	26		13	**	5	ns

Prevalence are age-standardized by age-standardized by European standard population 2013. CI: confidence interval. Diff: prevalence difference between 2018–2019 and 1998–2002 or 2018–2019 and 2008–2012; the values are approximated taking into account the first decimal of prevalence. Higher education - high school or college; lower education - primary or middle school. Chi-squared test to compare prevalences between periods and among age classes within the period. Raised blood pressure: systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg. Hypertension: systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 and/or under specific pharmacological treatment. Hypertension is divided into 'undiagnosed, 'diagnosed but untreated', 'uncontrolled' (treated and SBP≥ 140 mmHg or DBP≥ 90 mmHg) and 'controlled' (treated and SBP < 140 mmHg and DBP < 90 mmHg). Pool of the following Italian Regions: Piedmont, Lombardy, Liguria, Emilia Romagna, Tuscany, Lazio, Abruzzo, Basilicata, Calabria, and Sicily.

Table S15. Prevalence of blood pressure treatment, raised blood pressure, hypertension and state of hypertension control based on measurements, by educational class and period (age-adjusted using the European standard population). Italian resident women aged 35–74 years, the CUORE Project Surveys 1998-2002, 2008-2012 and 2018-2019.

WOMEN

Blood pressure drug treatment

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign ***	2008-2012 n	%	95% CI		Chi-squared test within period sign ***	2018-2019 n	%	95% CI		Chi-squared test within period sign **	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
Higher education	1052	16	14	19		1167	19	17	21		725	19	16	22		2	ns	-0.4	ns
Lower education	1887	24	22	25		1017	26	24	29		339	27	22	31		3	ns	0.4	ns

Raised blood pressure

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign **	2008-2012 n	%	95% CI		Chi-squared test within period sign ***	2018-2019 n	%	95% CI		Chi-squared test within period sign **	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
Higher education	1052	35	32	38		1167	22	20	24		725	14	11	16		-21	***	-8	***
Lower education	1887	42	40	44		1017	30	27	32		339	21	16	25		-21	***	-9	**

Hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign **	2008-2012 n	%	95% CI		Chi-squared test within period sign ***	2018-2019 n	%	95% CI		Chi-squared test within period sign **	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
Higher education	1052	40	37	43		1167	32	29	34		725	27	24	30		-13	***	-5	*
Lower education	1887	47	45	49		1017	41	38	44		339	38	33	43		-9	**	-3	ns

Undiagnosed hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign ns	2008-2012 n	%	95% CI		Chi-squared test within period sign **	2018-2019 n	%	95% CI		Chi-squared test within period sign ns	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
Higher education	337	47	42	52		311	36	30	41		192	28	21	34		-19	***	-8	ns
Lower education	1037	43	40	46		534	25	21	28		172	31	24	38		-12	**	6	ns

Diagnosed but untreated hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign ns	2008-2012 n	%	95% CI		Chi-squared test within period sign ns	2018-2019 n	%	95% CI		Chi-squared test within period sign ns	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
Higher education	337	19	14	23		311	15	11	19		192	17	12	23		-1	ns	2	ns
Lower education	1037	15	13	18		534	16	13	19		172	13	8	18		-2	***	-3	*

Uncontrolled hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign **	2008-2012 n	%	95% CI		Chi-squared test within period sign *	2018-2019 n	%	95% CI		Chi-squared test within period sign ns	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
Higher education	337	24	19	28		311	23	18	27		192	14	9	19		-9	*	-8	*
Lower education	1037	32	29	34		534	29	25	33		172	17	11	22		-15	***	-12	ns

Controlled hypertension

Educational level	1998-2002 n	%	95% CI		Chi-squared test within period sign ns	2008-2012 n	%	95% CI		Chi-squared test within period sign ns	2018-2019 n	%	95% CI		Chi-squared test within period sign ns	2018-2019 vs 1998-2002 Diff	chi-squared sign	2018-2019 vs 2008-2012 Diff	chi-squared sign
Higher education	337	11	7	14		311	27	22	31		192	40	33	47		30	***	14	**
Lower education	1037	10	8	12		534	30	26	34		172	40	32	47		29	***	9	ns

Prevalence are age-standardized by age-standardized by European standard population 2013. CI: confidence interval. Diff: prevalence difference between 2018–2019 and 1998–2002 or 2018–2019 and 2008–2012; the values are approximated taking into account the first decimal of prevalence. Higher education - high school or college; lower education - primary or middle school. Chi-squared test to compare prevalences between periods and among age classes within the period. Raised blood pressure: systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg. Hypertension: systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 and/or under specific pharmacological treatment. Hypertension is divided into 'undiagnosed, 'diagnosed but untreated', 'uncontrolled' (treated and SBP≥ 140 mmHg or DBP≥ 90 mmHg) and 'controlled' (treated and SBP < 140 mmHg and DBP < 90 mmHg). Pool of the following Italian Regions: Piedmont, Lombardy, Liguria, Emilia Romagna, Tuscany, Lazio, Abruzzo, Basilicata, Calabria, and Sicily.