Appendix

Table A1: Overview over the sample flow by outcome

	Hypertension	Diabetes
Part of the core interview in waves 2,4,6,8&9	48,264 observations from 17,091 respondents	48,264 observations from 17,091 respondents
Valid data on self-reported measures	48,252 observations from 17,081 respondents	48,252 observations from 17,081 respondents
At least one valid objective measure	32,958 observations from 12,877 respondents	25,978observations from 11,985respondents
Restricted age range (50-85)	31,300 observations from 12,497 respondents	25,033observations from 11,670respondents
Restricted cohort range (1920-1967)	31,192 observations from 12,389 respondents	24,940observations from 11,577respondents
Valid data on education	30,589 observations from 12,128 respondents	24,464 observations from 11,337 respondents

Source: ELSA, release 2022, waves 2, 4, 6, 8 & 9, own calculations with unweighted data.

Table A2: Descriptive statistics by reporting status.

	Hypertension		Diabetes	
	Correct reporting	Under-reporting	Correct reporting	Under-reporting
Age	68.71	70.05	68.14	71,46
Cohort	1940	1940	1940	1941
Male	.46	.50	.48	.50
Higher education	.14	.13	.14	.10
Intermediate education	.29	.28	.28	.29
Lower education	.57	.59	.58	.61
N observations (weighted)	15,524	3,943	14,910	342
N observations (unweighted)	24,440	6,149	23,885	579

Source: ELSA, release 2022, waves 2, 4, 6, 8 & 9, own calculations with weighted data.

Table A3: Random-effect models of the probability of underreporting in hypertension (HBP) and diabetes.

	HBP underreporting		Diabetes underreporting	
	Women	Men	Women	Men
Age	0.004^{***}	0.002^{*}	0.003^{***}	0.004^{***}
	[0.002,0.005]	[0.000,0.003]	[0.003,0.004]	[0.003,0.004]
Cohort	0.002^{***}	-0.000	0.003^{***}	0.003^{***}
	[0.001,0.004]	[-0.002,0.001]	[0.002,0.003]	[0.002,0.003]
Education				
Higher	-0.009	-0.001	-0.009^{*}	-0.008^{*}
	[-0.034,0.016]	[-0.025,0.023]	[-0.018,-0.000]	[-0.016,-0.000]
Intermediate	0.000	0.002	-0.005	-0.002
	[-0.018,0.018]	[-0.020,0.024]	[-0.011,0.001]	[-0.009,0.006]
Higher * Age	0.003^{**}	0.001	0.000	0.000
	[0.001,0.005]	[-0.001,0.003]	[-0.001,0.001]	[-0.001,0.001]
Intermediate * Age	0.003^{***}	0.002^{*}	0.000	0.000
	[0.001,0.004]	[0.001,0.004]	[-0.000,0.001]	[-0.001,0.001]
Dropped out before wave 8	-0.014	0.008	0.010^{**}	0.000
	[-0.034,0.005]	[-0.013,0.030]	[0.002,0.017]	[-0.008,0.008]
Constant	0.181^{***}	0.189^{***}	0.016^{***}	0.024^{***}
	[0.165,0.198]	[0.170,0.207]	[0.010,0.022]	[0.017,0.031]
N	16141	13740	12526	10874

Source: ELSA, release 2022, waves 2, 4, 6, 8 & 9, own calculations. 95% confidence intervals in brackets, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Underreporting was constructed as a dummy variable, which took value one if a respondent had hypertension or diabetes respectively according to the biomedical tests, while not having hypertension or diabetes respectively according to self-reports (also known as false negative in the literature), and a value 0 in case of no differences in hypertension or diabetes status between biomedical tests and self-reports with unweighted data.

Table A4: Descriptive statistics.

	Mean	Std. Dev.	Min	Max
Age	66.8	8.77	50	85
Sex				
Male	.46			
Female	.54			
Race				
White	.97			
Non-white	.03			
Year of birth	1943	9.29	1920	1967
Education				
Higher	.18			
Intermediate	.33			
Lower	.49			
Chronic conditions				
Uncorrected HBP	.45			
Corrected HBP	.65			
Uncorrected diabetes	.14			
Corrected diabetes	.16			
Year of the interview	2011	4.82	2004	2019
Duration of participation in years	10.85	4.46	1	16
Dropped out until wave 8	.63			
Died	.01			

Source: ELSA, release 2022, waves 2, 4, 6, 8 & 9, own calculations with unweighted data. Note: Descriptive statistics were calculated over the number of observations in the sample used for hypertension analyses with 30,589 observations collected among 12,1128 respondents. Descriptive statistics were similar when calculated over the number of observations in the diabetes sample with 24,464 observations among 11,337 respondents.

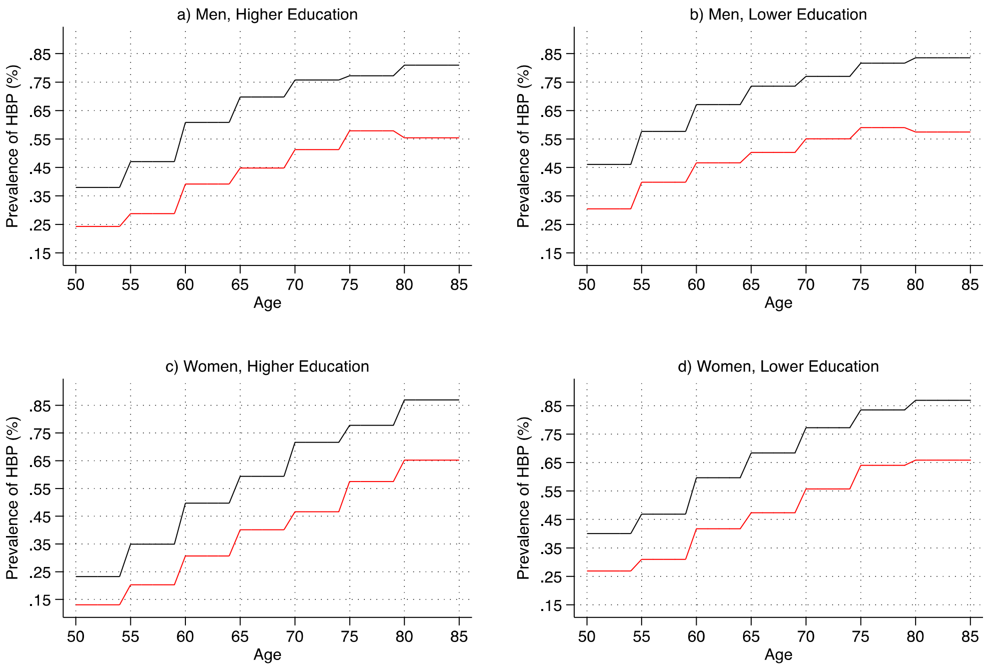

Figure A1: Descriptive prevalence of high blood pressure (HBP) by education, age, and gender.

Red lines indicate the prevalence of HBP uncorrected for underreporting; the black lines indicate the prevalence of HBP corrected for underreporting using biomedical measurements.

Source: ELSA, release 2022, waves 2, 4, 6, 8 & 9, own calculations with unweighted data.

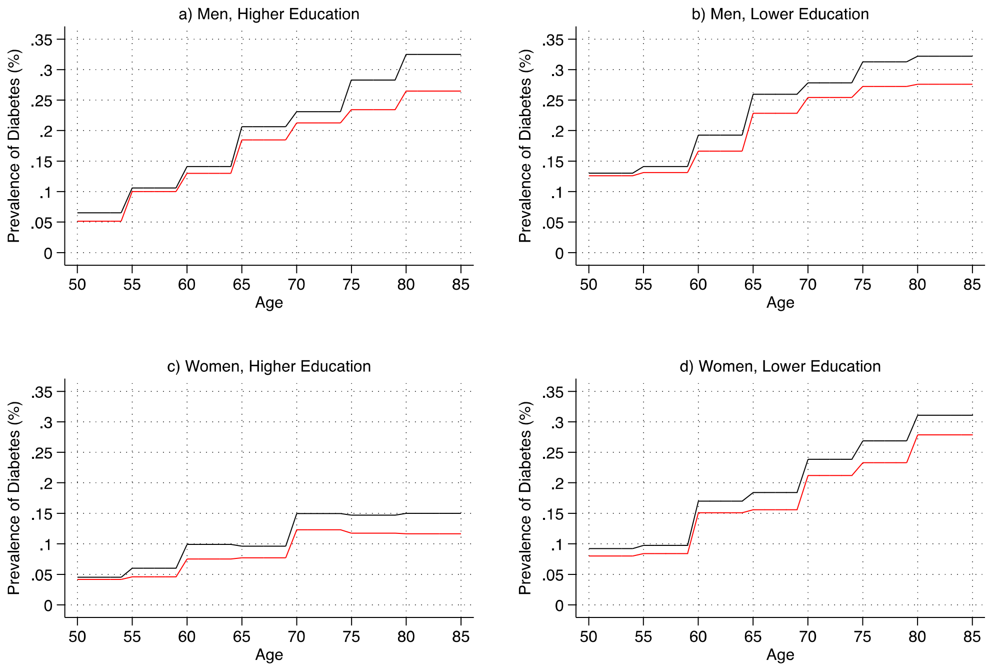

Figure A2: Descriptive prevalence of diabetes by education and age, for women and men.

Red lines indicate the prevalence of diabetes uncorrected for underreporting; the black lines indicate the prevalence of diabetes corrected for underreporting using biomedical measurements.

Source: ELSA, release 2022, waves 2, 4, 6, 8 & 9, own calculations with unweighted data.

Supplemental material S1: Missing data analyses

Missing values in self-reported hypertension, diabetes, biomedically measured hypertension, and education were negligible (with a maximum of 2.1% in biomedically measured hypertension and education). Values for biomedically measured diabetes were missing for approximately 7% of observations. These missing values primarily occurred because some respondents who participated in nurse visits did not participate in blood tests. We examined whether these missing values were related to our main constructs of interest, namely education, age, and gender. We observed that missing values in biomedically measured diabetes were more prevalent among lower educated respondents (8.7%) than among higher educated respondents (4.8%). There were no differences by age and gender, and the differences by education did not change with age or differ between women and men. Because the proportion of missing values was low overall, we opted for listwise deletion of missing values. Multiple imputation was shown not to improve the accuracy of estimates when the share of missing data is below 10% (Lee and Huber 2021).