Online appendix 2: Supplementary analyses

This document lists results from all analyses of exposure vs. pulmonary function outcomes – including primary, secondary and sensitivity analyses.

Introduction

The pulmonary function outcomes are split into two groups as listed in the following table:

Outcome group	**Outcomes in group**
1 (primary outcomes)	FEV_1 Z-score, FVC Z-score, FEV_1/FVC Z-score
2 (secondary outcomes)	FEV_1, FVC, FEV_1/FVC, PEF, FEF_{25}, FEF_{50}, FEF_{75}, FEF_{25-75}, FEF_{25-75} Z-score

All group 1 outcomes are considered equally important. All Z-scores are calculated based on the GLI 2012 equations[1] with ethnicity set to “African-American”, as normal values are not available for Ugandans.

Abbreviations

On the tables on next pages, we use the following abbreviations:

- AChE = red blood cell acetylcholine esterase
- AChE/Hb = AChE normalized by hemoglobin concentration
- Bootstrap = confidence intervals for estimates were derived using bootstrap procedure(see details below)
- FE = fixed effect model (see main text for description of the statistical model)
- Hb = hemoglobin
- ME = classic mixed effect model
- RCM = random coefficient model (a type of mixed effect model; see main text for details)
- RE = random effect (see main text for details)

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Definitions of covariate sets

Outcome	Random coefficient model			Fixed effect model		Comment
	Unadjusted	**Basic covariate set**	**Extended covariate set**	**Basic covariate set**	**Extended covariate set**	
Z-scores of FEV_1, FVC, FEV_1/FVC and FEF_{25-75}	[Not applicable]	Age (continuous) Sex (dichotomous) Pack-years of smoking (continuous) Cumulated lifetime hours of cooking (proxy for exposure to biofuel smoke, continuous)	Basic set + BMI (continuous) Years of full-time education (proxy for socioeconomic status, continuous)	Δage (continuous) Δpack-years (continuous) Δ(hours of cooking in the last week) (proxy for exposure to biofuel smoke, continuous)	Minimal set + ΔBMI (continuous)	Sex and education level are not included in the fixed effect model, as they are assumed constant. All models implicitly account for sex, age and height, as they are used for Z-score calculation.
Absolute lung function measures (FEV_1, FVC, FEV_1/FVC, PEF, FEF_{25}, FEF_{50}, FEF_{75}, FEF_{25-75})	Age (continuous) Sex (dichotomous) Height (continuous)	Basic set for group 1 + height (continuous)	Basic set + BMI (continuous) Years of full-time education (continuous)	N/A	N/A	-

Pack-years of smoking was modelled under the assumption of a linear exposure-response relationship, as the number of ever-smokers in the PEXADU project was relatively low. The remaining continuous variables are modelled using restricted cubic splines to allow non-linear dose-response relationships. The location of spline knots for each independent variable was determined automatically by Stata according to percentiles of the variable, as recommended by Harell[2] and implemented in Stata's `mkspline` command. For four knots, the percentiles are 5, 35, 65 and 95. For three knots, they are 10, 50 and 90. For five knots, they are 5, 27.5, 50, 72.5 and 95.[2]

Overview of statistical models in this appendix

Mixed effect models (planned *a priori*)

Model number	Description	Outcome metrics	Statistical model	Assumptions regarding linearity	Handling of interdependent data (family)	Handling of multiple AChE measurements in same phase*	Classification	Covariate set
1	Primary model	Group 1	RCM	Cubic splines, 4 knots	RE	First measurement used	Primary analysis	Basic set
							Primary analysis	Unadjusted
							Sensitivity analysis	Extended set
2	Secondary outcomes	Group 2	RCM	Cubic splines, 4 knots	RE	First measurement used	Secondary analysis	Basic set
							Sensitivity analysis	Extended set
							Sensitivity analysis	Unadjusted
3	Sensitivity analyses	Group 1	RCM	Cubic splines, 4 knots	RE	If two measurements were made, the second one was used	Sensitivity analysis	Basic set
4		Group 1	ME	Cubic splines, 4 knots	RE + bootstrap	First measurement used		
5		Group 1	RCM	Cubic splines, 3 knots	RE	First measurement used		
6		Group 1	RCM	Cubic splines, 5 knots	RE	First measurement used		
7		Group 1 (calculated using stricter quality criteria: difference in best and second-best FEV1 and FVC must be ≤ 0.15 l, or ≤ 0.1 l if best FVC ≤ 1l)	RCM	Cubic splines, 4 knots	RE	First measurement used		
8		[Model described in analysis protocol, but excluded as described below]	N/A	N/A	N/A	N/A		
9		Group 1 (excluding anyone with a self-reported prior diagnosis of tuberculosis, and one participant with goiter)	RCM	Cubic splines, 4 knots	RE	First measurement used		
10		Group 1 (excluding all observations where the Test-Mate gave a warning that delays had happened during analysis)	RCM	Cubic splines, 4 knots	RE	First measurement used		

Fixed effect models (planned *a priori*)

Model number	Description	Outcome metrics	Assumptions regarding linearity	Handling of interdependent data (family)	Handling of multiple AChE measurements in same phase*	Classification	Covariate set
11	Secondary model for primary outcomes	Group 1 (phase 1+3)	Cubic splines, 4 knots	RE	First measurement used	Secondary analysis	Basic set
							Unadjusted
						Sensitivity analysis	Extended set
12	Sensitivity analysis	Group 1 (phase 1+2)	Cubic splines, 4 knots	RE	First measurement used	Sensitivity analysis	Basic set
13	Sensitivity analysis	Group 1 (phase 2+3)	Cubic splines, 4 knots	RE	First measurement used	Sensitivity analysis	

Mixed effect models (*post hoc*)

Model number	Description	Outcome metrics	Statistical model	Assumptions regarding linearity	Handling of interdependent data (family)	Handling of multiple AChE measurements in same phase*	Covariate set
14	Sensitivity analysis	Group 1	RCM	Cubic splines, 4 knots	RE	First measurement used	Basic set + project phase
							Extended set + project phase
15	Sensitivity analysis	Group 1, females only	RCM	Cubic splines, 4 knots	RE	First measurement used	Basic set
16	Sensitivity analysis	Group 1, males only	RCM	Cubic splines, 4 knots**	RE	First measurement used	Basic set
17	Sensitivity analysis	Group 1, phase 1 only	ME	Cubic splines, 4 knots	RE	First measurement used	Basic set

* Handling of multiple AChE measurements in same phase: Each participant had his/her AChE measured in each phase. In some cases, the primary investigator suspected that an error had occurred during analysis (e.g., due to very low or very high measured hemoglobin values), and a second measurement was therefore made. Both results were saved. The decision to re-do the AChE analysis or not may have been biased unintentionally. Therefore, in the primary analyses we always used the first measurement, as measurement errors are assumed to happen at random. In some sensitivity analyses, we instead used the result from the second analysis.

** The cumulated lifetime hours of cooking was very low for most men. Hence, in model 16 we could not use splines and had to assume linearity between lifetime hours of cooking and pulmonary function among men.

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Changes from analysis protocol

Before the analyses were carried out, an analysis protocol was published online.[3] During analysis, a few modifications were made to the models. The changes are listed point-by-point below.

Changes in covariates

- All models: Due to the clear trend in AChE/Hb across study phases (see Table 2 in the main text), we decided to exclude project phase as a predictor in the random coefficient models. We deemed that because of the temporal trend in AChE/Hb, adjusting for phase would likely lead to bias towards the null hypothesis. As a sensitivity analysis, we re-included phase in model 14.
- All models: The analysis protocol also stated that we would adjust our analyses for the spirometer used during the test. However, there was a clear relationship between the project phase and the spirometer used during testing.[4] Hence, spirometer ID was a proxy for project phase. As we did not want to include project phase as a confounder (as described above), it was decided to leave spirometer ID out as well. Based on analyses of calibration data,[4] we deemed that this change was unlikely to introduce bias to our results.
- Model 2: During peer review, we were requested to include sex, age and height as covariates in the unadjusted models that used absolute lung function measures as outcome.

Change of statistical model

- Model 4: As described in the main text, some study participants were related to each other. We generally accounted for this by including a random effect for family ID in our statistical models. However, due to incomplete data on family relationships, this may be insufficient to account completely for the interdependence of observations, leading to a risk of falsely low standards errors in our effect estimates. In model 4, we attempted to obtain unbiased standard errors not only by including a random effect by family, but also by a bootstrapping procedure as implemented in the Stata command bootstrap, with 200 repetitions. To allow each iteration of the regression to complete in finite time, we wanted to model all predictor under the assumption of linearity (i.e., we would not use splines). However, the processing time for the bootstrapped RCM model was still unfeasibly long, so we decided to instead bootstrap a classical mixed effect model, i.e.

$$y = \beta_b \times b + \left(\sum \beta_{c,i} \times c_i\right) + \alpha + \tau + \varepsilon$$

Where y is outcome, β_b is a fixed effect for the exposure variable called b, $\beta_{c,i}$ is a fixed effect for the i^{th} confounder c_i, α is a random term for family, τ is a random term for person, and ε is an error term. In this model, all participants have the same β_b (contrary to the RCM).

The classical mixed effect model ran much faster than the random coefficient model, meaning that bootstrapping became feasible. To make it easier to compare results across models, we decided to also use splines in the revised model 4.

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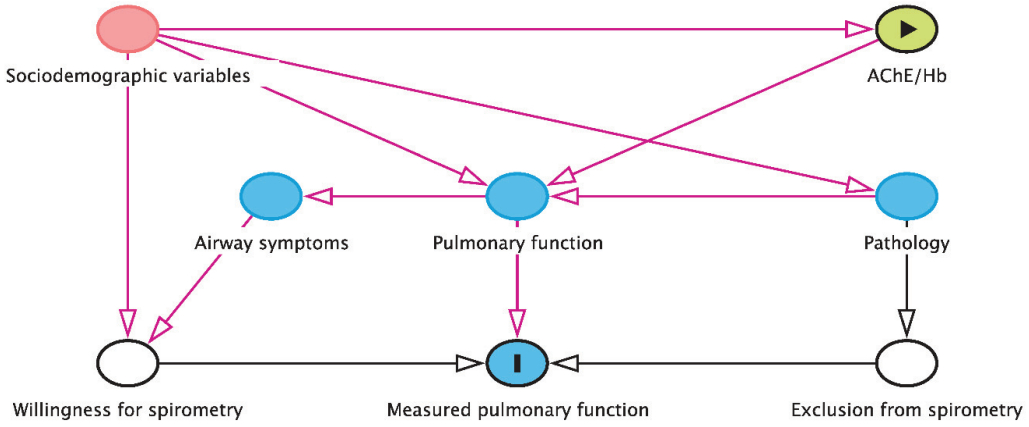
Discarded model

- Model 8: Our analysis protocol included a model (model 8) where we wanted to re-calculate AChE/Hb after adjusting hemoglobin to take into account that the Test-mate ChE device might underestimate hemoglobin. However, extra quality control with different Test-Mate devices indicated that when hemoglobin is negatively biased, so is AChE, and by approximately the same fraction, meaning that AChE/Hb is relatively unaffected.[4] Hence, we decided that adjusting hemoglobin and recalculating AChE was more likely to bias our results that to correct any biases. This model was therefore discarded.

Post-hoc analyses and rationale

- Model 14: Adjusted for project phase as described above.
- Model 15 and 16: Analyses stratified by sex, as this was requested during peer review. Model 15 is limited to females, while only males are included in model 16.
- Model 17: Cross-sectional analysis based on phase 1 data only.

  Only a subset of PEXADU participants underwent spirometry, as some participants were excluded (e.g., because they had a current respiratory infection), and others refused the examination. Using standard rules for the analysis of Directed Acyclic Graphs (DAGs)[5], the following DAG created using the DAGitty software[6] can be used to assess the potential for selection bias in the relation between AChE/Hb and measured lung function:



Green variable marked ▶ is the exposure variable. Blue variable marked "I" is the outcome. Remaining blue variables are parents of the outcome. Red variables are parents of both exposure and outcome. White variables are conditioned on. Green paths are causal. Red paths are biasing or "back-door" paths between exposure and outcome. Black paths are "other" paths.

The DAG shows that excluding participants due to e.g. respiratory infections will not introduce selection bias between AChE/Hb and measured pulmonary function. However, participants refusing the examination *can* lead to selection bias. In phase 1 of the PEXADU project, only one person refused spirometry. Hence, we decided to conduct a cross-sectional analysis limited to the phase 1 data, as we deemed it unlikely that selection processes could bias that analysis. Data were analyzed in a classic mixed effect model:

$$y = \beta_b \times b + \left(\sum \beta_{c,i} \times c_i\right) + \alpha + \varepsilon$$

Where y is outcome, β_b is a fixed effect for the exposure variable called b, $\beta_{c,i}$ is a fixed effect for the i^{th} confounder c_i, α is a random term for family, and ε is an error term. In this model, all participants have the same β_b (contrary to the RCM), and there is no random term for individual participants.

Notes on figures in this appendix

Plots of outcomes vs. predictors modelled using splines show the effect estimates with 95% confidence intervals, relative to the predicted outcome at the median value of the predictor. The black points on the trend curves show the location of the knots for the restricted cubic splines. For reference purposes, a histogram of the predictor is overlaid on each figure.

Tables of results for predictors modeled using splines show effect estimates with 95% confidence intervals at the location of the spline knots (see page 2), relative to the median value of the predictor. For predictors modelled categorically or under the assumption of linearity, tables show regression coefficients.

Please note that the covariate sets in adjusted analyses were selected based on Directed Acyclic Graphs with the purpose of obtaining an unbiased estimate of the effect of AChE/Hb on the pulmonary function. No attempt was made to select covariates to provide unbiased estimates of the effects of other predictors (such as age). Hence, regression results for other predictors could potentially be biased and are only listed to provide context for the main results (AChE/Hb vs. pulmonary function).

References for this appendix

1 Quanjer PH, Stanojevic S, Cole TJ et al. Multi-ethnic reference values for spirometry for the 3-95-yr age range: the global lung function 2012 equations. Eur Respir J 2012;40:1324-43. https://dx.doi.org/10.1183/09031936.00080312

2 Harrell FE. Regression Modeling Strategies : With Applications to Linear Models, Logistic Regression, and Survival Analysis. New York, UNITED STATES: Springer New York, 2001. http://ebookcentral.proquest.com/lib/asb/detail.action?docID=3085295

3 Hansen MRH, Jørs E, Sandbæk A et al. Protocol for statistical analyses of health outcomes in the study entitled "Pesticide exposure, asthma and diabetes in Uganda (PEXADU)". Zenodo 2019. https://dx.doi.org/10.5281/zenodo.3552751

4 Hansen MRH. Exposure to pesticides in present-day use, diabetes mellitus and lung function impairment. PhD thesis, 2020. Environment, Work and Health, Danish Ramazzini Center, Department of Public Health, Aarhus University, Aarhus, Denmark. https://dx.doi.org/10.5281/zenodo.3775222

5 Suttorp MM, Siegerink B, Jager KJ, Zoccali C, Dekker FW. Graphical presentation of confounding in directed acyclic graphs. Nephrol Dial Transplant 2015;30:1418-23. https://dx.doi.org/10.1093/ndt/gfu325

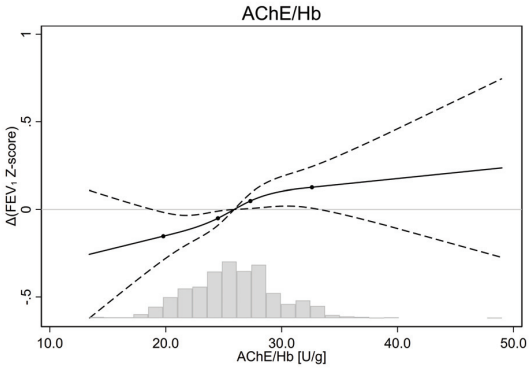
6 Textor J, van der Zander B, Gilthorpe MS, Liskiewicz M, Ellison GT. Robust causal inference using directed acyclic graphs: the R package 'dagitty'. Int J Epidemiol 2016;45:1887-1894. https://dx.doi.org/10.1093/ije/dyw341

Analysis specification

Model 01
Outcome: FEV_1 Z-score
Unadjusted

Number of observations in model: 837

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

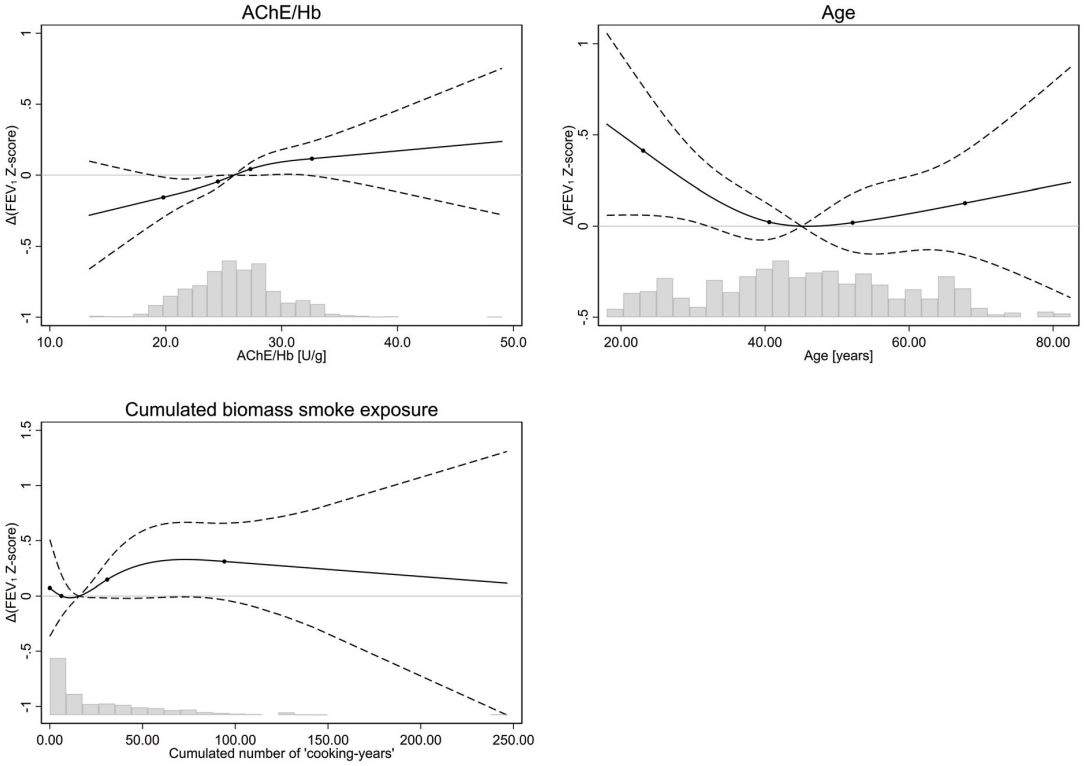
Value	Outcome estimate [CI]
19.79	-0.153 [-0.289 ; -0.016]
24.50	-0.050 [-0.091 ; -0.010]
25.90	0 [ref.]
27.30	0.048 [0.005 ; 0.091]
32.61	0.126 [0.007 ; 0.244]

Analysis specification

Model 01
Outcome: FEV_1 Z-score
Covariate adjustment: Basic

Number of observations in model: 793

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.155 [-0.296 ; -0.014]
24.50	-0.045 [-0.087 ; -0.003]
25.90	0 [ref.]
27.30	0.043 [-0.002 ; 0.087]
32.61	0.116 [-0.004 ; 0.236]

Age

Value	Outcome estimate [CI]
23.07	0.413 [0.060 ; 0.766]
40.58	0.023 [-0.073 ; 0.118]
45.06	0 [ref.]
52.16	0.019 [-0.141 ; 0.179]
67.76	0.126 [-0.157 ; 0.410]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.072 [-0.366 ; 0.511]
6.25	0.001 [-0.190 ; 0.192]
15.89	0 [ref.]
30.95	0.147 [-0.017 ; 0.312]
94.12	0.311 [-0.035 ; 0.658]

Regression results for categorical and linear variables

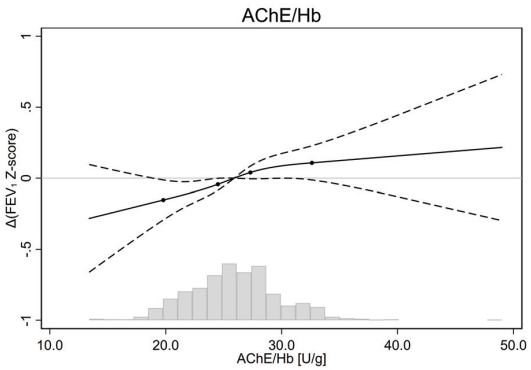
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.301 [-0.103 ; 0.705]
Pack-years	-0.016 [-0.071 ; 0.038]

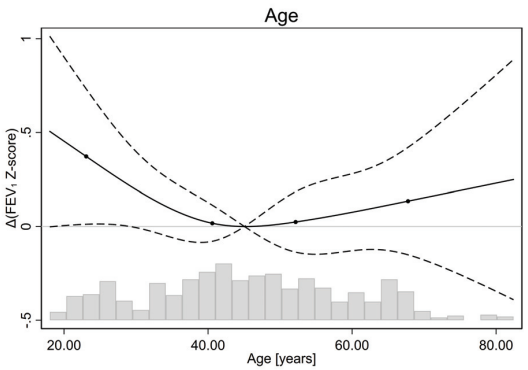
Analysis specification

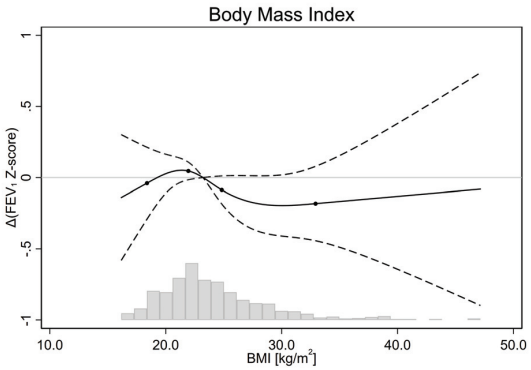
Model 01
Outcome: FEV_1 Z-score
Covariate adjustment: Extended

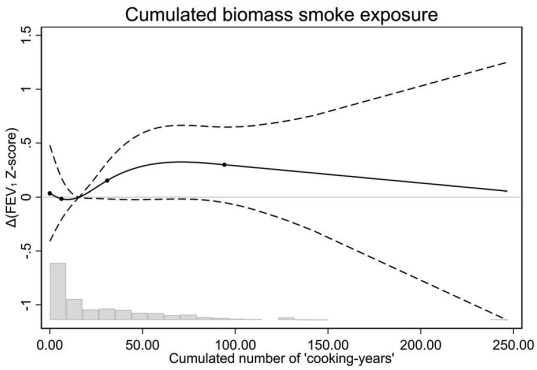
Number of observations in model: 789

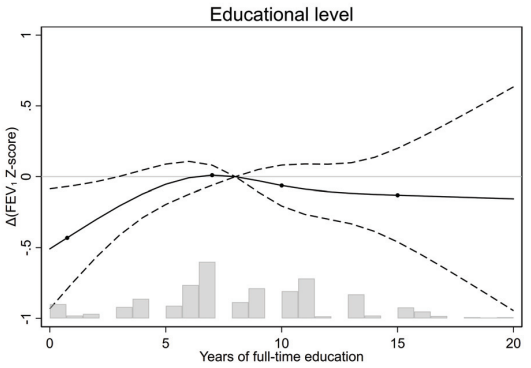
Regression results for variables modeled using splines











Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.153 [-0.293 ; -0.012]
24.50	-0.043 [-0.085 ; -0.001]
25.90	0 [ref.]
27.30	0.040 [-0.005 ; 0.085]
32.61	0.108 [-0.013 ; 0.228]

Body Mass Index

Value	Outcome estimate [CI]
18.38	-0.039 [-0.291 ; 0.213]
21.95	0.046 [-0.016 ; 0.108]
23.22	0 [ref.]
24.83	-0.086 [-0.184 ; 0.011]
32.92	-0.182 [-0.443 ; 0.079]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.035 [-0.411 ; 0.481]
6.25	-0.015 [-0.209 ; 0.178]
15.72	0 [ref.]
30.95	0.152 [-0.016 ; 0.320]
94.12	0.299 [-0.051 ; 0.648]

Educational level

Value	Outcome estimate [CI]
0.75	-0.430 [-0.792 ; -0.069]
7.00	0.011 [-0.060 ; 0.082]
8.00	0 [ref.]
10.00	-0.062 [-0.206 ; 0.082]
15.00	-0.130 [-0.459 ; 0.200]

Age

Value	Outcome estimate [CI]
23.07	0.373 [0.012 ; 0.733]
40.58	0.017 [-0.079 ; 0.114]
45.06	0 [ref.]
52.16	0.024 [-0.137 ; 0.185]
67.76	0.135 [-0.151 ; 0.421]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.227 [-0.206 ; 0.661]
Pack-years	-0.011 [-0.066 ; 0.044]

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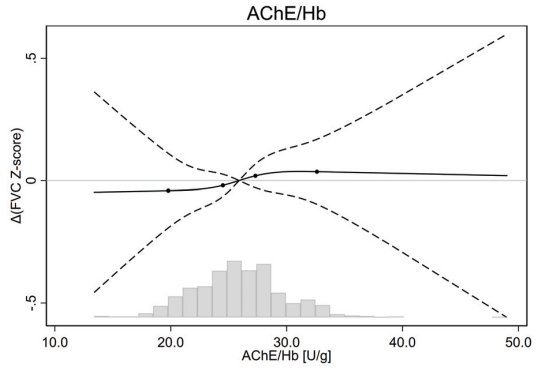
Analysis specification

Model 01
Outcome: FVC Z-score
Unadjusted

Number of observations in model: 835

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

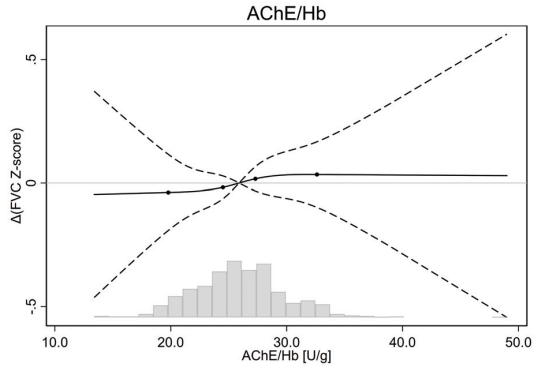
Value	Outcome estimate [CI]
19.79	-0.041 [-0.193 ; 0.111]
24.50	-0.019 [-0.065 ; 0.026]
25.90	0 [ref.]
27.30	0.019 [-0.029 ; 0.067]
32.61	0.036 [-0.096 ; 0.169]

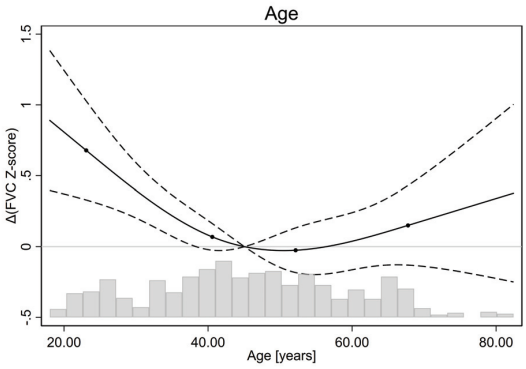
Analysis specification

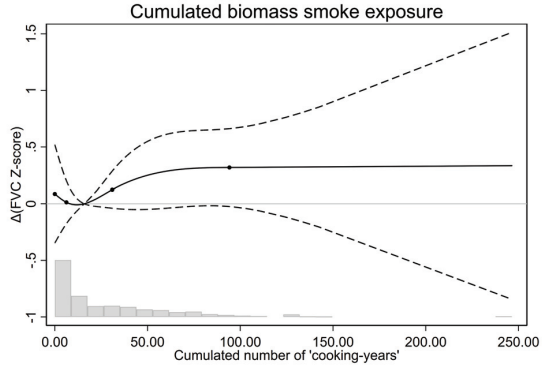
Model 01
Outcome: FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 791

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.038 [-0.192 ; 0.116]
24.50	-0.017 [-0.063 ; 0.029]
25.90	0 [ref.]
27.30	0.017 [-0.032 ; 0.066]
32.61	0.034 [-0.098 ; 0.167]

Age

Value	Outcome estimate [CI]
23.07	0.679 [0.329 ; 1.028]
40.58	0.069 [-0.025 ; 0.163]
45.06	0 [ref.]
52.16	-0.025 [-0.183 ; 0.133]
67.76	0.150 [-0.130 ; 0.431]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.087 [-0.348 ; 0.521]
6.25	0.013 [-0.176 ; 0.202]
15.89	0 [ref.]
30.95	0.123 [-0.039 ; 0.286]
94.12	0.319 [-0.024 ; 0.662]

Regression results for categorical and linear variables

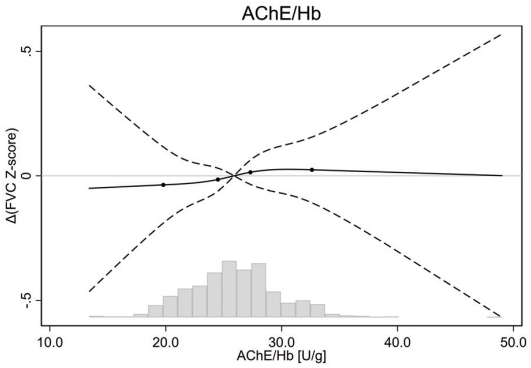
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.366 [-0.035 ; 0.766]
Pack-years	-0.008 [-0.061 ; 0.046]

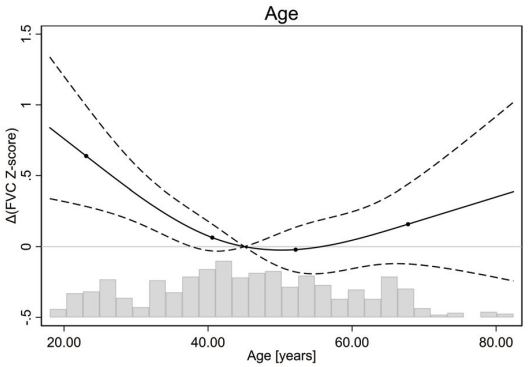
Analysis specification

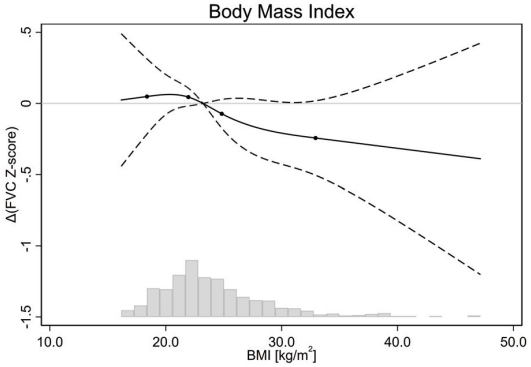
Model 01
Outcome: FVC Z-score
Covariate adjustment: Extended

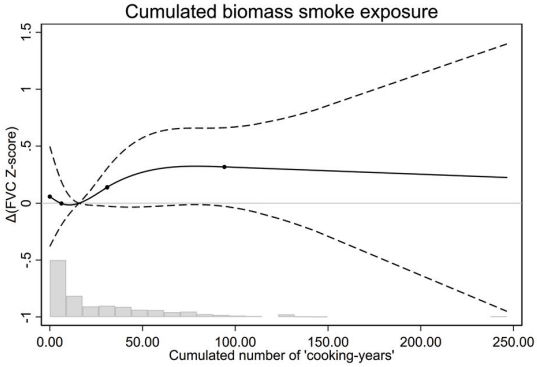
Number of observations in model: 787

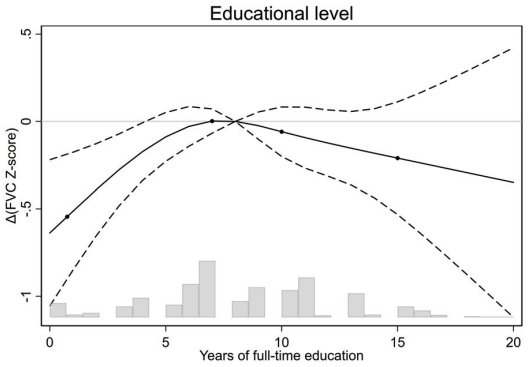
Regression results for variables modeled using splines











Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.036 [-0.189 ; 0.116]
24.50	-0.015 [-0.061 ; 0.031]
25.90	0 [ref.]
27.30	0.014 [-0.034 ; 0.063]
32.61	0.024 [-0.107 ; 0.156]

Body Mass Index

Value	Outcome estimate [CI]
18.38	0.049 [-0.216 ; 0.313]
21.95	0.045 [-0.018 ; 0.108]
23.22	0 [ref.]
24.83	-0.073 [-0.173 ; 0.028]
32.92	-0.243 [-0.505 ; 0.018]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.059 [-0.381 ; 0.498]
6.25	-0.002 [-0.193 ; 0.189]
15.72	0 [ref.]
30.95	0.139 [-0.027 ; 0.304]
94.12	0.317 [-0.027 ; 0.661]

Educational level

Value	Outcome estimate [CI]
0.75	-0.544 [-0.902 ; -0.187]
7.00	0.002 [-0.068 ; 0.072]
8.00	0 [ref.]
10.00	-0.059 [-0.201 ; 0.083]
15.00	-0.210 [-0.532 ; 0.112]

Age

Value	Outcome estimate [CI]
23.07	0.639 [0.284 ; 0.994]
40.58	0.064 [-0.030 ; 0.159]
45.06	0 [ref.]
52.16	-0.021 [-0.179 ; 0.137]
67.76	0.159 [-0.122 ; 0.440]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.274 [-0.153 ; 0.702]
Pack-years	-0.001 [-0.054 ; 0.053]

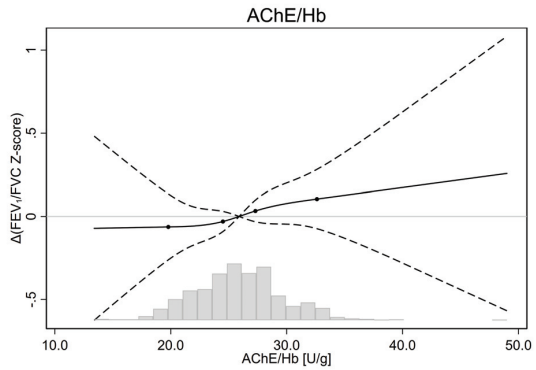
Hansen MRH, *et al. Thorax* 2021; 76:1–10. doi: 10.1136/thoraxjnl-2020-214609

Analysis specification

Model 01
Outcome: FEV_1/FVC Z-score
Unadjusted

Number of observations in model: 835

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

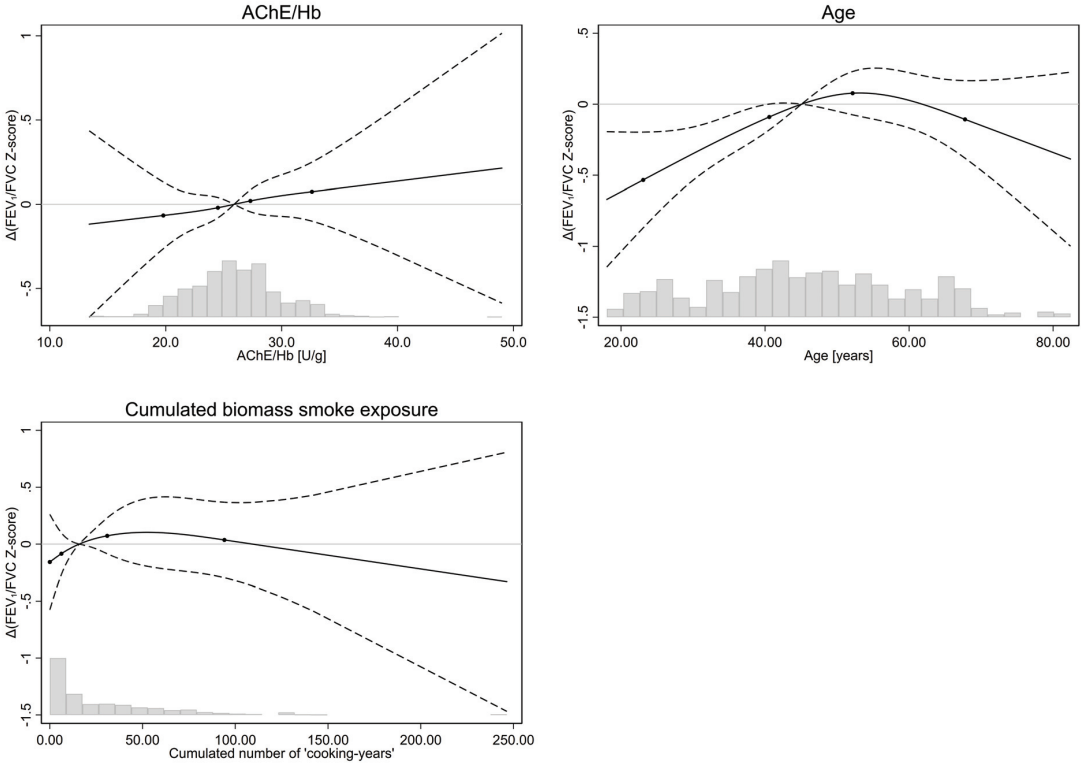
Value	Outcome estimate [CI]
19.79	-0.063 [-0.261 ; 0.135]
24.50	-0.030 [-0.091 ; 0.030]
25.90	0 [ref.]
27.30	0.033 [-0.032 ; 0.098]
32.61	0.104 [-0.074 ; 0.282]

Analysis specification

Model 01
Outcome: FEV_1/FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 791

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.066 [-0.264 ; 0.132]
24.50	-0.020 [-0.080 ; 0.040]
25.90	0 [ref.]
27.30	0.020 [-0.044 ; 0.085]
32.61	0.075 [-0.100 ; 0.249]

Age

Value	Outcome estimate [CI]
23.07	-0.534 [-0.870 ; -0.197]
40.58	-0.090 [-0.181 ; 0.001]
45.06	0 [ref.]
52.16	0.078 [-0.075 ; 0.230]
67.76	-0.107 [-0.380 ; 0.166]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.157 [-0.577 ; 0.262]
6.25	-0.084 [-0.267 ; 0.098]
15.89	0 [ref.]
30.95	0.073 [-0.085 ; 0.230]
94.12	0.036 [-0.295 ; 0.368]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.036 [-0.352 ; 0.423]
Pack-years	-0.051 [-0.103 ; 0.001]

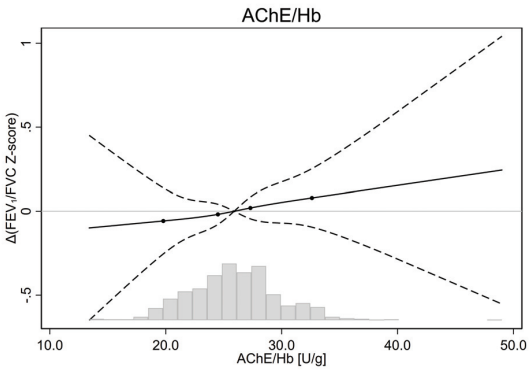
Hansen MRH, *et al. Thorax* 2021; 76:1–10. doi: 10.1136/thoraxjnl-2020-214609

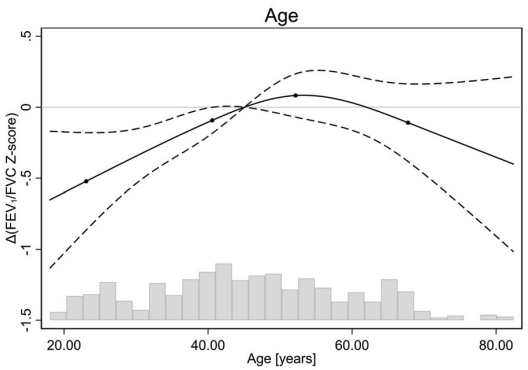
Analysis specification

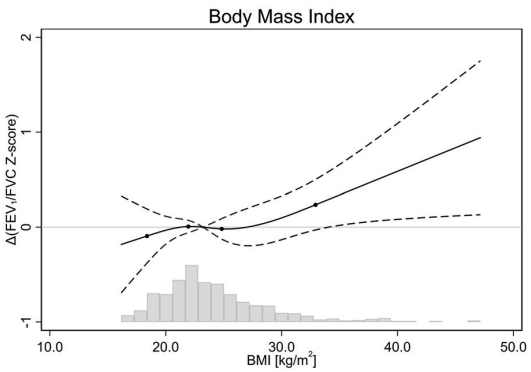
Model 01
Outcome: FEV_1/FVC Z-score
Covariate adjustment: Extended

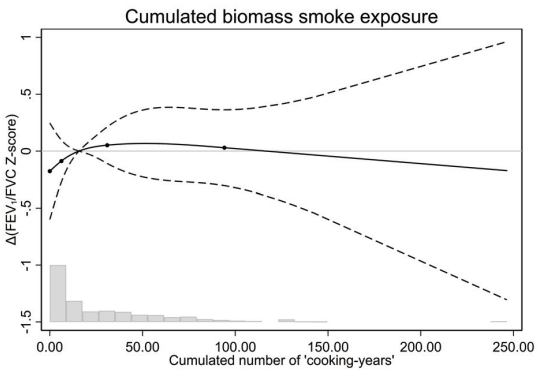
Number of observations in model: 787

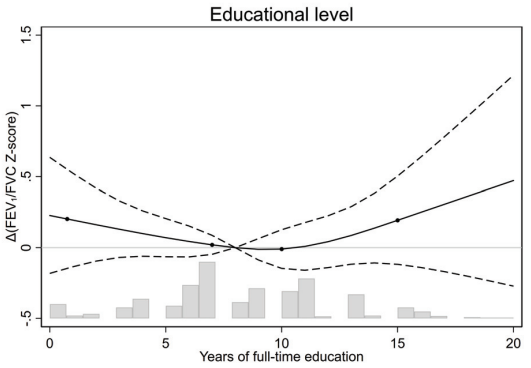
Regression results for variables modeled using splines











Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.058 [-0.254 ; 0.139]
24.50	-0.018 [-0.079 ; 0.042]
25.90	0 [ref.]
27.30	0.020 [-0.045 ; 0.084]
32.61	0.079 [-0.095 ; 0.253]

Body Mass Index

Value	Outcome estimate [CI]
18.38	-0.093 [-0.379 ; 0.192]
21.95	0.007 [-0.058 ; 0.072]
23.22	0 [ref.]
24.83	-0.018 [-0.126 ; 0.090]
32.92	0.236 [-0.029 ; 0.501]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.177 [-0.600 ; 0.247]
6.25	-0.087 [-0.272 ; 0.097]
15.72	0 [ref.]
30.95	0.052 [-0.109 ; 0.212]
94.12	0.030 [-0.303 ; 0.363]

Educational level

Value	Outcome estimate [CI]
0.75	0.203 [-0.147 ; 0.552]
7.00	0.020 [-0.047 ; 0.087]
8.00	0 [ref.]
10.00	-0.010 [-0.147 ; 0.127]
15.00	0.193 [-0.118 ; 0.504]

Age

Value	Outcome estimate [CI]
23.07	-0.522 [-0.865 ; -0.179]
40.58	-0.093 [-0.184 ; -0.001]
45.06	0 [ref.]
52.16	0.083 [-0.070 ; 0.235]
67.76	-0.109 [-0.382 ; 0.164]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.088 [-0.327 ; 0.502]
Pack-years	-0.055 [-0.106 ; -0.003]

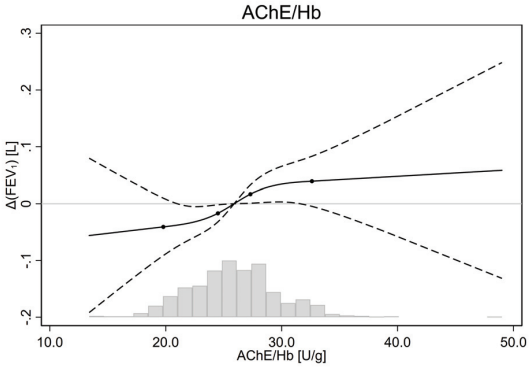
Hansen MRH, *et al. Thorax* 2021; 76:1–10. doi: 10.1136/thoraxjnl-2020-214609

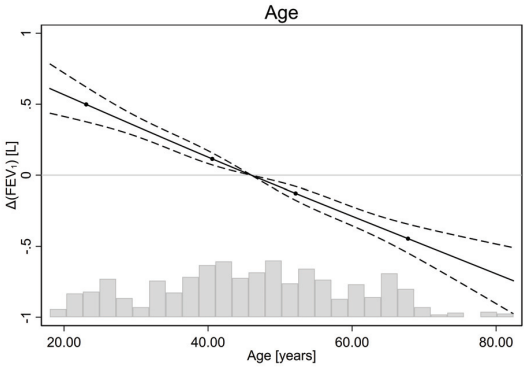
Analysis specification

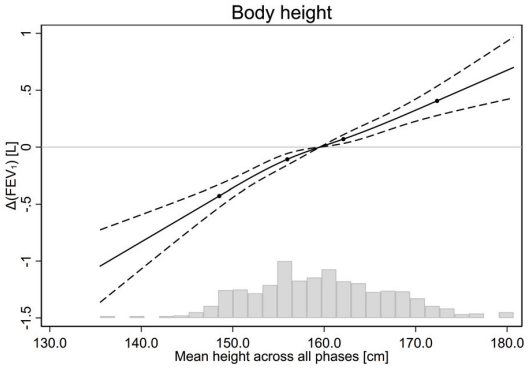
Model 02
Outcome: FEV_1
Unadjusted

Number of observations in model: 837

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.041 [-0.091 ; 0.010]
24.50	-0.017 [-0.032 ; -0.002]
25.90	0 [ref.]
27.30	0.017 [0.001 ; 0.033]
32.61	0.039 [-0.005 ; 0.083]

Age

Value	Outcome estimate [CI]
23.07	0.498 [0.376 ; 0.621]
40.58	0.114 [0.072 ; 0.157]
46.00	0 [ref.]
52.16	-0.128 [-0.176 ; -0.079]
67.76	-0.446 [-0.548 ; -0.344]

Body height

Value	Outcome estimate [CI]
148.52	-0.428 [-0.529 ; -0.328]
155.97	-0.107 [-0.158 ; -0.057]
159.53	0 [ref.]
162.10	0.070 [0.032 ; 0.108]
172.33	0.406 [0.277 ; 0.535]

Regression results for categorical and linear variables

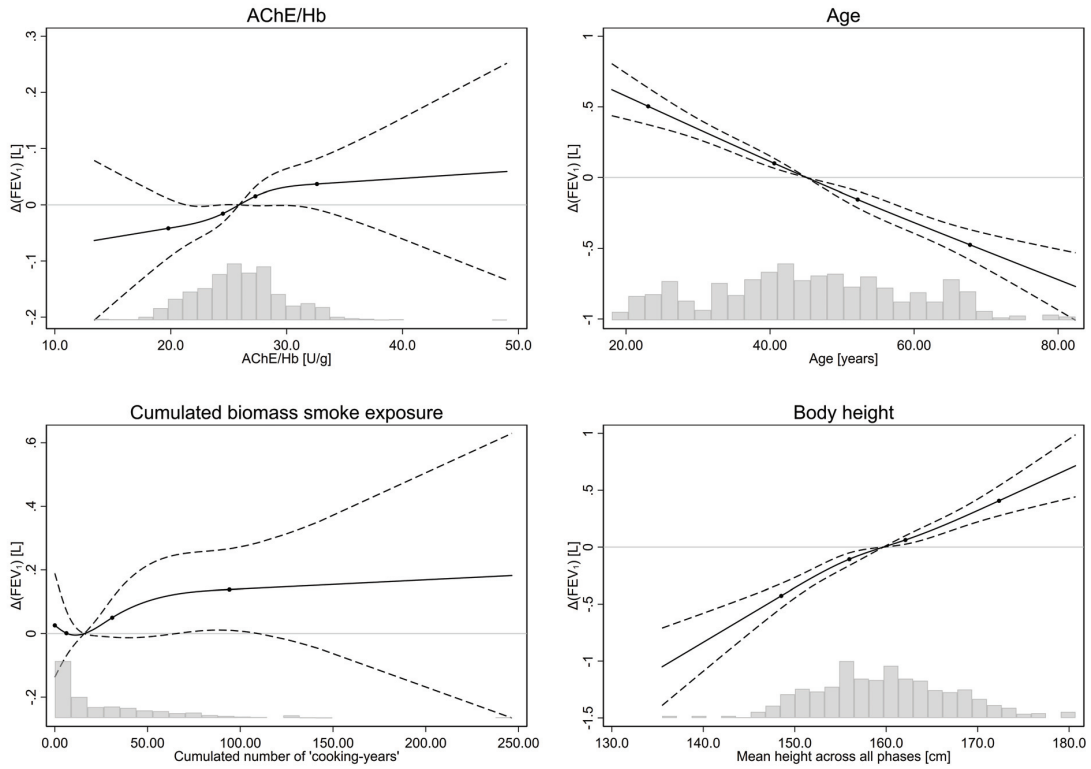
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.418 [0.314 ; 0.523]

Analysis specification

Model 02
Outcome: FEV_1
Covariate adjustment: Basic

Number of observations in model: 793

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.042 [-0.094 ; 0.011]
24.50	-0.016 [-0.031 ; 0.000]
25.90	0 [ref.]
27.30	0.015 [-0.001 ; 0.032]
32.61	0.037 [-0.008 ; 0.082]

Age

Value	Outcome estimate [CI]
23.07	0.504 [0.374 ; 0.634]
40.58	0.100 [0.065 ; 0.135]
45.06	0 [ref.]
52.16	-0.154 [-0.213 ; -0.095]
67.76	-0.475 [-0.582 ; -0.367]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.026 [-0.137 ; 0.189]
6.25	0.001 [-0.070 ; 0.073]
15.89	0 [ref.]
30.95	0.050 [-0.011 ; 0.111]
94.12	0.138 [0.010 ; 0.266]

Body height

Value	Outcome estimate [CI]
148.52	-0.427 [-0.535 ; -0.319]
155.97	-0.106 [-0.162 ; -0.051]
159.70	0 [ref.]
162.10	0.063 [0.025 ; 0.100]
172.33	0.407 [0.275 ; 0.539]

Regression results for categorical and linear variables

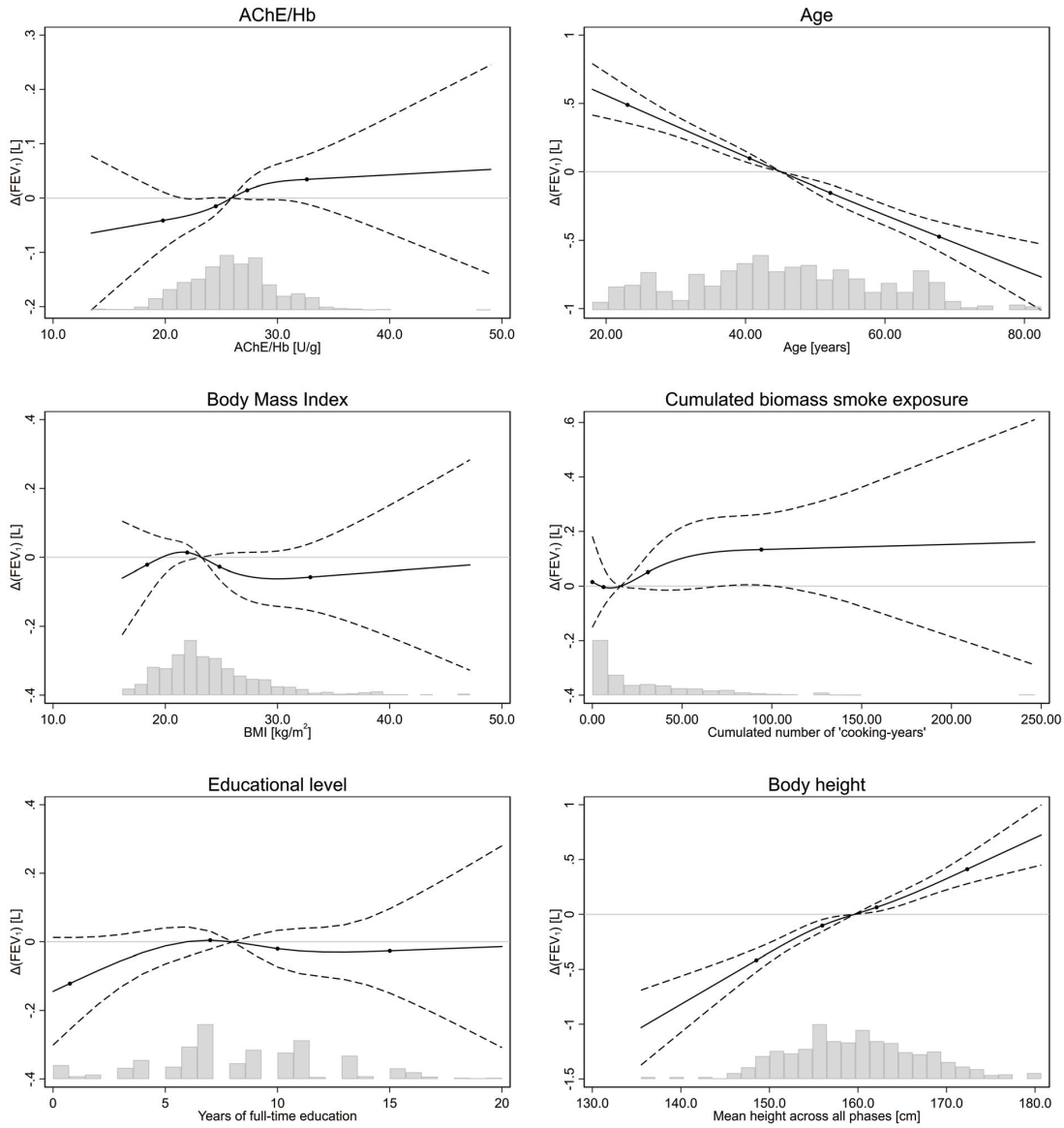
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.460 [0.301 ; 0.619]
Pack-years	-0.006 [-0.026 ; 0.015]

Analysis specification

Model 02
Outcome: FEV_1
Covariate adjustment: Extended

Number of observations in model: 789

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.041 [-0.094 ; 0.011]
24.50	-0.015 [-0.031 ; 0.001]
25.90	0 [ref.]
27.30	0.014 [-0.002 ; 0.031]
32.61	0.034 [-0.011 ; 0.079]

Body Mass Index

Value	Outcome estimate [CI]
18.38	-0.022 [-0.116 ; 0.072]
21.95	0.014 [-0.009 ; 0.037]
23.22	0 [ref.]
24.83	-0.027 [-0.064 ; 0.009]
32.92	-0.057 [-0.155 ; 0.040]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.015 [-0.151 ; 0.182]
6.25	-0.003 [-0.076 ; 0.069]
15.72	0 [ref.]
30.95	0.051 [-0.012 ; 0.114]
94.12	0.133 [0.004 ; 0.263]

Educational level

Value	Outcome estimate [CI]
0.75	-0.121 [-0.255 ; 0.013]
7.00	0.005 [-0.022 ; 0.031]
8.00	0 [ref.]
10.00	-0.020 [-0.073 ; 0.033]
15.00	-0.026 [-0.149 ; 0.096]

Age

Value	Outcome estimate [CI]
23.07	0.490 [0.356 ; 0.623]
40.58	0.098 [0.063 ; 0.134]
45.06	0 [ref.]
52.16	-0.153 [-0.213 ; -0.093]
67.76	-0.473 [-0.581 ; -0.365]

Body height

Value	Outcome estimate [CI]
148.52	-0.417 [-0.525 ; -0.310]
155.97	-0.102 [-0.156 ; -0.048]
159.60	0 [ref.]
162.10	0.064 [0.025 ; 0.104]
172.33	0.412 [0.279 ; 0.545]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.437 [0.268 ; 0.606]
Pack-years	-0.004 [-0.024 ; 0.016]

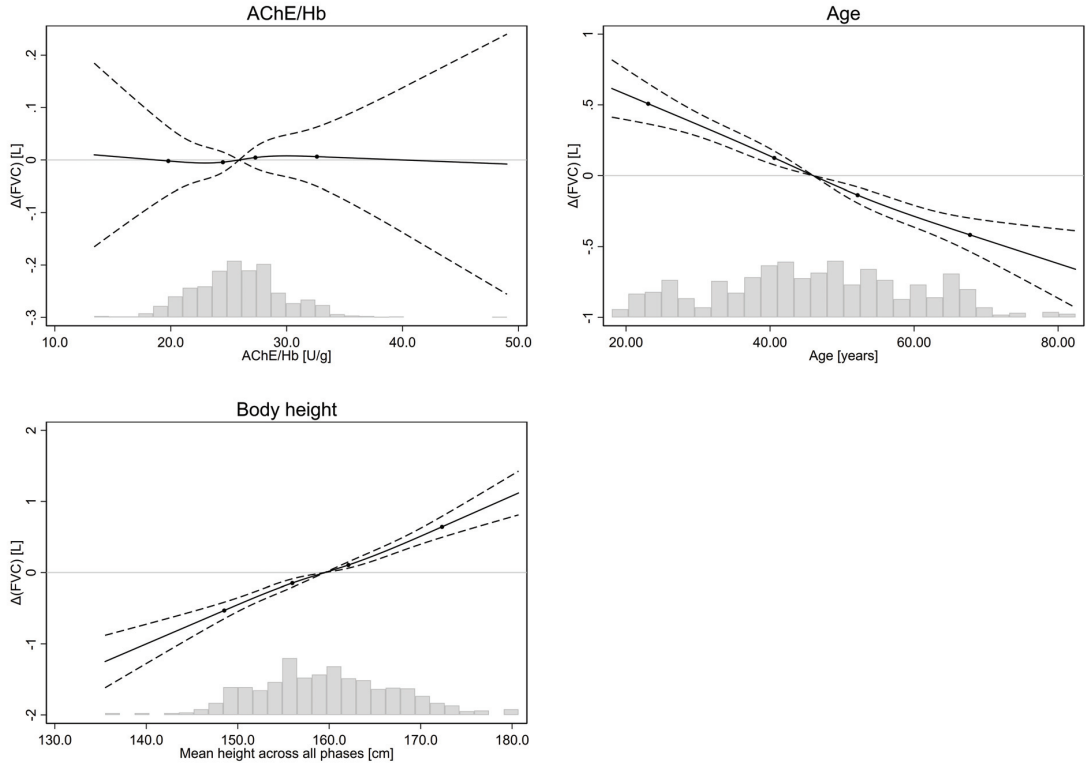
Hansen MRH, *et al. Thorax* 2021; 76:1–10. doi: 10.1136/thoraxjnl-2020-214609

Analysis specification

Model 02
Outcome: FVC
Unadjusted

Number of observations in model: 835

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.002 [-0.067 ; 0.063]
24.50	-0.004 [-0.024 ; 0.015]
25.90	0 [ref.]
27.30	0.005 [-0.016 ; 0.025]
32.61	0.006 [-0.050 ; 0.063]

Age

Value	Outcome estimate [CI]
23.07	0.508 [0.365 ; 0.651]
40.58	0.125 [0.076 ; 0.174]
46.00	0 [ref.]
52.16	-0.136 [-0.192 ; -0.080]
67.76	-0.417 [-0.535 ; -0.298]

Body height

Value	Outcome estimate [CI]
148.52	-0.531 [-0.647 ; -0.414]
155.97	-0.147 [-0.205 ; -0.088]
159.53	0 [ref.]
162.10	0.106 [0.062 ; 0.150]
172.33	0.643 [0.495 ; 0.791]

Regression results for categorical and linear variables

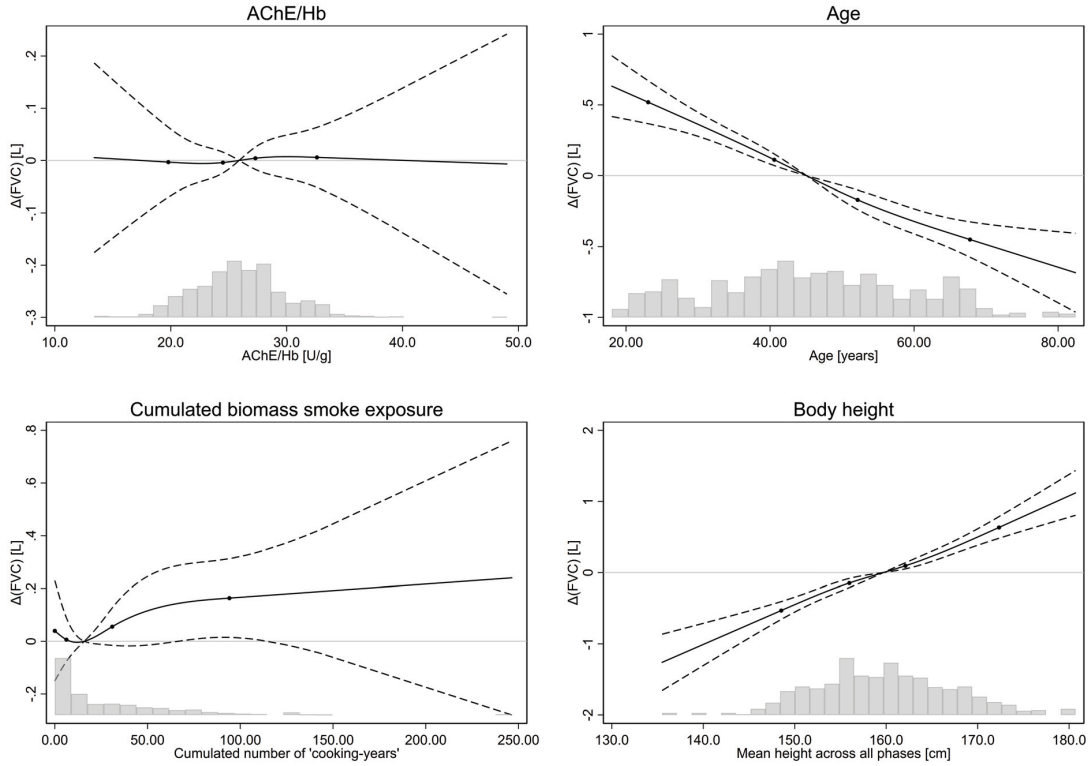
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.516 [0.397 ; 0.635]

Analysis specification

Model 02
Outcome: FVC
Covariate adjustment: Basic

Number of observations in model: 791

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.003 [-0.070 ; 0.064]
24.50	-0.004 [-0.024 ; 0.016]
25.90	0 [ref.]
27.30	0.004 [-0.017 ; 0.026]
32.61	0.006 [-0.052 ; 0.063]

Age

Value	Outcome estimate [CI]
23.07	0.519 [0.367 ; 0.671]
40.58	0.112 [0.071 ; 0.153]
45.06	0 [ref.]
52.16	-0.169 [-0.238 ; -0.101]
67.76	-0.450 [-0.575 ; -0.325]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.040 [-0.151 ; 0.230]
6.25	0.006 [-0.077 ; 0.089]
15.89	0 [ref.]
30.95	0.055 [-0.015 ; 0.126]
94.12	0.164 [0.015 ; 0.313]

Body height

Value	Outcome estimate [CI]
148.52	-0.531 [-0.657 ; -0.406]
155.97	-0.146 [-0.211 ; -0.082]
159.70	0 [ref.]
162.10	0.095 [0.051 ; 0.138]
172.33	0.634 [0.482 ; 0.786]

Regression results for categorical and linear variables

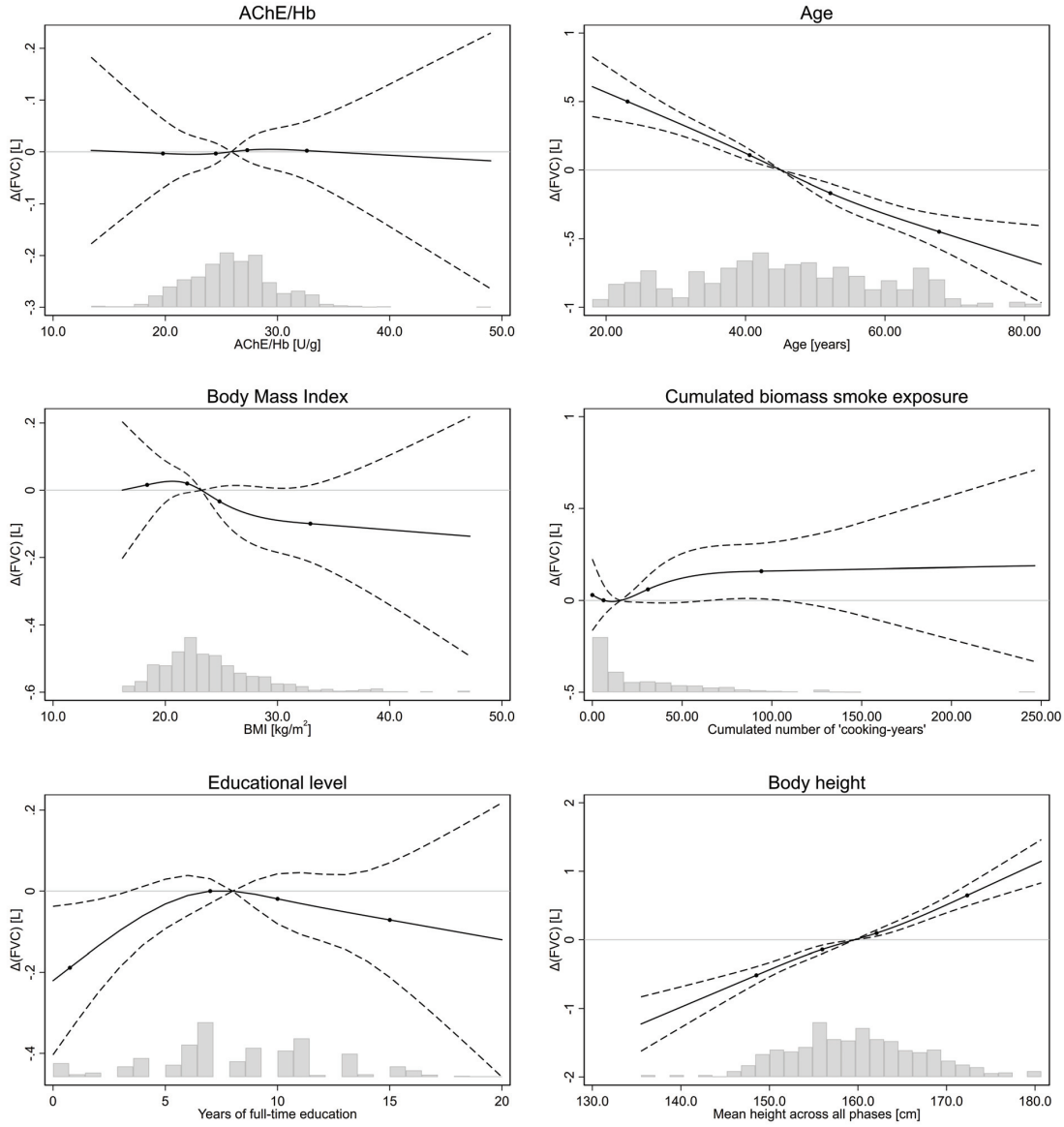
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.557 [0.372 ; 0.742]
Pack-years	-0.002 [-0.025 ; 0.022]

Analysis specification

Model 02
Outcome: FVC
Covariate adjustment: Extended

Number of observations in model: 787

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.003 [-0.070 ; 0.063]
24.50	-0.003 [-0.023 ; 0.017]
25.90	0 [ref.]
27.30	0.003 [-0.018 ; 0.024]
32.61	0.002 [-0.055 ; 0.059]

Body Mass Index

Value	Outcome estimate [CI]
18.38	0.016 [-0.100 ; 0.132]
21.95	0.020 [-0.007 ; 0.048]
23.22	0 [ref.]
24.83	-0.033 [-0.077 ; 0.011]
32.92	-0.099 [-0.214 ; 0.015]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.030 [-0.164 ; 0.224]
6.25	0.001 [-0.083 ; 0.086]
15.72	0 [ref.]
30.95	0.061 [-0.012 ; 0.133]
94.12	0.159 [0.009 ; 0.310]

Educational level

Value	Outcome estimate [CI]
0.75	-0.189 [-0.345 ; -0.032]
7.00	0.000 [-0.030 ; 0.030]
8.00	0 [ref.]
10.00	-0.019 [-0.081 ; 0.043]
15.00	-0.071 [-0.212 ; 0.070]

Age

Value	Outcome estimate [CI]
23.07	0.500 [0.345 ; 0.656]
40.58	0.109 [0.068 ; 0.151]
45.06	0 [ref.]
52.16	-0.166 [-0.235 ; -0.097]
67.76	-0.448 [-0.573 ; -0.322]

Body height

Value	Outcome estimate [CI]
148.52	-0.515 [-0.640 ; -0.390]
155.97	-0.140 [-0.202 ; -0.077]
159.60	0 [ref.]
162.10	0.098 [0.053 ; 0.143]
172.33	0.648 [0.495 ; 0.802]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.518 [0.321 ; 0.714]
Pack-years	0.001 [-0.023 ; 0.024]

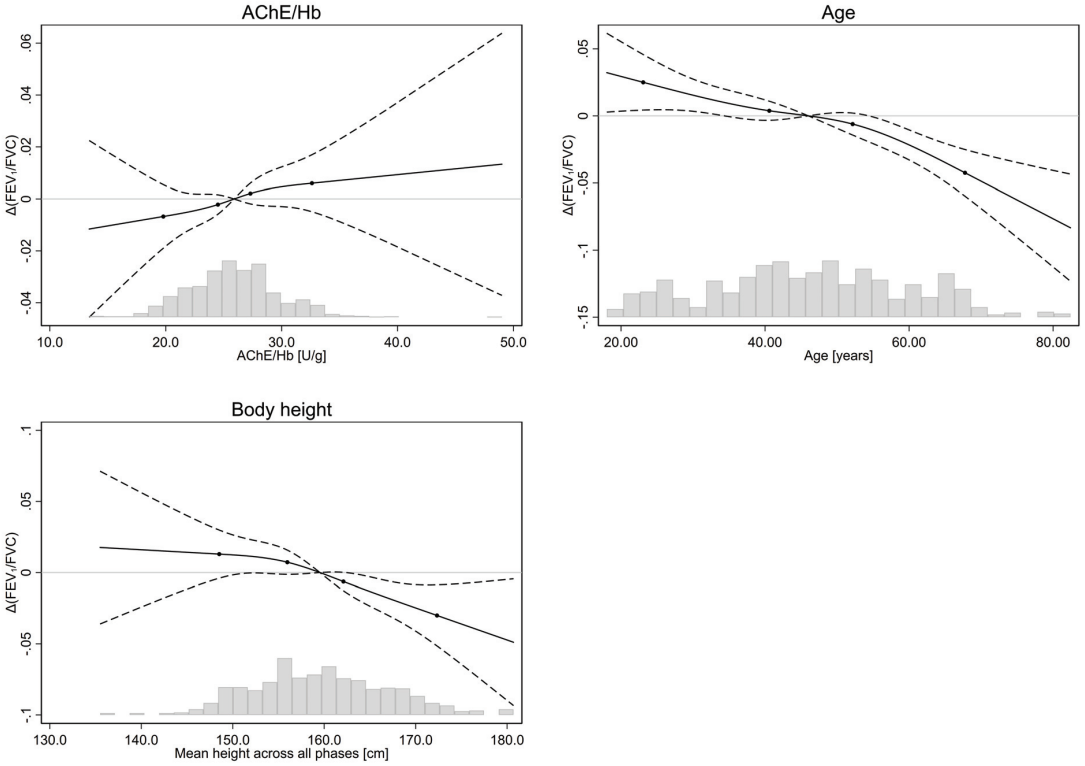
Hansen MRH, *et al. Thorax* 2021; 76:1–10. doi: 10.1136/thoraxjnl-2020-214609

Analysis specification

Model 02
Outcome: FEV_1/FVC
Unadjusted

Number of observations in model: 835

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.007 [-0.019 ; 0.005]
24.50	-0.002 [-0.006 ; 0.002]
25.90	0 [ref.]
27.30	0.002 [-0.002 ; 0.006]
32.61	0.006 [-0.005 ; 0.017]

Age

Value	Outcome estimate [CI]
23.07	0.025 [0.004 ; 0.046]
40.58	0.004 [-0.003 ; 0.011]
46.00	0 [ref.]
52.16	-0.006 [-0.014 ; 0.002]
67.76	-0.042 [-0.060 ; -0.025]

Body height

Value	Outcome estimate [CI]
148.52	0.013 [-0.004 ; 0.030]
155.97	0.007 [-0.001 ; 0.016]
159.53	0 [ref.]
162.10	-0.006 [-0.013 ; 0.000]
172.33	-0.030 [-0.051 ; -0.009]

Regression results for categorical and linear variables

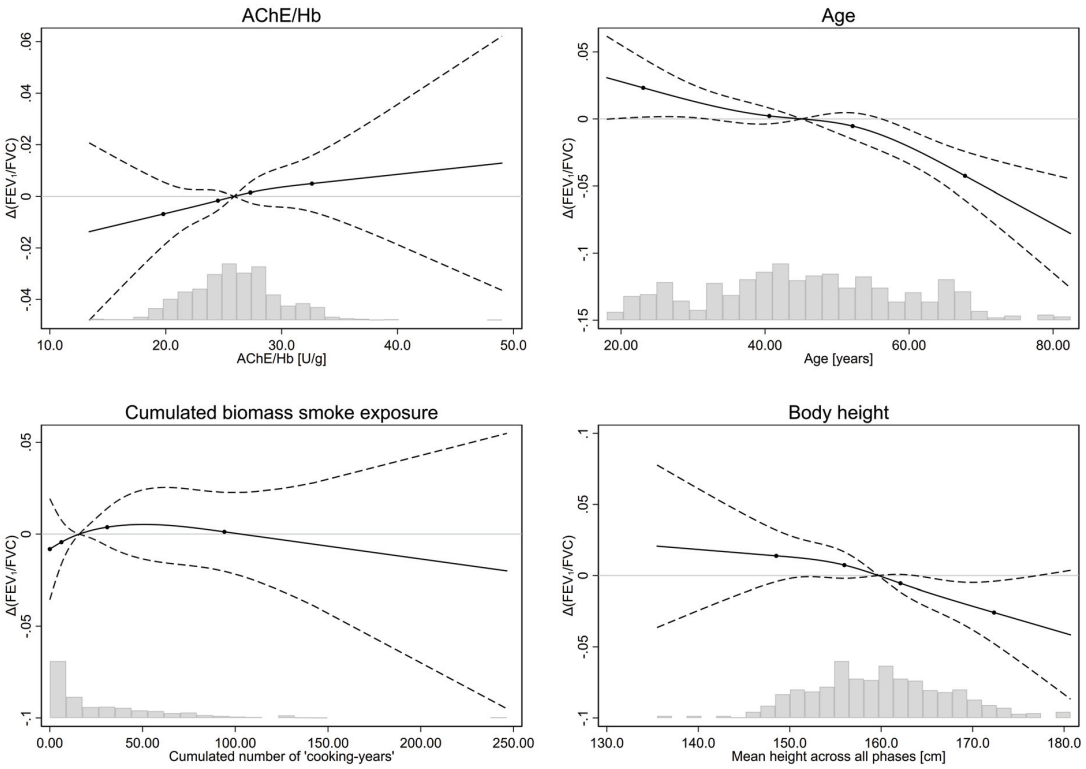
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	-0.005 [-0.023 ; 0.012]

Analysis specification

Model 02
Outcome: FEV_1/FVC
Covariate adjustment: Basic

Number of observations in model: 791

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.007 [-0.019 ; 0.006]
24.50	-0.002 [-0.005 ; 0.002]
25.90	0 [ref.]
27.30	0.001 [-0.003 ; 0.006]
32.61	0.005 [-0.006 ; 0.016]

Age

Value	Outcome estimate [CI]
23.07	0.023 [0.001 ; 0.045]
40.58	0.002 [-0.004 ; 0.008]
45.06	0 [ref.]
52.16	-0.005 [-0.015 ; 0.005]
67.76	-0.042 [-0.061 ; -0.024]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.008 [-0.036 ; 0.019]
6.25	-0.004 [-0.016 ; 0.008]
15.89	0 [ref.]
30.95	0.004 [-0.006 ; 0.014]
94.12	0.001 [-0.020 ; 0.023]

Body height

Value	Outcome estimate [CI]
148.52	0.014 [-0.004 ; 0.032]
155.97	0.007 [-0.002 ; 0.017]
159.70	0 [ref.]
162.10	-0.005 [-0.012 ; 0.001]
172.33	-0.026 [-0.048 ; -0.004]

Regression results for categorical and linear variables

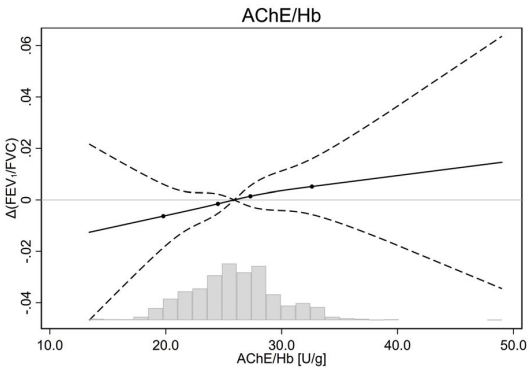
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.005 [-0.022 ; 0.032]
Pack-years	-0.003 [-0.007 ; -0.000]

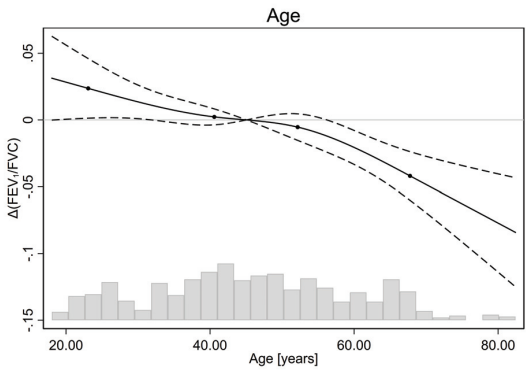
Analysis specification

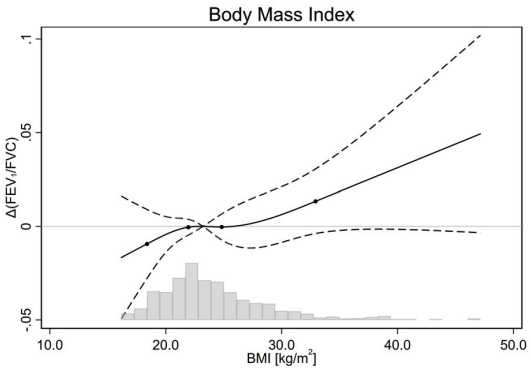
Model 02
Outcome: FEV_1/FVC
Covariate adjustment: Extended

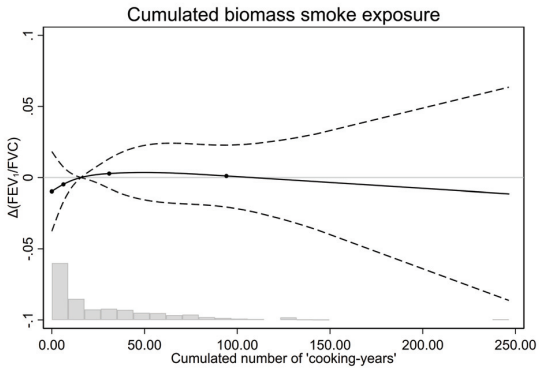
Number of observations in model: 787

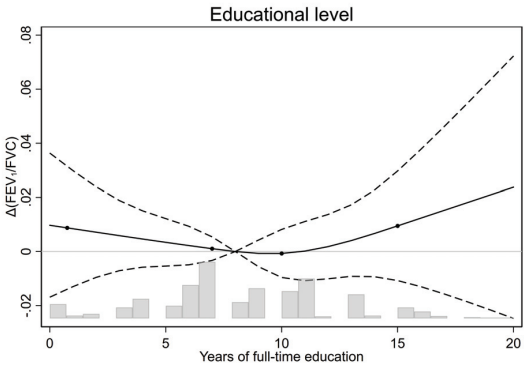
Regression results for variables modeled using splines

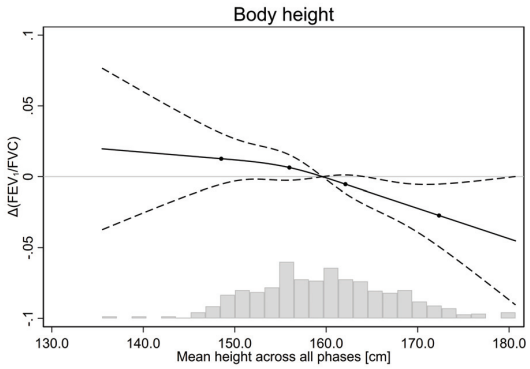












Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.006 [-0.019 ; 0.006]
24.50	-0.002 [-0.005 ; 0.002]
25.90	0 [ref.]
27.30	0.001 [-0.003 ; 0.005]
32.61	0.005 [-0.006 ; 0.016]

Body Mass Index

Value	Outcome estimate [CI]
18.38	-0.009 [-0.028 ; 0.009]
21.95	-0.000 [-0.005 ; 0.004]
23.22	0 [ref.]
24.83	-0.000 [-0.007 ; 0.007]
32.92	0.013 [-0.004 ; 0.031]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.010 [-0.038 ; 0.018]
6.25	-0.005 [-0.017 ; 0.007]
15.72	0 [ref.]
30.95	0.003 [-0.008 ; 0.013]
94.12	0.001 [-0.021 ; 0.023]

Educational level

Value	Outcome estimate [CI]
0.75	0.009 [-0.014 ; 0.031]
7.00	0.001 [-0.003 ; 0.005]
8.00	0 [ref.]
10.00	-0.001 [-0.010 ; 0.008]
15.00	0.009 [-0.011 ; 0.030]

Age

Value	Outcome estimate [CI]
23.07	0.024 [0.001 ; 0.046]
40.58	0.002 [-0.004 ; 0.008]
45.06	0 [ref.]
52.16	-0.005 [-0.015 ; 0.005]
67.76	-0.042 [-0.060 ; -0.024]

Body height

Value	Outcome estimate [CI]
148.52	0.013 [-0.005 ; 0.031]
155.97	0.006 [-0.003 ; 0.015]
159.60	0 [ref.]
162.10	-0.005 [-0.012 ; 0.001]
172.33	-0.027 [-0.049 ; -0.005]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.009 [-0.019 ; 0.038]
Pack-years	-0.004 [-0.007 ; -0.000]

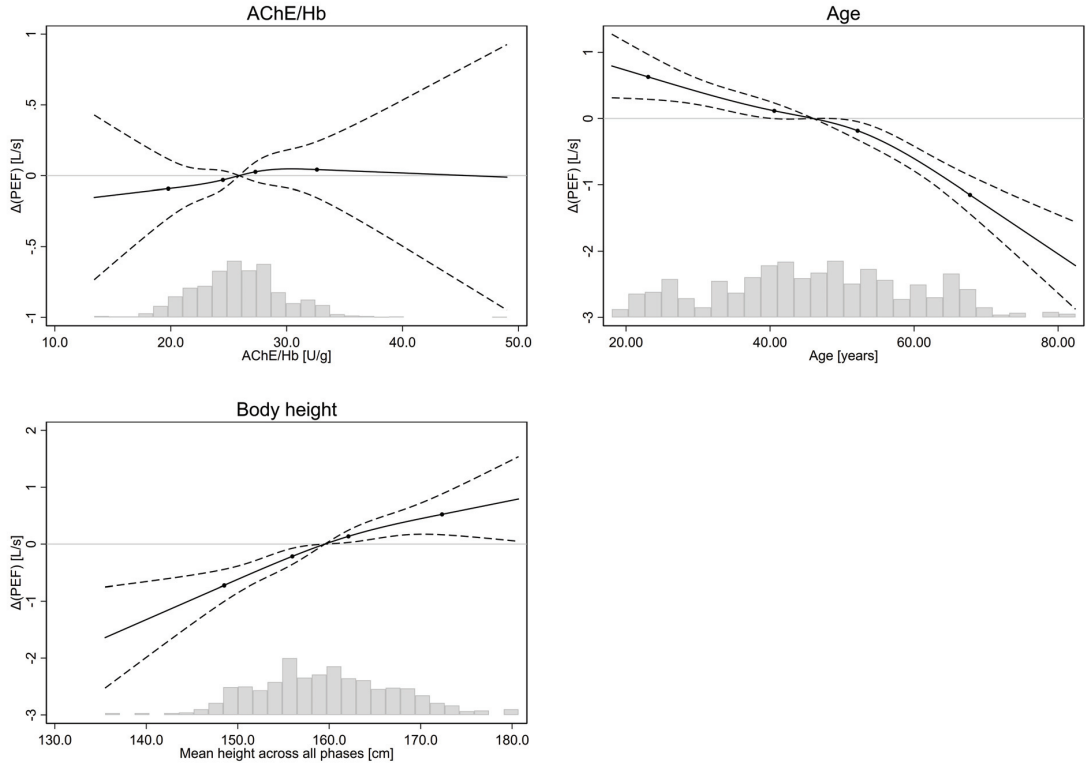
Hansen MRH, *et al. Thorax* 2021; 76:1–10. doi: 10.1136/thoraxjnl-2020-214609

Analysis specification

Model 02
Outcome: PEF
Unadjusted

Number of observations in model: 837

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.091 [-0.299 ; 0.117]
24.50	-0.030 [-0.095 ; 0.035]
25.90	0 [ref.]
27.30	0.027 [-0.042 ; 0.096]
32.61	0.043 [-0.155 ; 0.241]

Age

Value	Outcome estimate [CI]
23.07	0.629 [0.290 ; 0.967]
40.58	0.116 [-0.002 ; 0.235]
46.00	0 [ref.]
52.16	-0.184 [-0.321 ; -0.048]
67.76	-1.150 [-1.437 ; -0.863]

Body height

Value	Outcome estimate [CI]
148.52	-0.724 [-1.004 ; -0.444]
155.97	-0.216 [-0.358 ; -0.074]
159.53	0 [ref.]
162.10	0.136 [0.028 ; 0.243]
172.33	0.523 [0.164 ; 0.881]

Regression results for categorical and linear variables

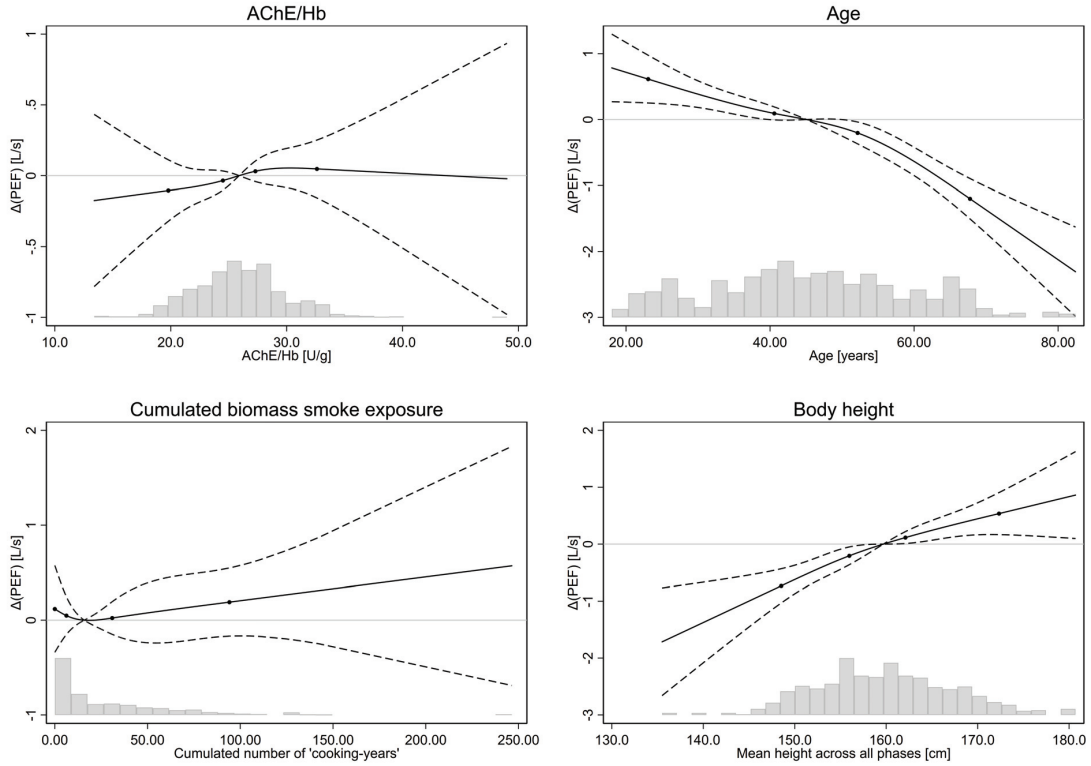
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	1.649 [1.356 ; 1.943]

Analysis specification

Model 02
Outcome: PEF
Covariate adjustment: Basic

Number of observations in model: 793

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.104 [-0.321 ; 0.112]
24.50	-0.034 [-0.102 ; 0.033]
25.90	0 [ref.]
27.30	0.031 [-0.041 ; 0.103]
32.61	0.048 [-0.156 ; 0.251]

Age

Value	Outcome estimate [CI]
23.07	0.614 [0.251 ; 0.976]
40.58	0.093 [-0.006 ; 0.192]
45.06	0 [ref.]
52.16	-0.203 [-0.369 ; -0.038]
67.76	-1.200 [-1.504 ; -0.895]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.118 [-0.340 ; 0.576]
6.25	0.048 [-0.151 ; 0.247]
15.89	0 [ref.]
30.95	0.023 [-0.149 ; 0.195]
94.12	0.190 [-0.168 ; 0.548]

Body height

Value	Outcome estimate [CI]
148.52	-0.733 [-1.032 ; -0.433]
155.97	-0.206 [-0.362 ; -0.050]
159.70	0 [ref.]
162.10	0.114 [0.010 ; 0.219]
172.33	0.536 [0.166 ; 0.905]

Regression results for categorical and linear variables

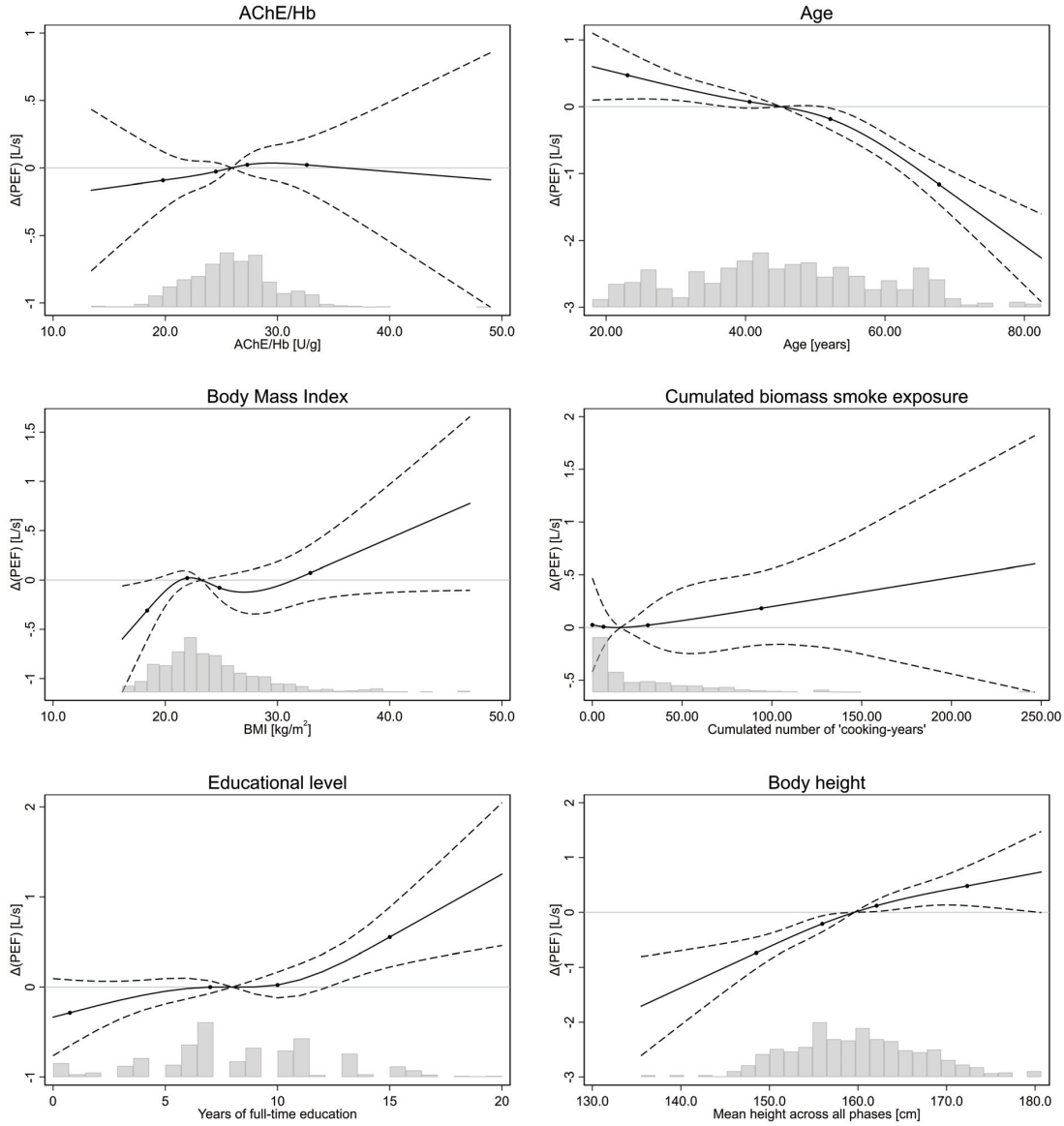
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	1.618 [1.173 ; 2.064]
Pack-years	-0.021 [-0.078 ; 0.036]

Analysis specification

Model 02
Outcome: PEF
Covariate adjustment: Extended

Number of observations in model: 789

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.092 [-0.304 ; 0.121]
24.50	-0.027 [-0.094 ; 0.039]
25.90	0 [ref.]
27.30	0.023 [-0.048 ; 0.094]
32.61	0.022 [-0.179 ; 0.222]

Body Mass Index

Value	Outcome estimate [CI]
18.38	-0.310 [-0.611 ; -0.008]
21.95	0.021 [-0.049 ; 0.090]
23.22	0 [ref.]
24.83	-0.078 [-0.194 ; 0.037]
32.92	0.072 [-0.213 ; 0.358]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.025 [-0.421 ; 0.471]
6.25	0.008 [-0.186 ; 0.201]
15.72	0 [ref.]
30.95	0.022 [-0.147 ; 0.192]
94.12	0.183 [-0.165 ; 0.531]

Educational level

Value	Outcome estimate [CI]
0.75	-0.286 [-0.651 ; 0.080]
7.00	-0.000 [-0.070 ; 0.070]
8.00	0 [ref.]
10.00	0.023 [-0.120 ; 0.166]
15.00	0.554 [0.222 ; 0.885]

Age

Value	Outcome estimate [CI]
23.07	0.471 [0.115 ; 0.828]
40.58	0.074 [-0.023 ; 0.170]
45.06	0 [ref.]
52.16	-0.184 [-0.345 ; -0.023]
67.76	-1.162 [-1.457 ; -0.868]

Body height

Value	Outcome estimate [CI]
148.52	-0.736 [-1.022 ; -0.451]
155.97	-0.209 [-0.355 ; -0.063]
159.60	0 [ref.]
162.10	0.121 [0.016 ; 0.227]
172.33	0.482 [0.122 ; 0.842]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	1.598 [1.143 ; 2.053]
Pack-years	-0.015 [-0.070 ; 0.040]

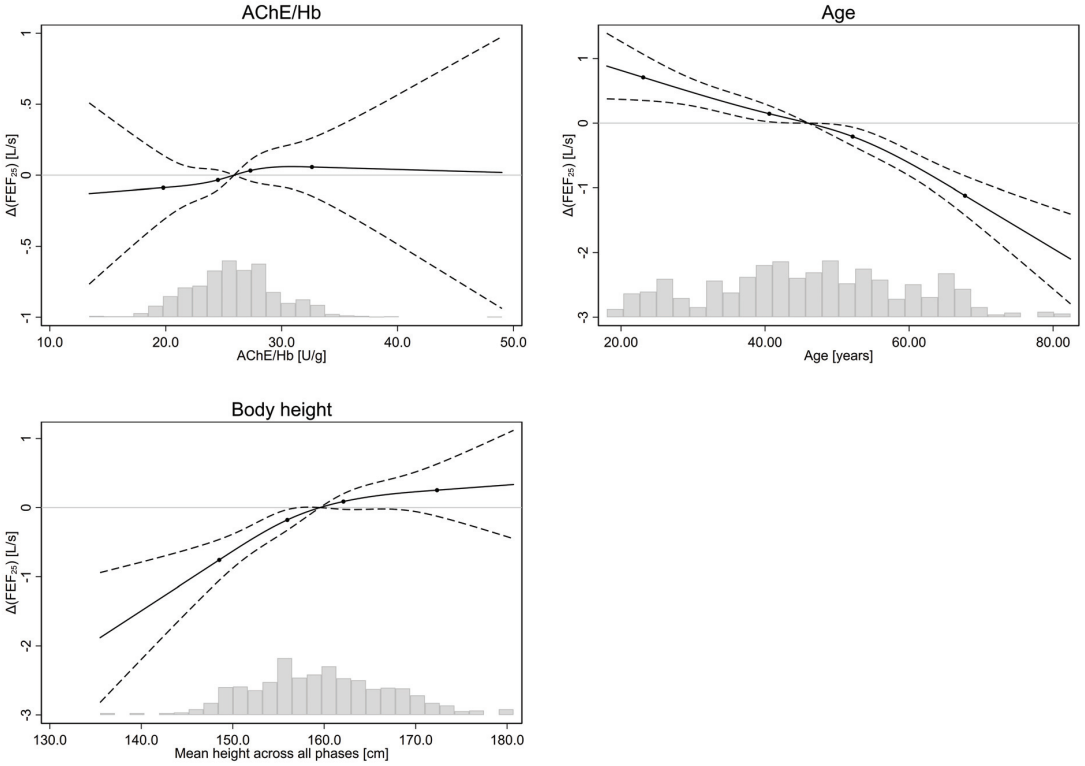
Hansen MRH, *et al. Thorax* 2021; 76:1–10. doi: 10.1136/thoraxjnl-2020-214609

Analysis specification

Model 02
Outcome: FEF_{25}
Unadjusted

Number of observations in model: 837

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.088 [-0.315 ; 0.140]
24.50	-0.034 [-0.103 ; 0.036]
25.90	0 [ref.]
27.30	0.032 [-0.042 ; 0.106]
32.61	0.057 [-0.147 ; 0.262]

Age

Value	Outcome estimate [CI]
23.07	0.709 [0.351 ; 1.066]
40.58	0.146 [0.021 ; 0.270]
46.00	0 [ref.]
52.16	-0.207 [-0.351 ; -0.063]
67.76	-1.119 [-1.421 ; -0.816]

Body height

Value	Outcome estimate [CI]
148.52	-0.758 [-1.054 ; -0.462]
155.97	-0.178 [-0.328 ; -0.029]
159.53	0 [ref.]
162.10	0.088 [-0.025 ; 0.201]
172.33	0.253 [-0.125 ; 0.630]

Regression results for categorical and linear variables

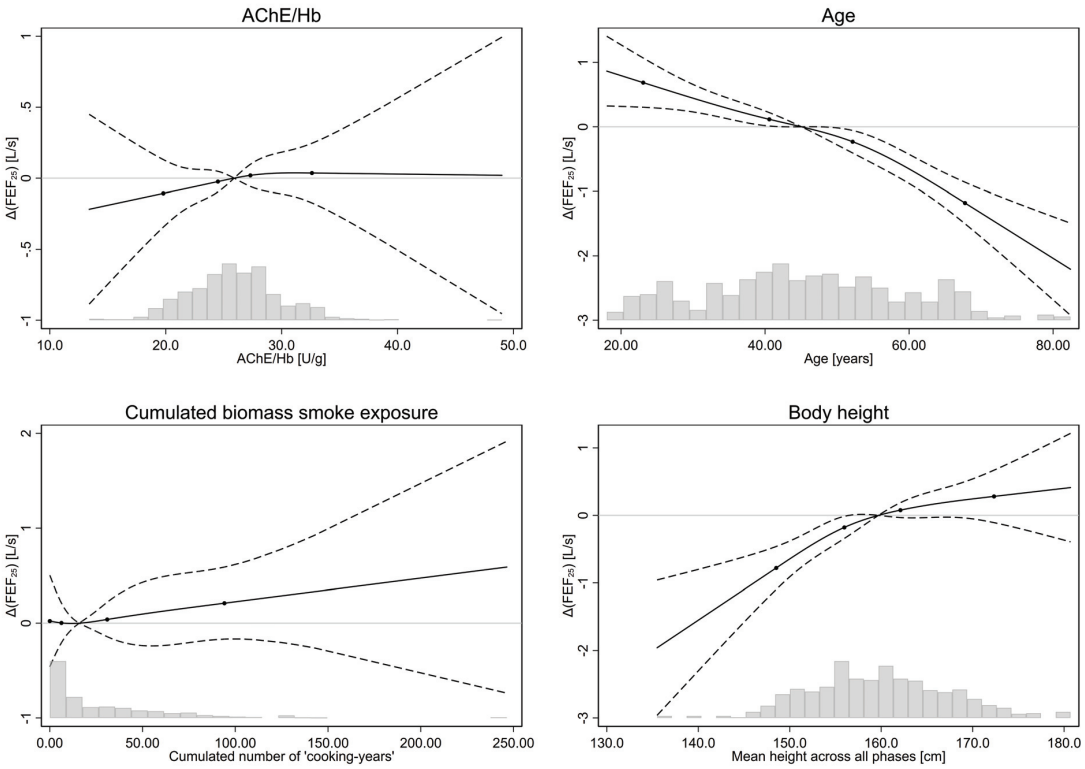
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.987 [0.678 ; 1.295]

Analysis specification

Model 02
Outcome: FEF_{25}
Covariate adjustment: Basic

Number of observations in model: 793

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.107 [-0.344 ; 0.131]
24.50	-0.024 [-0.096 ; 0.048]
25.90	0 [ref.]
27.30	0.020 [-0.058 ; 0.097]
32.61	0.036 [-0.174 ; 0.246]

Age

Value	Outcome estimate [CI]
23.07	0.686 [0.304 ; 1.069]
40.58	0.117 [0.012 ; 0.221]
45.06	0 [ref.]
52.16	-0.232 [-0.406 ; -0.057]
67.76	-1.180 [-1.501 ; -0.859]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.022 [-0.460 ; 0.504]
6.25	0.003 [-0.207 ; 0.213]
15.89	0 [ref.]
30.95	0.039 [-0.142 ; 0.221]
94.12	0.211 [-0.168 ; 0.589]

Body height

Value	Outcome estimate [CI]
148.52	-0.779 [-1.097 ; -0.461]
155.97	-0.179 [-0.343 ; -0.014]
159.70	0 [ref.]
162.10	0.078 [-0.033 ; 0.188]
172.33	0.281 [-0.108 ; 0.670]

Regression results for categorical and linear variables

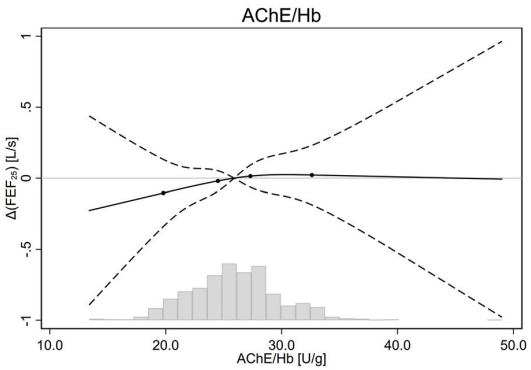
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	1.034 [0.564 ; 1.503]
Pack-years	-0.026 [-0.087 ; 0.034]

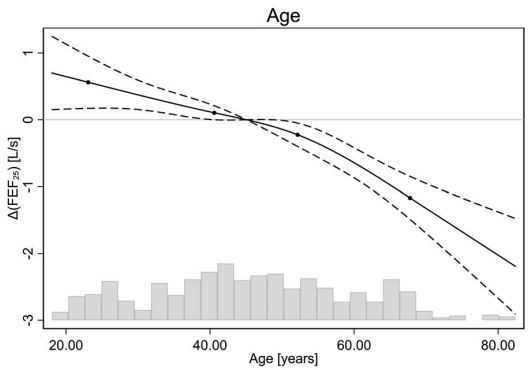
Analysis specification

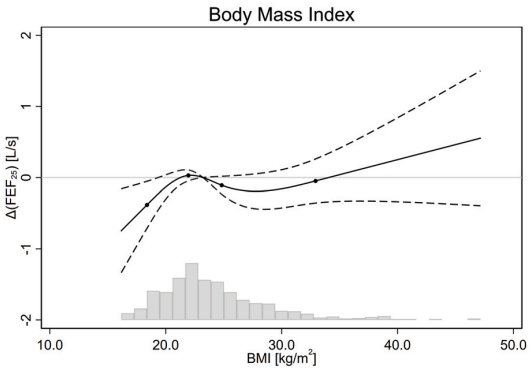
Model 02
Outcome: FEF_{25}
Covariate adjustment: Extended

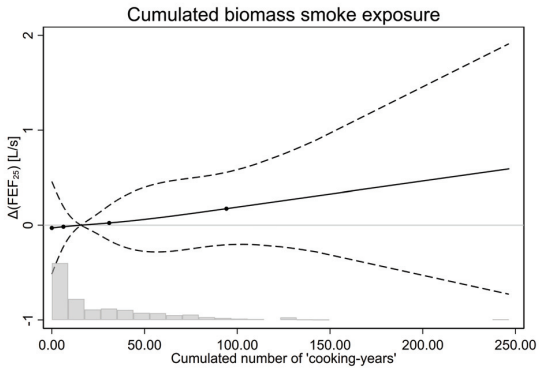
Number of observations in model: 789

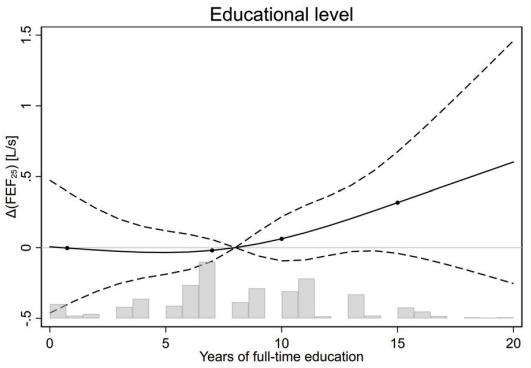
Regression results for variables modeled using splines

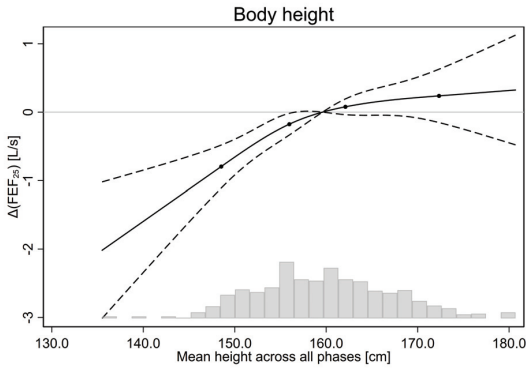












Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.104 [-0.340 ; 0.132]
24.50	-0.019 [-0.092 ; 0.053]
25.90	0 [ref.]
27.30	0.014 [-0.063 ; 0.092]
32.61	0.022 [-0.187 ; 0.231]

Body Mass Index

Value	Outcome estimate [CI]
18.38	-0.382 [-0.712 ; -0.053]
21.95	0.030 [-0.046 ; 0.106]
23.22	0 [ref.]
24.83	-0.108 [-0.233 ; 0.018]
32.92	-0.048 [-0.356 ; 0.261]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.029 [-0.516 ; 0.459]
6.25	-0.016 [-0.228 ; 0.196]
15.72	0 [ref.]
30.95	0.023 [-0.161 ; 0.208]
94.12	0.174 [-0.207 ; 0.555]

Educational level

Value	Outcome estimate [CI]
0.75	-0.003 [-0.402 ; 0.397]
7.00	-0.019 [-0.096 ; 0.057]
8.00	0 [ref.]
10.00	0.063 [-0.093 ; 0.219]
15.00	0.318 [-0.040 ; 0.676]

Age

Value	Outcome estimate [CI]
23.07	0.562 [0.171 ; 0.953]
40.58	0.105 [-0.000 ; 0.210]
45.06	0 [ref.]
52.16	-0.225 [-0.400 ; -0.050]
67.76	-1.168 [-1.489 ; -0.848]

Body height

Value	Outcome estimate [CI]
148.52	-0.796 [-1.110 ; -0.481]
155.97	-0.176 [-0.335 ; -0.018]
159.60	0 [ref.]
162.10	0.078 [-0.037 ; 0.193]
172.33	0.238 [-0.153 ; 0.628]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	1.011 [0.514 ; 1.508]
Pack-years	-0.022 [-0.082 ; 0.038]

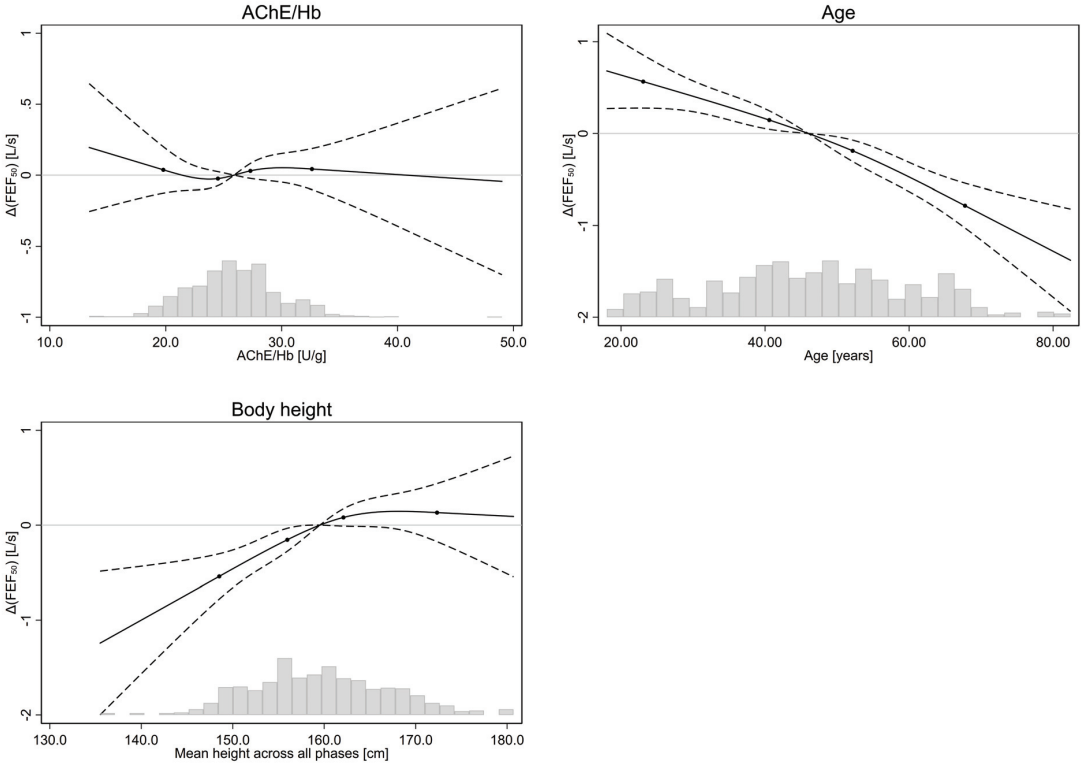
Hansen MRH, *et al. Thorax* 2021; 76:1–10. doi: 10.1136/thoraxjnl-2020-214609

Analysis specification

Model 02
Outcome: FEF_{50}
Unadjusted

Number of observations in model: 837

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	0.038 [-0.126 ; 0.201]
24.50	-0.024 [-0.073 ; 0.025]
25.90	0 [ref.]
27.30	0.030 [-0.022 ; 0.082]
32.61	0.043 [-0.101 ; 0.187]

Age

Value	Outcome estimate [CI]
23.07	0.566 [0.277 ; 0.855]
40.58	0.146 [0.046 ; 0.247]
46.00	0 [ref.]
52.16	-0.189 [-0.305 ; -0.072]
67.76	-0.784 [-1.027 ; -0.540]

Body height

Value	Outcome estimate [CI]
148.52	-0.540 [-0.779 ; -0.302]
155.97	-0.154 [-0.275 ; -0.034]
159.53	0 [ref.]
162.10	0.081 [-0.010 ; 0.172]
172.33	0.132 [-0.174 ; 0.439]

Regression results for categorical and linear variables

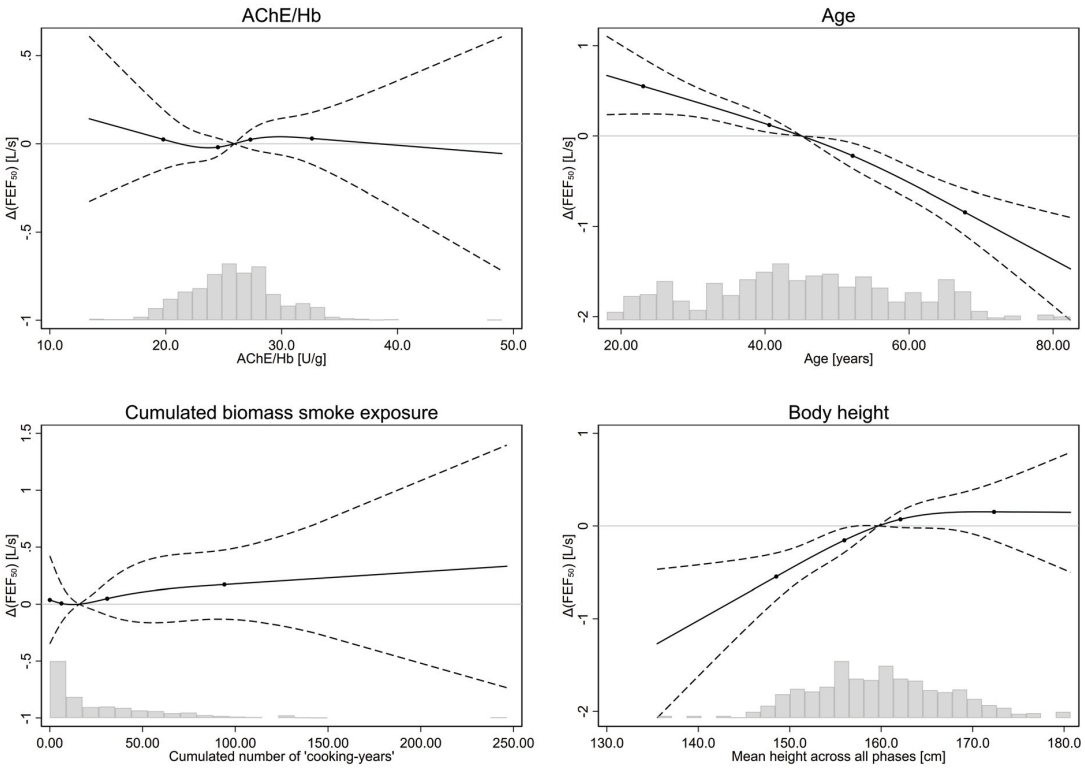
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.335 [0.084 ; 0.585]

Analysis specification

Model 02
Outcome: FEF_{50}
Covariate adjustment: Basic

Number of observations in model: 793

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	0.025 [-0.144 ; 0.194]
24.50	-0.020 [-0.071 ; 0.031]
25.90	0 [ref.]
27.30	0.024 [-0.031 ; 0.078]
32.61	0.030 [-0.117 ; 0.177]

Age

Value	Outcome estimate [CI]
23.07	0.551 [0.244 ; 0.858]
40.58	0.122 [0.038 ; 0.205]
45.06	0 [ref.]
52.16	-0.220 [-0.360 ; -0.080]
67.76	-0.844 [-1.100 ; -0.587]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.037 [-0.349 ; 0.424]
6.25	0.007 [-0.161 ; 0.175]
15.89	0 [ref.]
30.95	0.049 [-0.097 ; 0.194]
94.12	0.172 [-0.132 ; 0.475]

Body height

Value	Outcome estimate [CI]
148.52	-0.546 [-0.800 ; -0.292]
155.97	-0.155 [-0.286 ; -0.023]
159.70	0 [ref.]
162.10	0.072 [-0.016 ; 0.160]
172.33	0.152 [-0.161 ; 0.465]

Regression results for categorical and linear variables

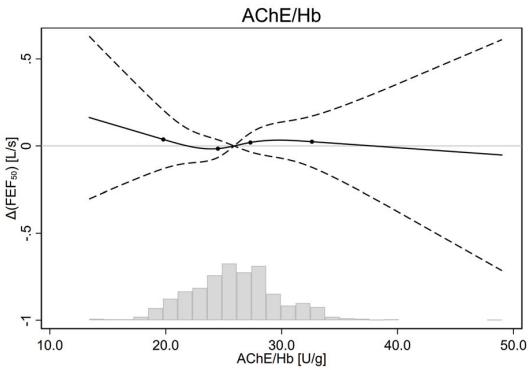
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.366 [-0.010 ; 0.742]
Pack-years	-0.011 [-0.060 ; 0.037]

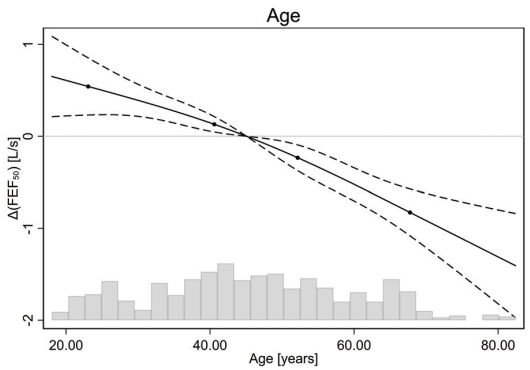
Analysis specification

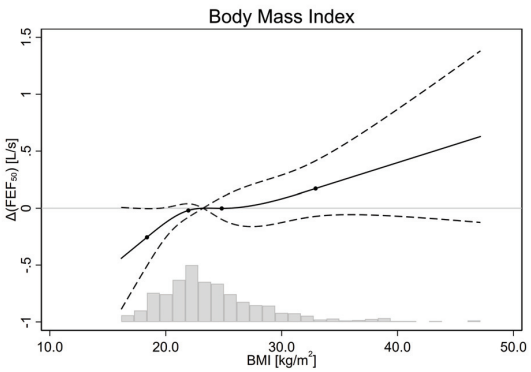
Model 02
Outcome: FEF_{50}
Covariate adjustment: Extended

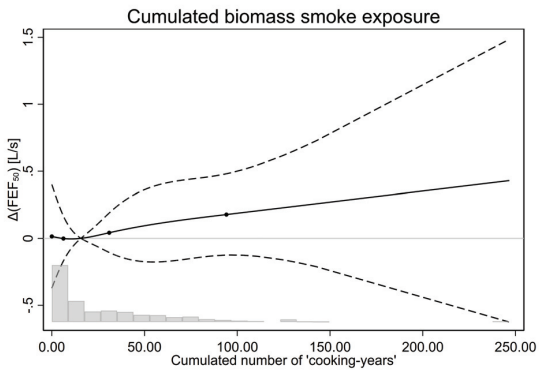
Number of observations in model: 789

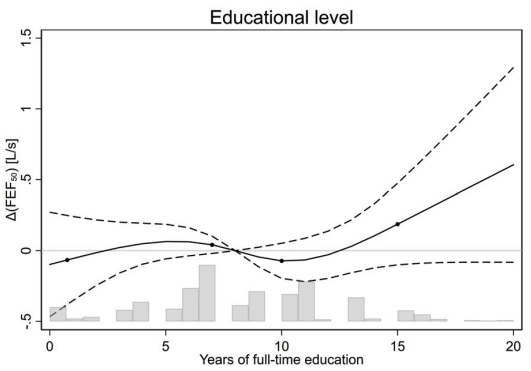
Regression results for variables modeled using splines

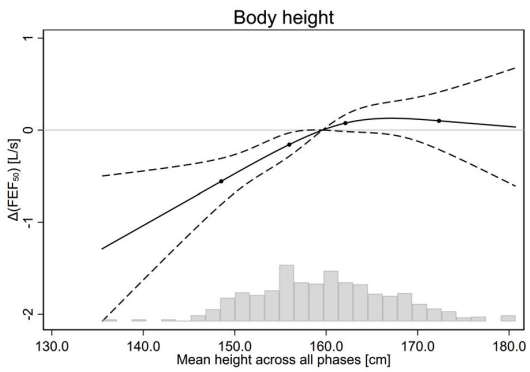












Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	0.038 [-0.131 ; 0.206]
24.50	-0.016 [-0.066 ; 0.035]
25.90	0 [ref.]
27.30	0.020 [-0.034 ; 0.074]
32.61	0.024 [-0.123 ; 0.171]

Body Mass Index

Value	Outcome estimate [CI]
18.38	-0.255 [-0.507 ; -0.004]
21.95	-0.020 [-0.079 ; 0.039]
23.22	0 [ref.]
24.83	-0.002 [-0.098 ; 0.095]
32.92	0.171 [-0.072 ; 0.415]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.014 [-0.373 ; 0.402]
6.25	-0.001 [-0.169 ; 0.167]
15.72	0 [ref.]
30.95	0.042 [-0.105 ; 0.189]
94.12	0.178 [-0.125 ; 0.480]

Educational level

Value	Outcome estimate [CI]
0.75	-0.066 [-0.381 ; 0.249]
7.00	0.041 [-0.020 ; 0.102]
8.00	0 [ref.]
10.00	-0.072 [-0.196 ; 0.052]
15.00	0.187 [-0.100 ; 0.474]

Age

Value	Outcome estimate [CI]
23.07	0.542 [0.231 ; 0.853]
40.58	0.130 [0.047 ; 0.214]
45.06	0 [ref.]
52.16	-0.233 [-0.373 ; -0.094]
67.76	-0.827 [-1.081 ; -0.572]

Body height

Value	Outcome estimate [CI]
148.52	-0.557 [-0.806 ; -0.307]
155.97	-0.158 [-0.284 ; -0.031]
159.60	0 [ref.]
162.10	0.076 [-0.016 ; 0.168]
172.33	0.101 [-0.212 ; 0.413]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.408 [0.014 ; 0.803]
Pack-years	-0.011 [-0.059 ; 0.037]

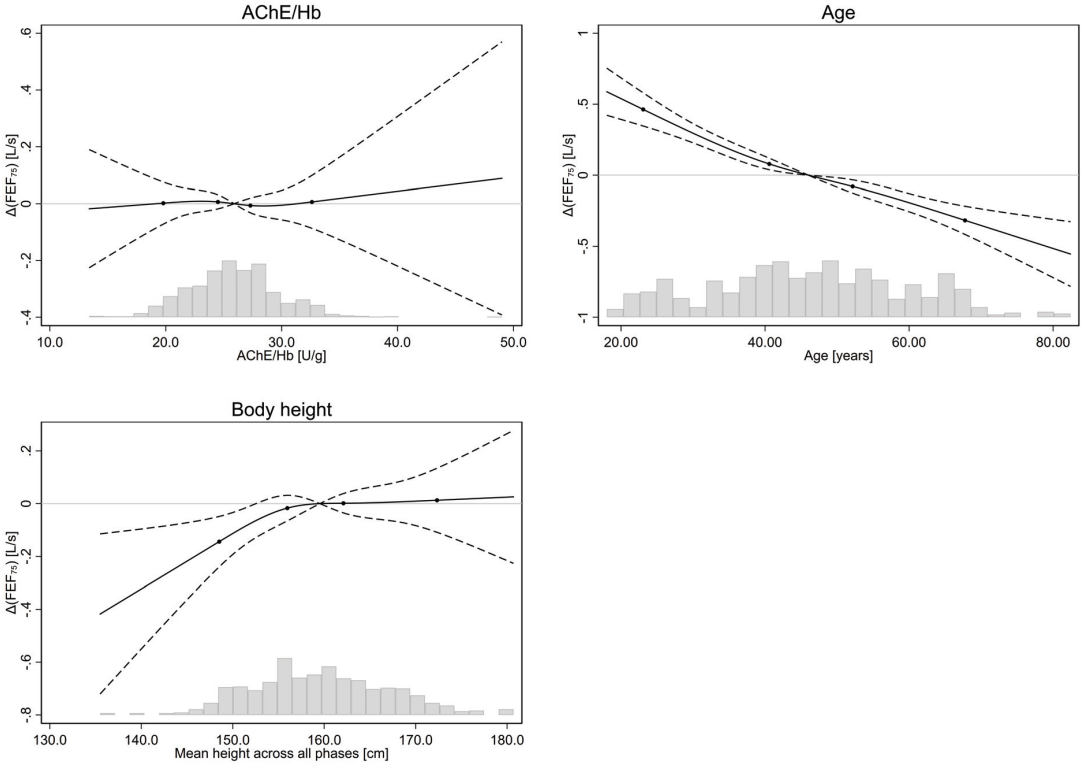
Hansen MRH, *et al. Thorax* 2021; 76:1–10. doi: 10.1136/thoraxjnl-2020-214609

Analysis specification

Model 02
Outcome: FEF_{75}
Unadjusted

Number of observations in model: 837

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	0.002 [-0.072 ; 0.076]
24.50	0.007 [-0.018 ; 0.031]
25.90	0 [ref.]
27.30	-0.006 [-0.032 ; 0.019]
32.61	0.006 [-0.087 ; 0.099]

Age

Value	Outcome estimate [CI]
23.07	0.463 [0.346 ; 0.580]
40.58	0.079 [0.038 ; 0.119]
46.00	0 [ref.]
52.16	-0.079 [-0.126 ; -0.033]
67.76	-0.317 [-0.416 ; -0.218]

Body height

Value	Outcome estimate [CI]
148.52	-0.144 [-0.240 ; -0.049]
155.97	-0.017 [-0.065 ; 0.031]
159.53	0 [ref.]
162.10	0.001 [-0.035 ; 0.038]
172.33	0.013 [-0.109 ; 0.134]

Regression results for categorical and linear variables

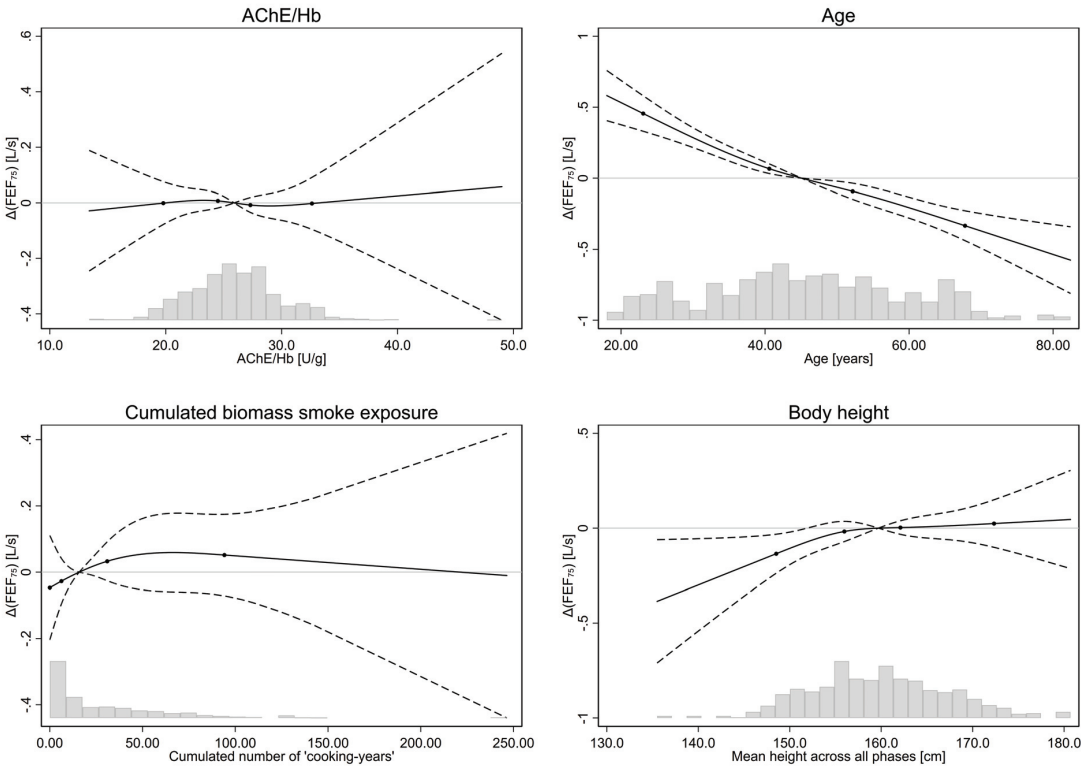
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.218 [0.119 ; 0.317]

Analysis specification

Model 02
Outcome: FEF_{75}
Covariate adjustment: Basic

Number of observations in model: 793

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.001 [-0.078 ; 0.076]
24.50	0.007 [-0.018 ; 0.033]
25.90	0 [ref.]
27.30	-0.008 [-0.034 ; 0.019]
32.61	-0.002 [-0.095 ; 0.091]

Age

Value	Outcome estimate [CI]
23.07	0.455 [0.330 ; 0.581]
40.58	0.067 [0.033 ; 0.100]
45.06	0 [ref.]
52.16	-0.092 [-0.149 ; -0.035]
67.76	-0.334 [-0.439 ; -0.229]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.047 [-0.204 ; 0.111]
6.25	-0.027 [-0.096 ; 0.041]
15.89	0 [ref.]
30.95	0.033 [-0.026 ; 0.091]
94.12	0.052 [-0.071 ; 0.175]

Body height

Value	Outcome estimate [CI]
148.52	-0.135 [-0.238 ; -0.032]
155.97	-0.018 [-0.071 ; 0.036]
159.70	0 [ref.]
162.10	0.003 [-0.033 ; 0.039]
172.33	0.024 [-0.101 ; 0.150]

Regression results for categorical and linear variables

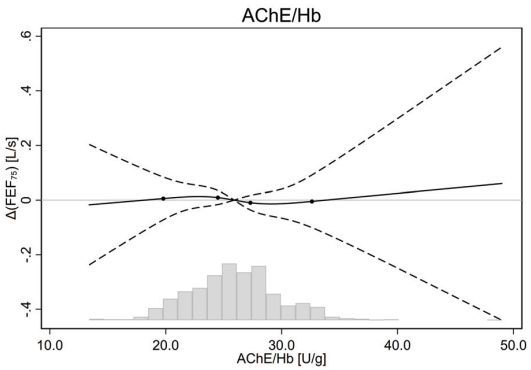
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.290 [0.137 ; 0.443]
Pack-years	-0.013 [-0.032 ; 0.006]

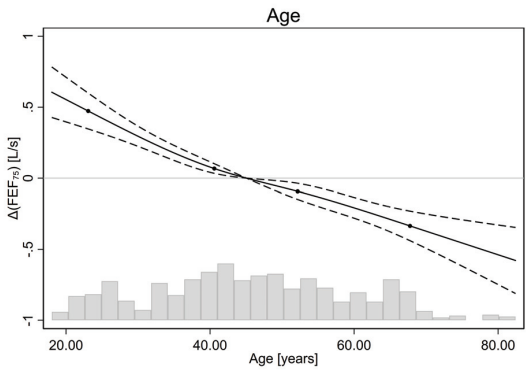
Analysis specification

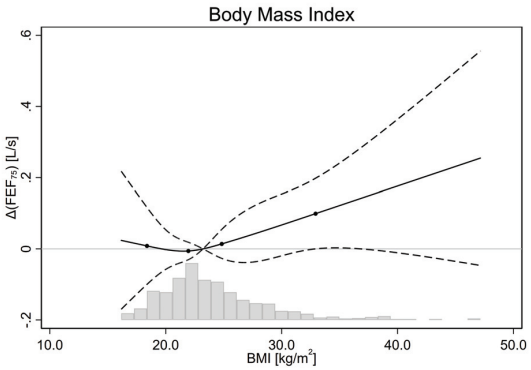
Model 02
Outcome: FEF_{75}
Covariate adjustment: Extended

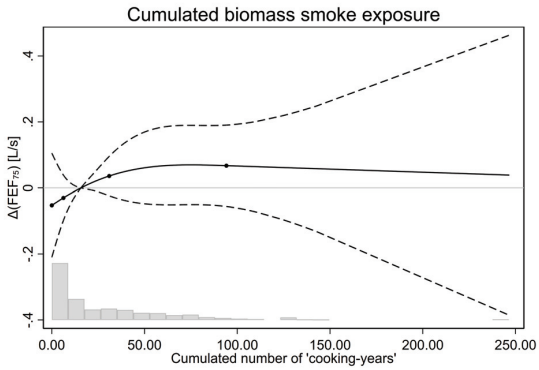
Number of observations in model: 789

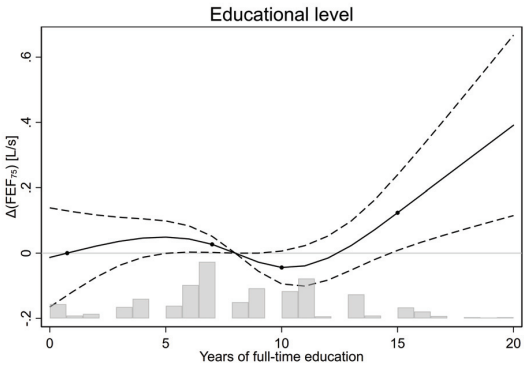
Regression results for variables modeled using splines

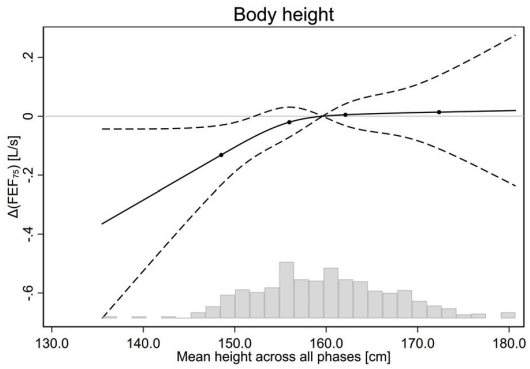












Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	0.006 [-0.072 ; 0.084]
24.50	0.009 [-0.016 ; 0.035]
25.90	0 [ref.]
27.30	-0.009 [-0.036 ; 0.017]
32.61	-0.005 [-0.101 ; 0.091]

Body Mass Index

Value	Outcome estimate [CI]
18.38	0.008 [-0.100 ; 0.117]
21.95	-0.006 [-0.030 ; 0.019]
23.22	0 [ref.]
24.83	0.014 [-0.027 ; 0.055]
32.92	0.099 [-0.000 ; 0.198]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.052 [-0.210 ; 0.106]
6.25	-0.030 [-0.098 ; 0.039]
15.72	0 [ref.]
30.95	0.036 [-0.024 ; 0.095]
94.12	0.067 [-0.056 ; 0.190]

Educational level

Value	Outcome estimate [CI]
0.75	0.000 [-0.129 ; 0.130]
7.00	0.027 [0.002 ; 0.052]
8.00	0 [ref.]
10.00	-0.044 [-0.094 ; 0.006]
15.00	0.124 [0.009 ; 0.239]

Age

Value	Outcome estimate [CI]
23.07	0.473 [0.347 ; 0.600]
40.58	0.068 [0.034 ; 0.102]
45.06	0 [ref.]
52.16	-0.092 [-0.149 ; -0.036]
67.76	-0.335 [-0.439 ; -0.231]

Body height

Value	Outcome estimate [CI]
148.52	-0.132 [-0.233 ; -0.030]
155.97	-0.020 [-0.071 ; 0.031]
159.60	0 [ref.]
162.10	0.005 [-0.032 ; 0.042]
172.33	0.014 [-0.111 ; 0.139]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.299 [0.138 ; 0.459]
Pack-years	-0.014 [-0.033 ; 0.005]

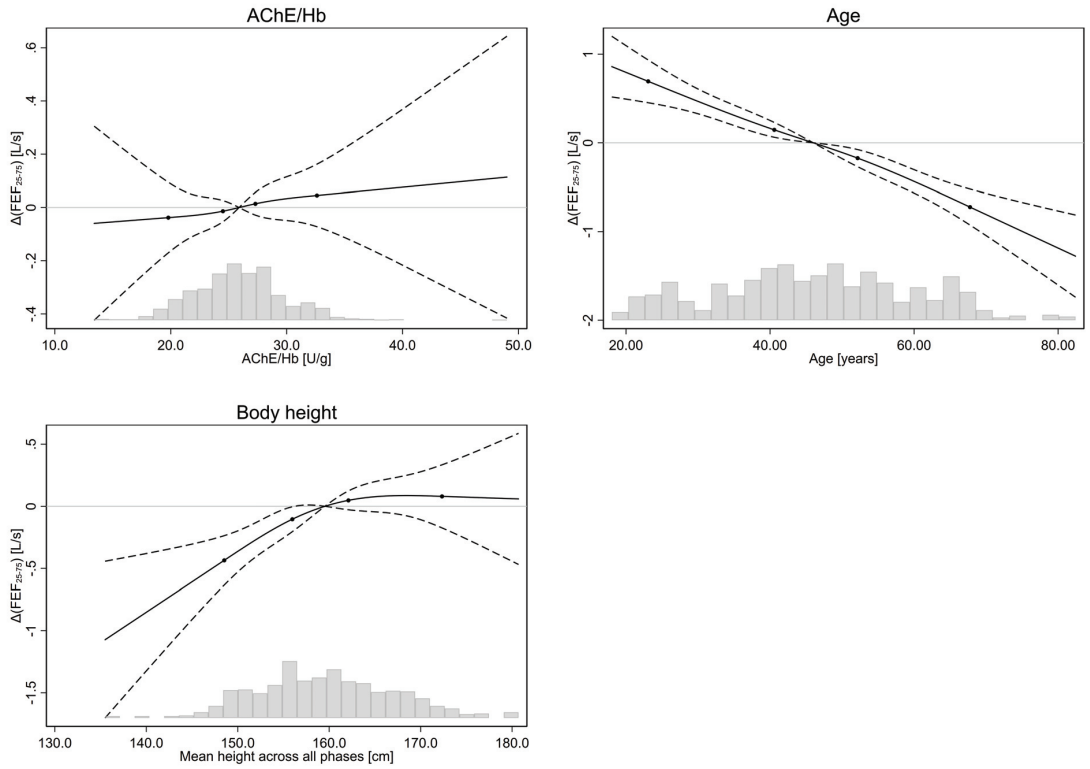
Hansen MRH, *et al. Thorax* 2021; 76:1–10. doi: 10.1136/thoraxjnl-2020-214609

Analysis specification

Model 02
Outcome: FEF_{25-75}
Unadjusted

Number of observations in model: 837

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.038 [-0.170 ; 0.095]
24.50	-0.014 [-0.054 ; 0.026]
25.90	0 [ref.]
27.30	0.014 [-0.028 ; 0.057]
32.61	0.045 [-0.072 ; 0.162]

Age

Value	Outcome estimate [CI]
23.07	0.694 [0.453 ; 0.935]
40.58	0.146 [0.063 ; 0.230]
46.00	0 [ref.]
52.16	-0.173 [-0.269 ; -0.076]
67.76	-0.723 [-0.925 ; -0.520]

Body height

Value	Outcome estimate [CI]
148.52	-0.435 [-0.634 ; -0.237]
155.97	-0.104 [-0.205 ; -0.004]
159.53	0 [ref.]
162.10	0.048 [-0.028 ; 0.124]
172.33	0.080 [-0.174 ; 0.334]

Regression results for categorical and linear variables

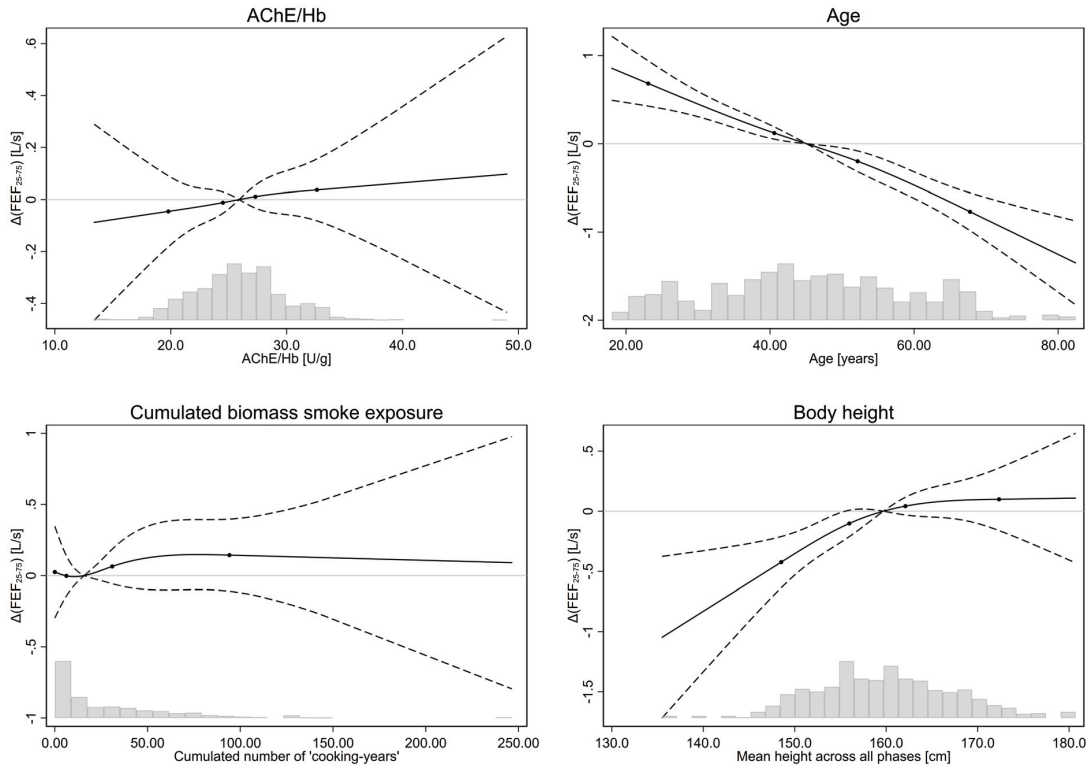
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.362 [0.155 ; 0.569]

Analysis specification

Model 02
Outcome: FEF_{25-75}
Covariate adjustment: Basic

Number of observations in model: 793

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.045 [-0.182 ; 0.091]
24.50	-0.012 [-0.053 ; 0.029]
25.90	0 [ref.]
27.30	0.011 [-0.033 ; 0.055]
32.61	0.037 [-0.082 ; 0.156]

Age

Value	Outcome estimate [CI]
23.07	0.684 [0.427 ; 0.941]
40.58	0.121 [0.052 ; 0.191]
45.06	0 [ref.]
52.16	-0.199 [-0.316 ; -0.082]
67.76	-0.769 [-0.983 ; -0.556]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.025 [-0.298 ; 0.347]
6.25	-0.002 [-0.143 ; 0.138]
15.89	0 [ref.]
30.95	0.064 [-0.057 ; 0.185]
94.12	0.144 [-0.109 ; 0.397]

Body height

Value	Outcome estimate [CI]
148.52	-0.423 [-0.636 ; -0.211]
155.97	-0.102 [-0.212 ; 0.008]
159.70	0 [ref.]
162.10	0.042 [-0.031 ; 0.116]
172.33	0.099 [-0.161 ; 0.360]

Regression results for categorical and linear variables

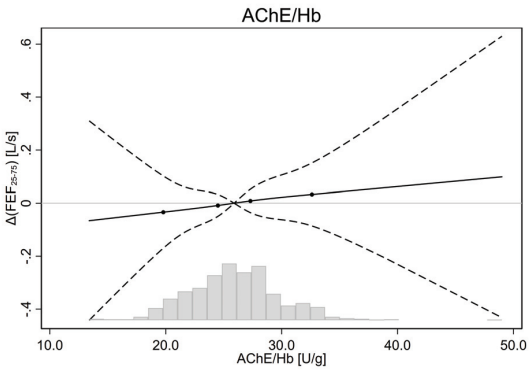
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.416 [0.102 ; 0.730]
Pack-years	-0.015 [-0.055 ; 0.026]

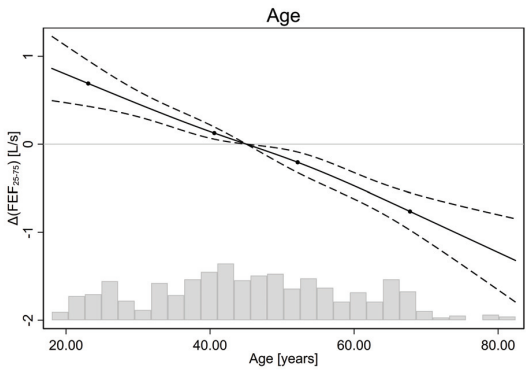
Analysis specification

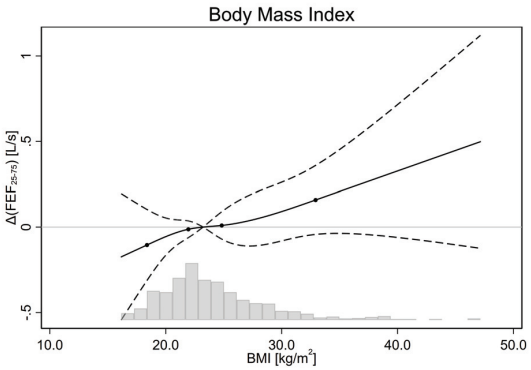
Model 02
Outcome: FEF_{25-75}
Covariate adjustment: Extended

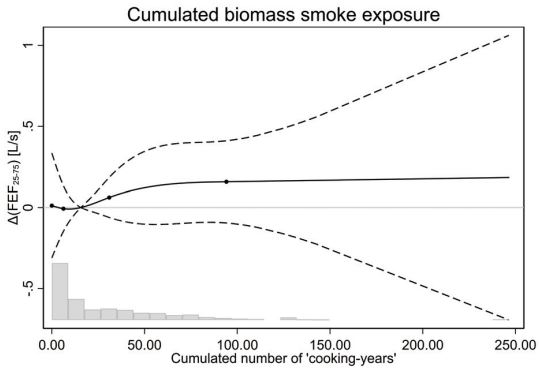
Number of observations in model: 789

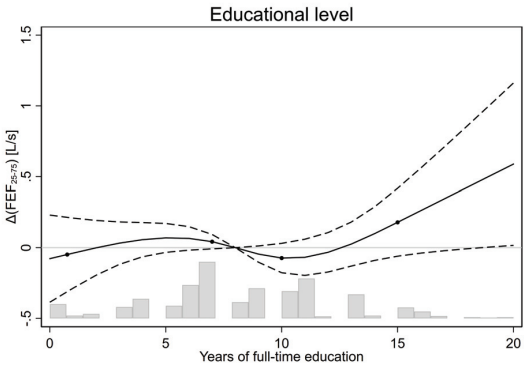
Regression results for variables modeled using splines

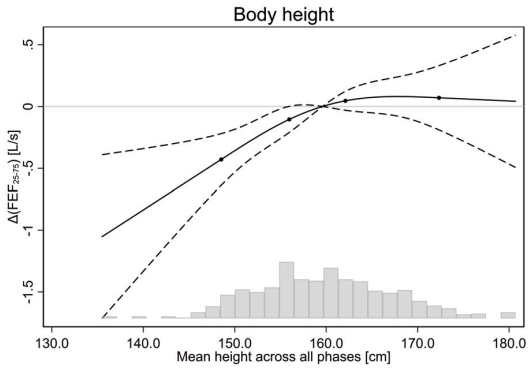












Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.034 [-0.170 ; 0.102]
24.50	-0.009 [-0.050 ; 0.032]
25.90	0 [ref.]
27.30	0.008 [-0.035 ; 0.052]
32.61	0.033 [-0.086 ; 0.151]

Body Mass Index

Value	Outcome estimate [CI]
18.38	-0.105 [-0.313 ; 0.103]
21.95	-0.013 [-0.062 ; 0.036]
23.22	0 [ref.]
24.83	0.010 [-0.070 ; 0.089]
32.92	0.158 [-0.043 ; 0.359]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.012 [-0.312 ; 0.336]
6.25	-0.007 [-0.147 ; 0.134]
15.72	0 [ref.]
30.95	0.062 [-0.061 ; 0.184]
94.12	0.158 [-0.095 ; 0.411]

Educational level

Value	Outcome estimate [CI]
0.75	-0.049 [-0.311 ; 0.214]
7.00	0.042 [-0.009 ; 0.093]
8.00	0 [ref.]
10.00	-0.073 [-0.177 ; 0.030]
15.00	0.179 [-0.060 ; 0.418]

Age

Value	Outcome estimate [CI]
23.07	0.691 [0.431 ; 0.951]
40.58	0.126 [0.057 ; 0.196]
45.06	0 [ref.]
52.16	-0.206 [-0.322 ; -0.089]
67.76	-0.763 [-0.975 ; -0.551]

Body height

Value	Outcome estimate [CI]
148.52	-0.429 [-0.638 ; -0.220]
155.97	-0.105 [-0.210 ; 0.001]
159.60	0 [ref.]
162.10	0.046 [-0.031 ; 0.122]
172.33	0.070 [-0.190 ; 0.331]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.435 [0.105 ; 0.765]
Pack-years	-0.015 [-0.055 ; 0.025]

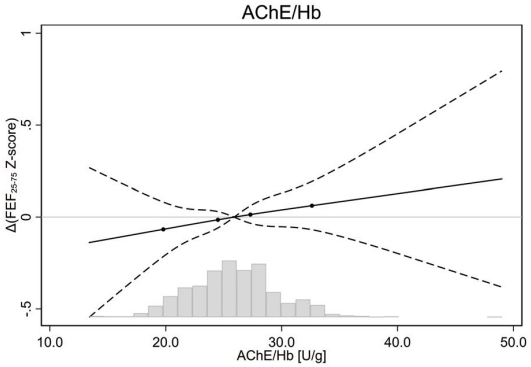
Hansen MRH, *et al. Thorax* 2021; 76:1–10. doi: 10.1136/thoraxjnl-2020-214609

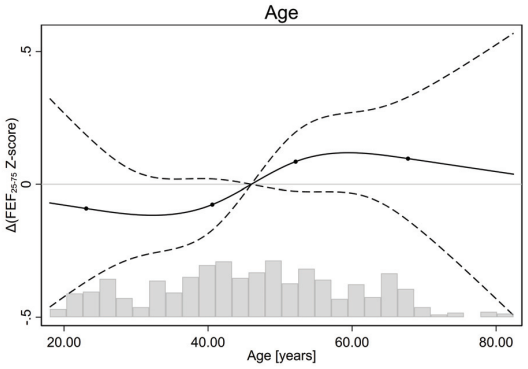
Analysis specification

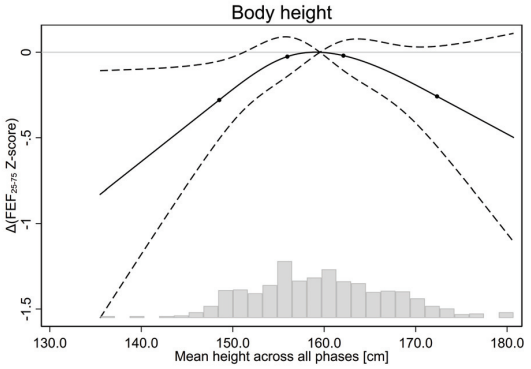
Model 02
Outcome: FEF_{25-75} Z-score
Unadjusted

Number of observations in model: 837

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.067 [-0.215 ; 0.082]
24.50	-0.014 [-0.059 ; 0.030]
25.90	0 [ref.]
27.30	0.014 [-0.034 ; 0.061]
32.61	0.062 [-0.069 ; 0.193]

Age

Value	Outcome estimate [CI]
23.07	-0.090 [-0.366 ; 0.186]
40.58	-0.076 [-0.172 ; 0.020]
46.00	0 [ref.]
52.16	0.085 [-0.026 ; 0.196]
67.76	0.097 [-0.135 ; 0.329]

Body height

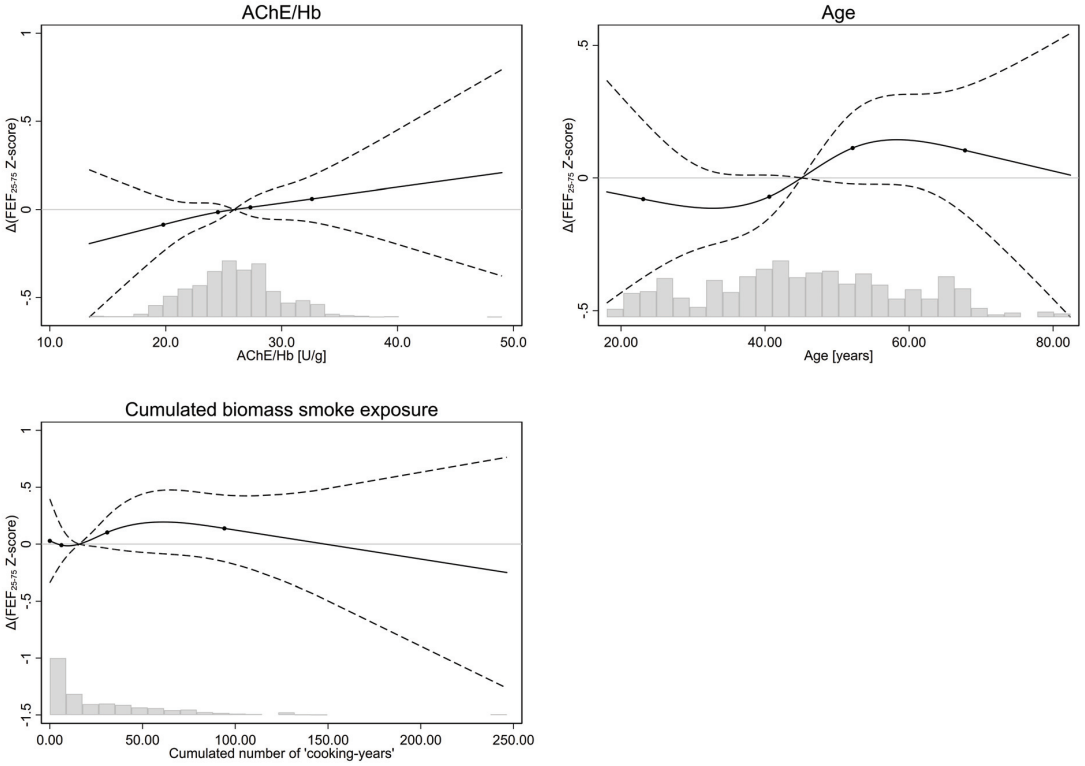
Value	Outcome estimate [CI]
148.52	-0.279 [-0.507 ; -0.051]
155.97	-0.025 [-0.141 ; 0.090]
159.53	0 [ref.]
162.10	-0.020 [-0.107 ; 0.068]
172.33	-0.258 [-0.550 ; 0.035]

Analysis specification

Model 02
Outcome: FEF_{25-75} Z-score
Covariate adjustment: Basic

Number of observations in model: 793

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.086 [-0.238 ; 0.066]
24.50	-0.015 [-0.060 ; 0.031]
25.90	0 [ref.]
27.30	0.013 [-0.036 ; 0.061]
32.61	0.060 [-0.072 ; 0.192]

Age

Value	Outcome estimate [CI]
23.07	-0.079 [-0.375 ; 0.217]
40.58	-0.070 [-0.150 ; 0.011]
45.06	0 [ref.]
52.16	0.113 [-0.022 ; 0.248]
67.76	0.104 [-0.137 ; 0.345]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.028 [-0.340 ; 0.397]
6.25	-0.009 [-0.170 ; 0.151]
15.89	0 [ref.]
30.95	0.103 [-0.037 ; 0.242]
94.12	0.138 [-0.155 ; 0.431]

Regression results for categorical and linear variables

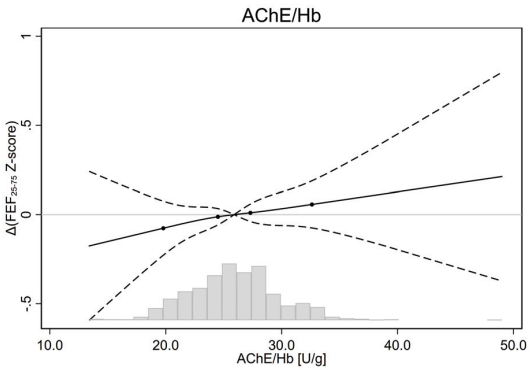
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.163 [-0.177 ; 0.502]
Pack-years	-0.024 [-0.070 ; 0.023]

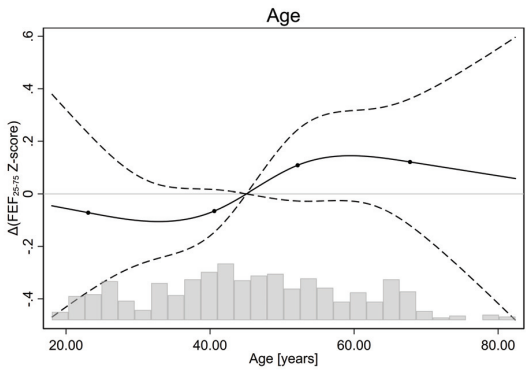
Analysis specification

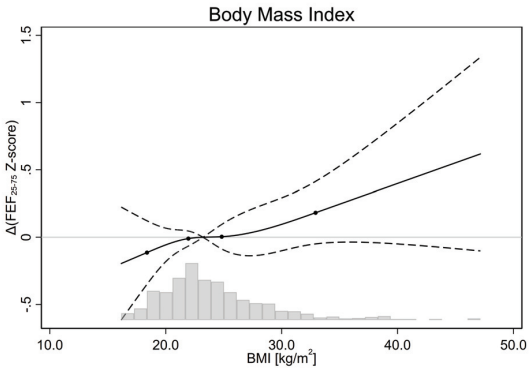
Model 02
Outcome: FEF_{25-75} Z-score
Covariate adjustment: Extended

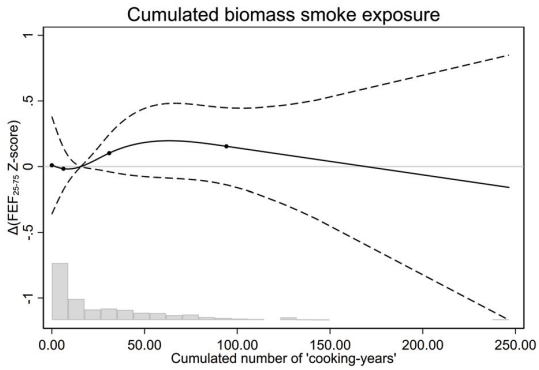
Number of observations in model: 789

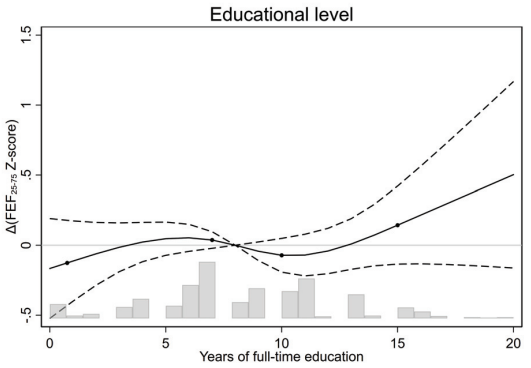
Regression results for variables modeled using splines











Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.076 [-0.228 ; 0.075]
24.50	-0.012 [-0.058 ; 0.034]
25.90	0 [ref.]
27.30	0.010 [-0.038 ; 0.059]
32.61	0.057 [-0.075 ; 0.189]

Body Mass Index

Value	Outcome estimate [CI]
18.38	-0.114 [-0.350 ; 0.123]
21.95	-0.010 [-0.066 ; 0.046]
23.22	0 [ref.]
24.83	0.004 [-0.087 ; 0.095]
32.92	0.182 [-0.049 ; 0.414]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.010 [-0.362 ; 0.382]
6.25	-0.016 [-0.178 ; 0.145]
15.72	0 [ref.]
30.95	0.102 [-0.040 ; 0.244]
94.12	0.154 [-0.139 ; 0.448]

Educational level

Value	Outcome estimate [CI]
0.75	-0.126 [-0.431 ; 0.178]
7.00	0.037 [-0.022 ; 0.097]
8.00	0 [ref.]
10.00	-0.072 [-0.193 ; 0.049]
15.00	0.143 [-0.135 ; 0.422]

Age

Value	Outcome estimate [CI]
23.07	-0.071 [-0.373 ; 0.230]
40.58	-0.065 [-0.146 ; 0.016]
45.06	0 [ref.]
52.16	0.108 [-0.027 ; 0.244]
67.76	0.121 [-0.120 ; 0.362]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.186 [-0.177 ; 0.548]
Pack-years	-0.024 [-0.070 ; 0.022]

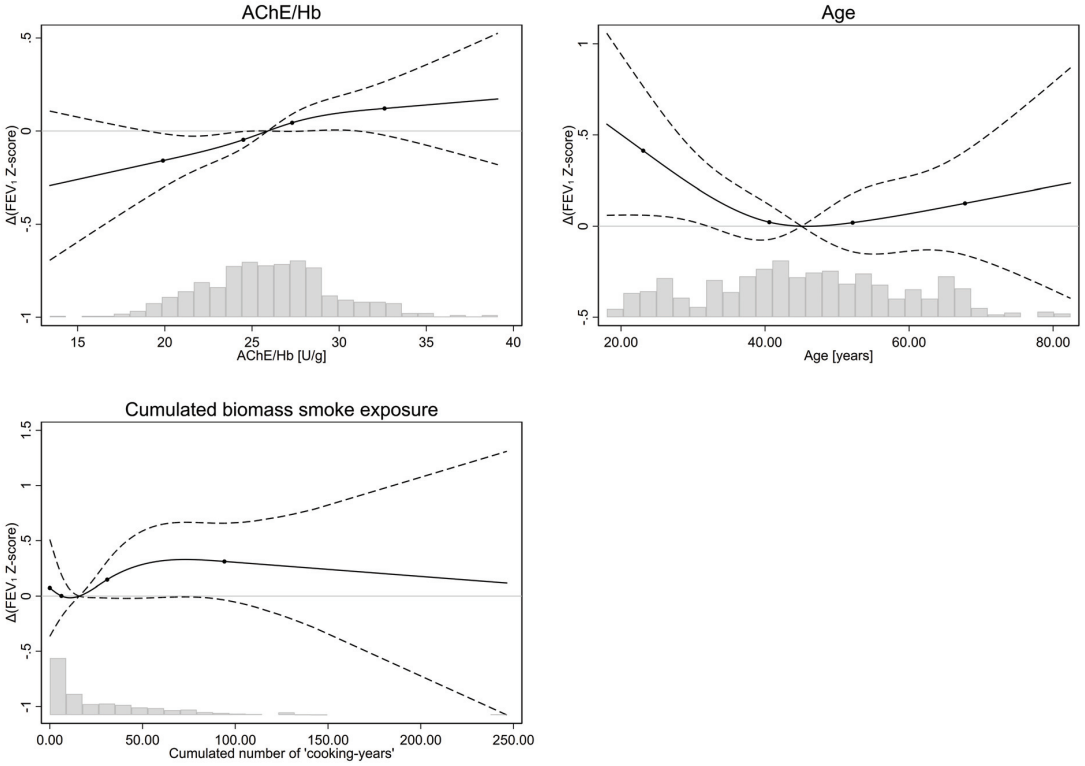
Hansen MRH, *et al. Thorax* 2021; 76:1–10. doi: 10.1136/thoraxjnl-2020-214609

Analysis specification

Model 03
Outcome: FEV_1 Z-score
Covariate adjustment: Basic

Number of observations in model: 793

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.89	-0.159 [-0.304 ; -0.014]
24.50	-0.047 [-0.091 ; -0.003]
25.90	0 [ref.]
27.30	0.044 [-0.002 ; 0.091]
32.60	0.121 [-0.023 ; 0.265]

Age

Value	Outcome estimate [CI]
23.07	0.413 [0.060 ; 0.766]
40.58	0.022 [-0.073 ; 0.117]
45.06	0 [ref.]
52.16	0.019 [-0.140 ; 0.179]
67.76	0.125 [-0.159 ; 0.409]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.073 [-0.365 ; 0.511]
6.25	0.002 [-0.189 ; 0.193]
15.89	0 [ref.]
30.95	0.147 [-0.018 ; 0.312]
94.12	0.312 [-0.035 ; 0.658]

Regression results for categorical and linear variables

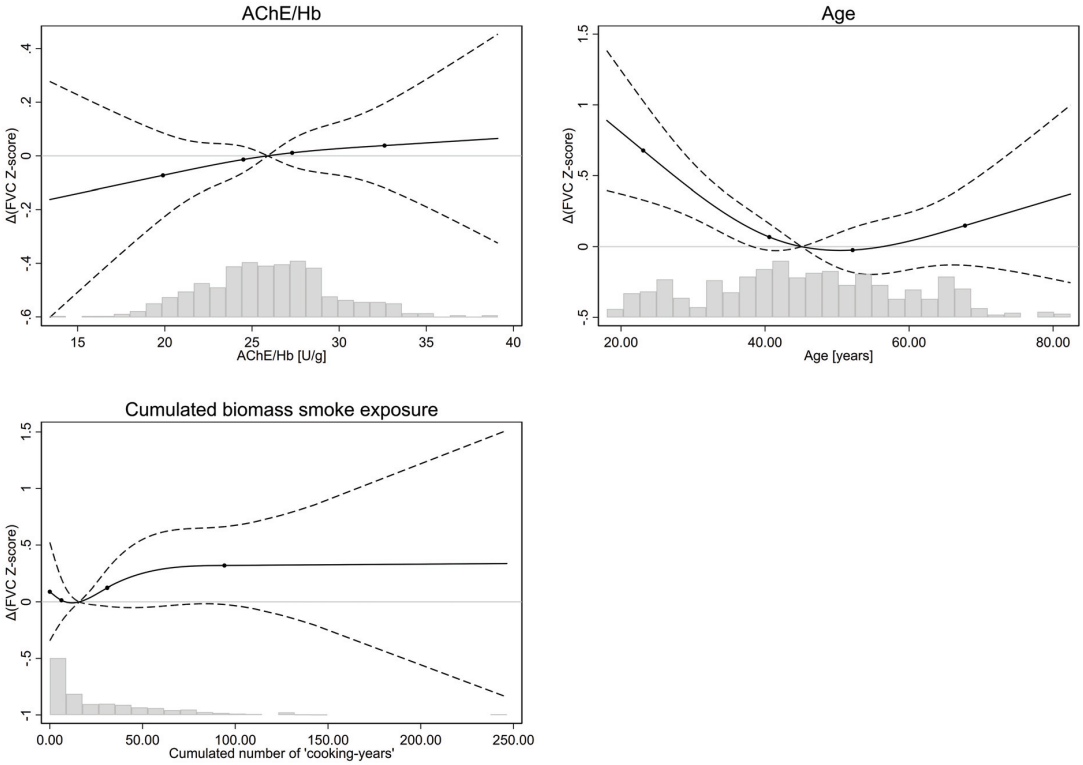
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.300 [-0.104 ; 0.704]
Pack-years	-0.016 [-0.071 ; 0.038]

Analysis specification

Model 03
Outcome: FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 791

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.89	-0.073 [-0.231 ; 0.086]
24.50	-0.014 [-0.062 ; 0.035]
25.90	0 [ref.]
27.30	0.011 [-0.040 ; 0.062]
32.60	0.038 [-0.119 ; 0.196]

Age

Value	Outcome estimate [CI]
23.07	0.678 [0.329 ; 1.027]
40.58	0.068 [-0.026 ; 0.162]
45.06	0 [ref.]
52.16	-0.024 [-0.182 ; 0.134]
67.76	0.149 [-0.132 ; 0.430]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.090 [-0.344 ; 0.524]
6.25	0.015 [-0.175 ; 0.204]
15.89	0 [ref.]
30.95	0.123 [-0.039 ; 0.286]
94.12	0.319 [-0.023 ; 0.662]

Regression results for categorical and linear variables

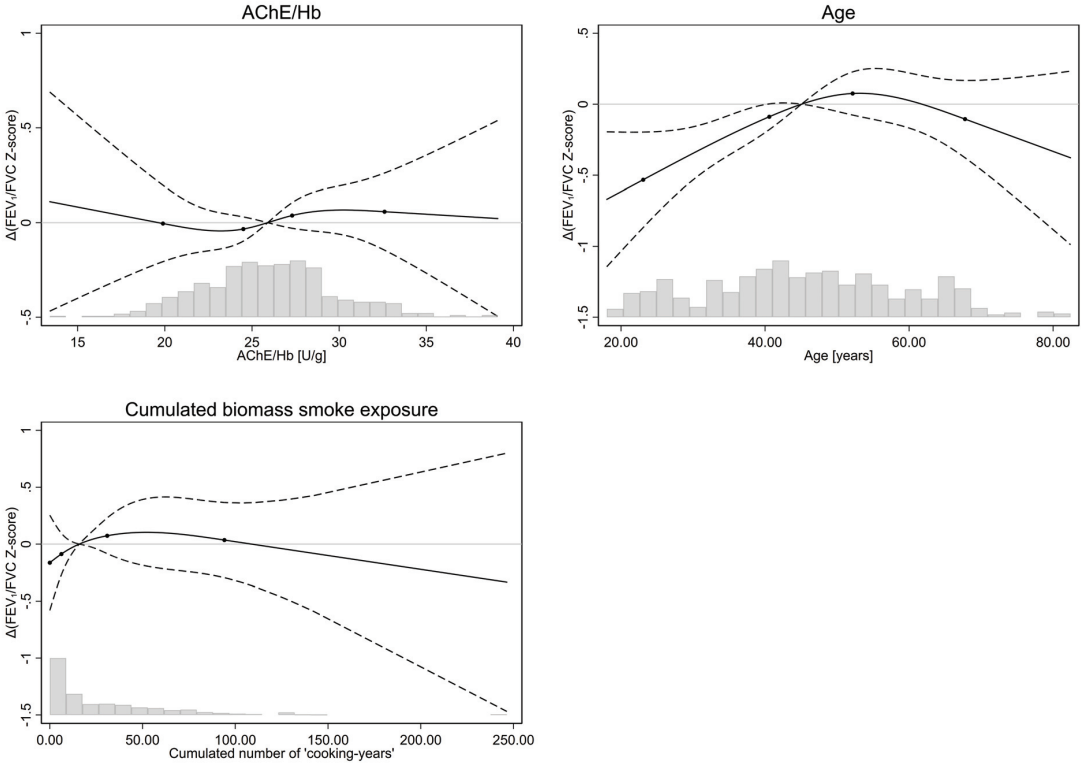
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.362 [-0.038 ; 0.762]
Pack-years	-0.007 [-0.061 ; 0.047]

Analysis specification

Model 03
Outcome: FEV_1/FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 791

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.89	-0.004 [-0.206 ; 0.197]
24.50	-0.034 [-0.098 ; 0.030]
25.90	0 [ref.]
27.30	0.038 [-0.030 ; 0.105]
32.60	0.058 [-0.145 ; 0.261]

Age

Value	Outcome estimate [CI]
23.07	-0.532 [-0.868 ; -0.197]
40.58	-0.089 [-0.179 ; 0.002]
45.06	0 [ref.]
52.16	0.075 [-0.077 ; 0.228]
67.76	-0.105 [-0.377 ; 0.167]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.164 [-0.582 ; 0.254]
6.25	-0.087 [-0.270 ; 0.095]
15.89	0 [ref.]
30.95	0.073 [-0.084 ; 0.230]
94.12	0.035 [-0.295 ; 0.366]

Regression results for categorical and linear variables

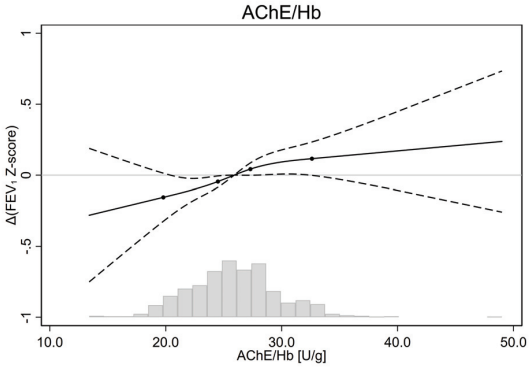
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.043 [-0.343 ; 0.430]
Pack-years	-0.053 [-0.104 ; -0.001]

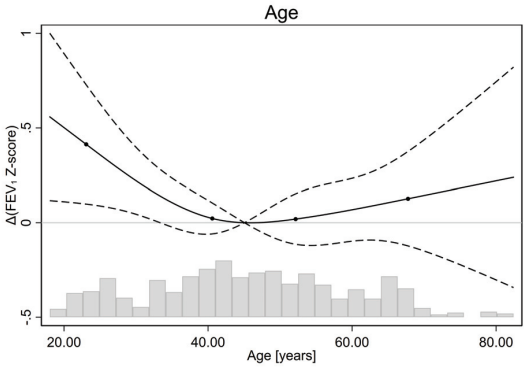
Analysis specification

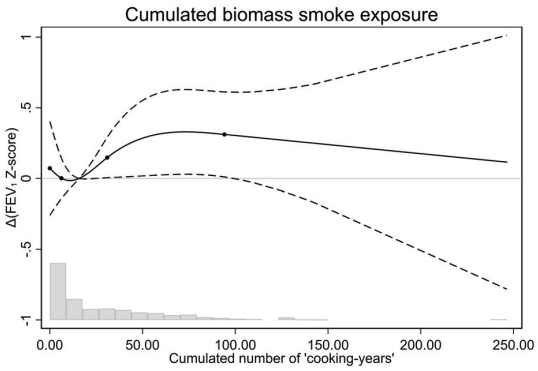
Model 04
Outcome: FEV_1 Z-score
Covariate adjustment: Basic

Number of observations in model: 793

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.155 [-0.324 ; 0.014]
24.50	-0.045 [-0.085 ; -0.006]
25.90	0 [ref.]
27.30	0.043 [-0.001 ; 0.086]
32.61	0.116 [-0.002 ; 0.233]

Age

Value	Outcome estimate [CI]
23.07	0.413 [0.098 ; 0.728]
40.58	0.023 [-0.059 ; 0.104]
45.06	0 [ref.]
52.16	0.019 [-0.114 ; 0.152]
67.76	0.126 [-0.123 ; 0.376]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.072 [-0.260 ; 0.405]
6.25	0.001 [-0.141 ; 0.144]
15.89	0 [ref.]
30.95	0.147 [0.005 ; 0.290]
94.12	0.311 [0.011 ; 0.612]

Regression results for categorical and linear variables

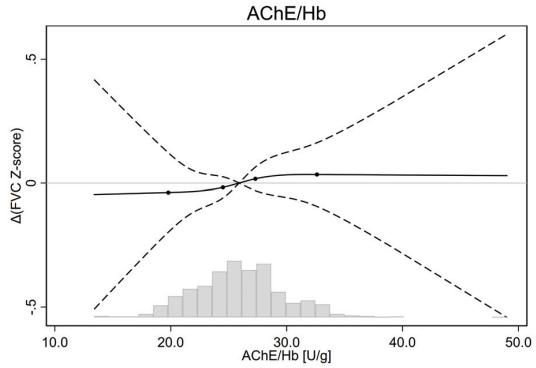
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.301 [-0.014 ; 0.616]
Pack-years	-0.016 [-0.081 ; 0.048]

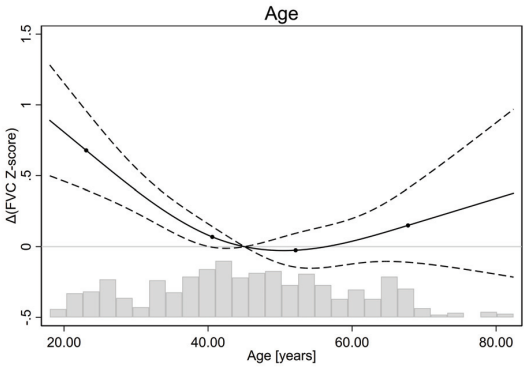
Analysis specification

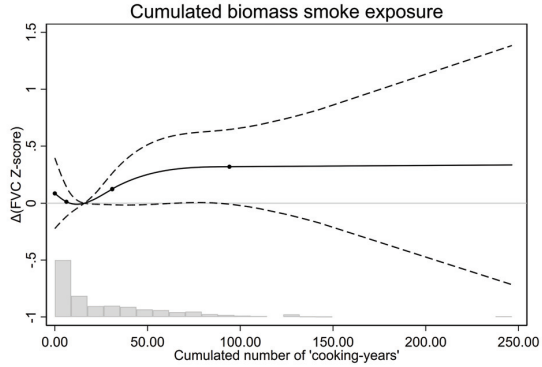
Model 04
Outcome: FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 791

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.038 [-0.198 ; 0.122]
24.50	-0.017 [-0.060 ; 0.025]
25.90	0 [ref.]
27.30	0.017 [-0.030 ; 0.064]
32.61	0.034 [-0.094 ; 0.163]

Age

Value	Outcome estimate [CI]
23.07	0.679 [0.400 ; 0.958]
40.58	0.069 [-0.004 ; 0.142]
45.06	0 [ref.]
52.16	-0.025 [-0.145 ; 0.094]
67.76	0.150 [-0.110 ; 0.411]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.087 [-0.223 ; 0.396]
6.25	0.013 [-0.117 ; 0.143]
15.89	0 [ref.]
30.95	0.123 [-0.014 ; 0.260]
94.12	0.319 [-0.008 ; 0.646]

Regression results for categorical and linear variables

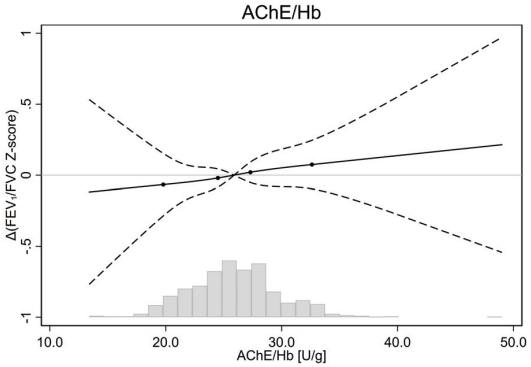
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.366 [0.098 ; 0.634]
Pack-years	-0.008 [-0.071 ; 0.056]

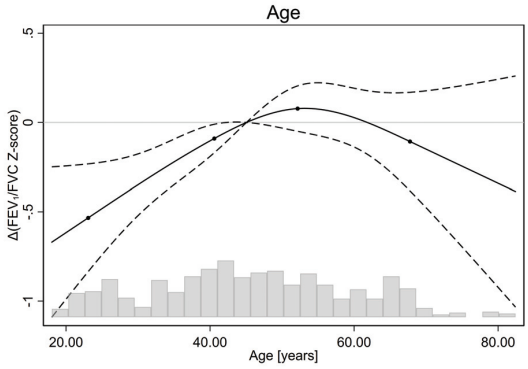
Analysis specification

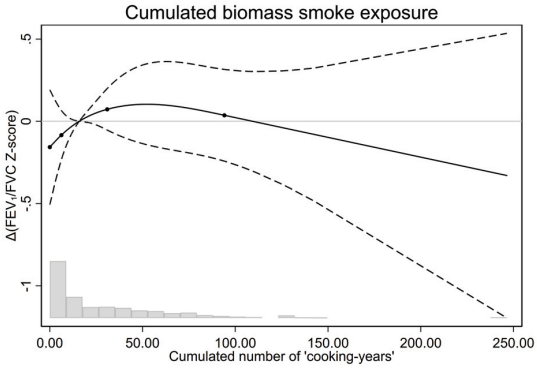
Model 04
Outcome: FEV_1/FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 791

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.066 [-0.286 ; 0.153]
24.50	-0.020 [-0.084 ; 0.044]
25.90	0 [ref.]
27.30	0.020 [-0.051 ; 0.092]
32.61	0.075 [-0.096 ; 0.245]

Age

Value	Outcome estimate [CI]
23.07	-0.534 [-0.835 ; -0.232]
40.58	-0.090 [-0.170 ; -0.010]
45.06	0 [ref.]
52.16	0.078 [-0.050 ; 0.205]
67.76	-0.107 [-0.383 ; 0.169]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.157 [-0.507 ; 0.192]
6.25	-0.084 [-0.234 ; 0.065]
15.89	0 [ref.]
30.95	0.073 [-0.054 ; 0.199]
94.12	0.036 [-0.243 ; 0.316]

Regression results for categorical and linear variables

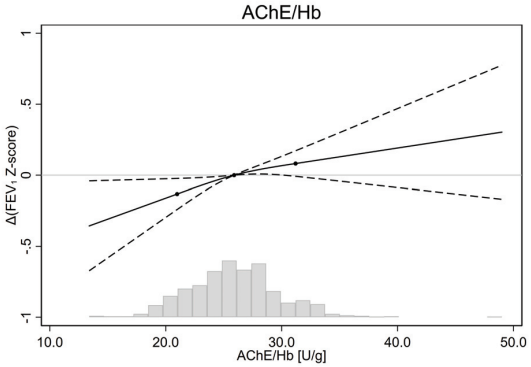
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.036 [-0.314 ; 0.385]
Pack-years	-0.051 [-0.107 ; 0.005]

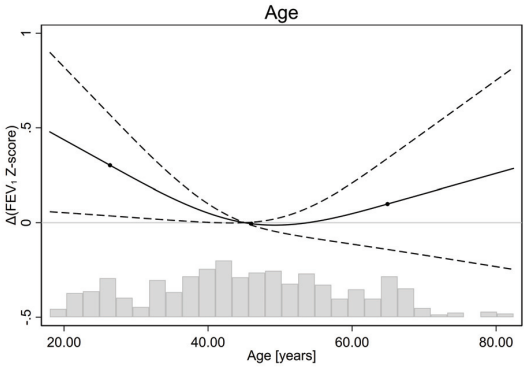
Analysis specification

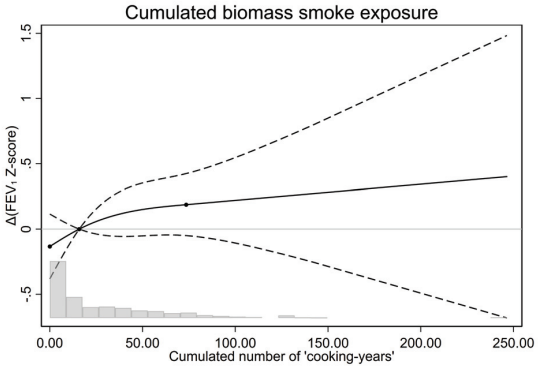
Model 05
Outcome: FEV_1 Z-score
Covariate adjustment: Basic

Number of observations in model: 793

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
20.98	-0.132 [-0.241 ; -0.023]
25.90	0 [ref.]
25.90	0.000 [0.000 ; 0.000]
31.20	0.082 [-0.008 ; 0.172]

Age

Value	Outcome estimate [CI]
26.38	0.302 [0.036 ; 0.569]
45.06	0 [ref.]
46.01	-0.005 [-0.013 ; 0.002]
64.92	0.098 [-0.142 ; 0.339]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.133 [-0.382 ; 0.115]
15.81	-0.001 [-0.002 ; 0.000]
15.89	0 [ref.]
73.51	0.187 [-0.050 ; 0.424]

Regression results for categorical and linear variables

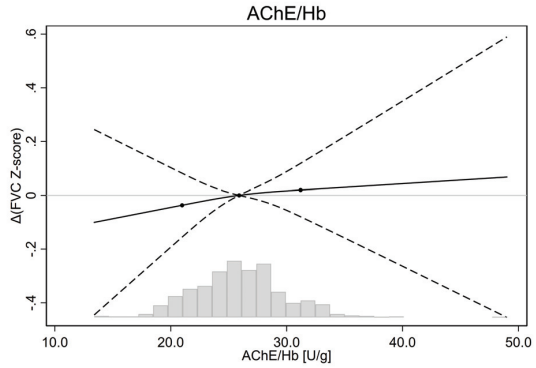
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.394 [0.030 ; 0.757]
Pack-years	-0.017 [-0.072 ; 0.037]

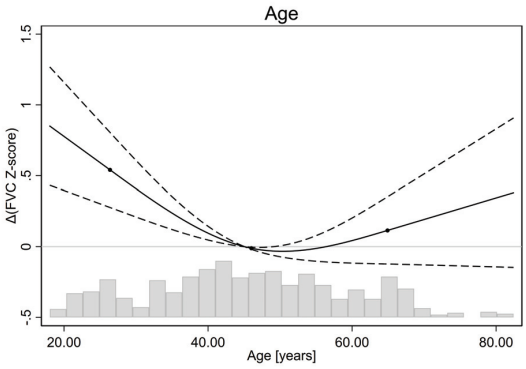
Analysis specification

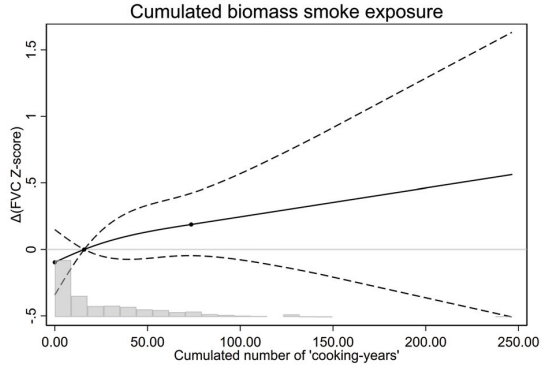
Model 05
Outcome: FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 791

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
20.98	-0.037 [-0.156 ; 0.082]
25.90	0 [ref.]
25.90	0.000 [0.000 ; 0.000]
31.20	0.020 [-0.080 ; 0.119]

Age

Value	Outcome estimate [CI]
26.38	0.541 [0.277 ; 0.806]
45.06	0 [ref.]
46.01	-0.011 [-0.018 ; -0.004]
64.92	0.115 [-0.123 ; 0.352]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.096 [-0.342 ; 0.150]
15.81	-0.000 [-0.001 ; 0.001]
15.89	0 [ref.]
73.51	0.188 [-0.047 ; 0.423]

Regression results for categorical and linear variables

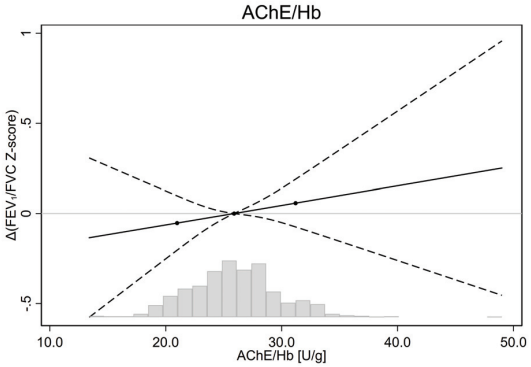
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.453 [0.094 ; 0.813]
Pack-years	-0.009 [-0.062 ; 0.045]

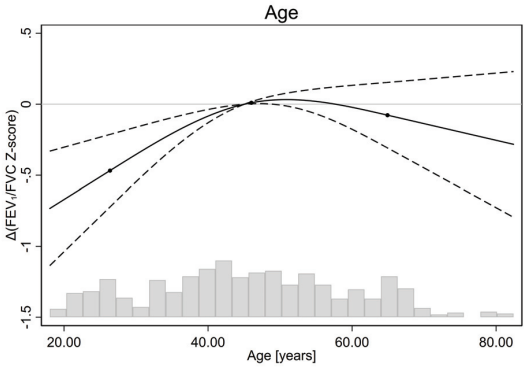
Analysis specification

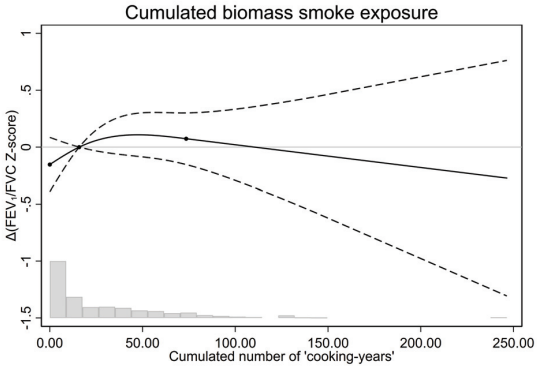
Model 05
Outcome: FEV_1/FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 791

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
20.98	-0.053 [-0.204 ; 0.098]
25.90	0.000 [0.000 ; 0.000]
25.90	0 [ref.]
31.20	0.058 [-0.074 ; 0.190]

Age

Value	Outcome estimate [CI]
26.38	-0.468 [-0.723 ; -0.213]
45.06	0 [ref.]
46.01	0.010 [0.003 ; 0.017]
64.92	-0.077 [-0.308 ; 0.154]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.153 [-0.392 ; 0.085]
15.81	-0.001 [-0.002 ; 0.000]
15.89	0 [ref.]
73.51	0.073 [-0.154 ; 0.301]

Regression results for categorical and linear variables

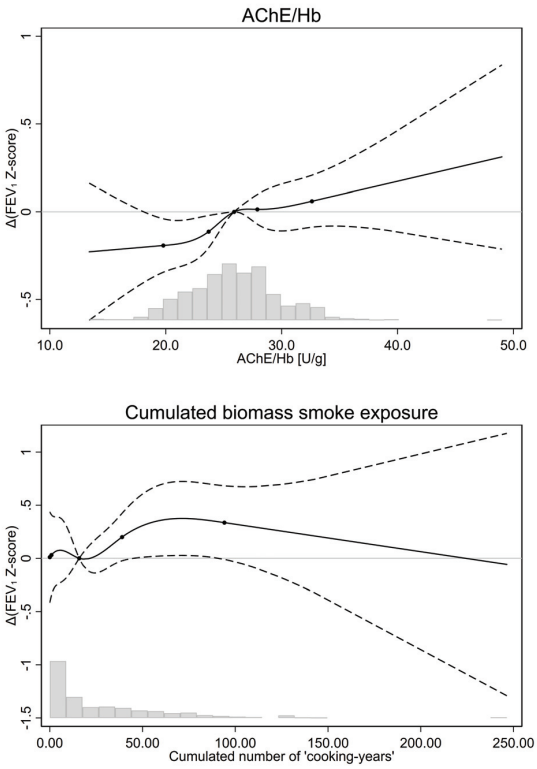
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.025 [-0.324 ; 0.373]
Pack-years	-0.051 [-0.103 ; 0.001]

Analysis specification

Model 06
Outcome: FEV_1 Z-score
Covariate adjustment: Basic

Number of observations in model: 793

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.192 [-0.345 ; -0.039]
23.70	-0.113 [-0.205 ; -0.021]
25.90	0.000 [0.000 ; 0.000]
25.90	0 [ref.]
27.90	0.014 [-0.070 ; 0.098]
32.61	0.060 [-0.088 ; 0.208]

Age

Value	Outcome estimate [CI]
23.07	0.493 [0.128 ; 0.858]
37.37	0.324 [0.040 ; 0.608]
45.06	0 [ref.]
46.01	-0.009 [-0.032 ; 0.014]
54.76	0.281 [-0.006 ; 0.567]
67.76	0.301 [-0.022 ; 0.624]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.011 [-0.416 ; 0.438]
0.86	0.031 [-0.349 ; 0.410]
15.81	0.000 [-0.002 ; 0.003]
15.89	0 [ref.]
38.96	0.200 [-0.024 ; 0.423]
94.12	0.336 [-0.010 ; 0.682]

Regression results for categorical and linear variables

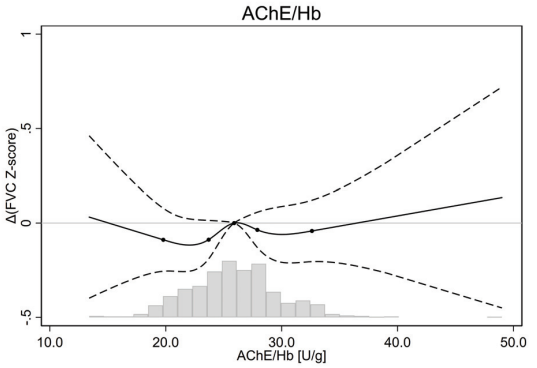
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.365 [-0.037 ; 0.767]
Pack-years	-0.016 [-0.070 ; 0.038]

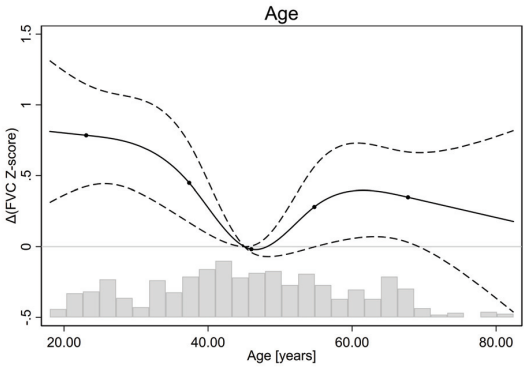
Analysis specification

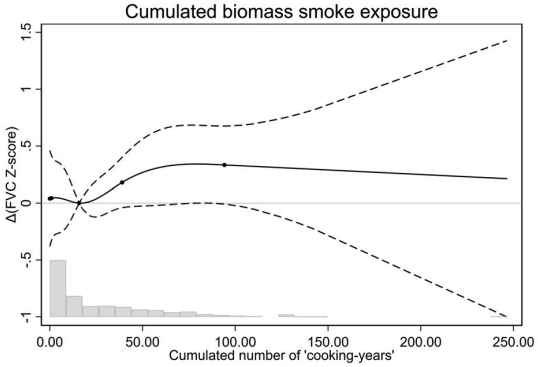
Model 06
Outcome: FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 791

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.088 [-0.255 ; 0.078]
23.70	-0.088 [-0.190 ; 0.014]
25.90	0 [ref.]
25.90	0.000 [0.000 ; 0.000]
27.90	-0.036 [-0.129 ; 0.057]
32.61	-0.042 [-0.204 ; 0.121]

Age

Value	Outcome estimate [CI]
23.07	0.785 [0.425 ; 1.145]
37.37	0.449 [0.170 ; 0.728]
45.06	0 [ref.]
46.01	-0.018 [-0.040 ; 0.005]
54.76	0.281 [-0.002 ; 0.563]
67.76	0.349 [0.030 ; 0.667]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.040 [-0.382 ; 0.462]
0.86	0.044 [-0.331 ; 0.419]
15.81	0.000 [-0.002 ; 0.002]
15.89	0 [ref.]
38.96	0.180 [-0.041 ; 0.400]
94.12	0.334 [-0.008 ; 0.676]

Regression results for categorical and linear variables

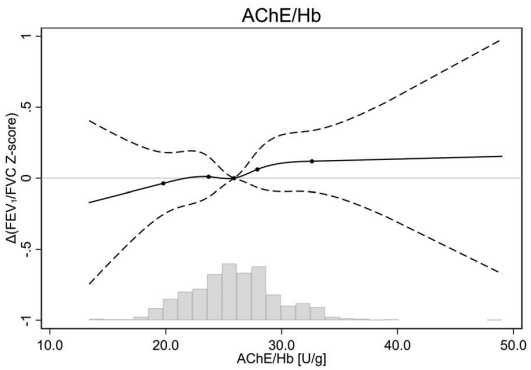
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.429 [0.032 ; 0.827]
Pack-years	-0.007 [-0.060 ; 0.046]

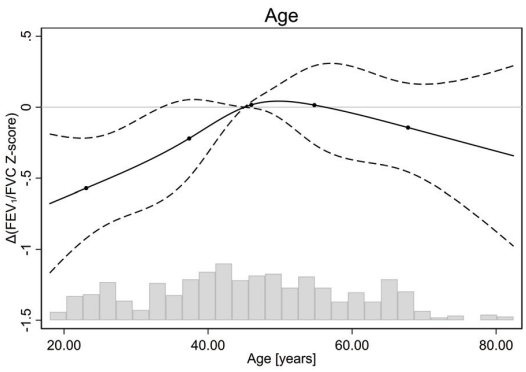
Analysis specification

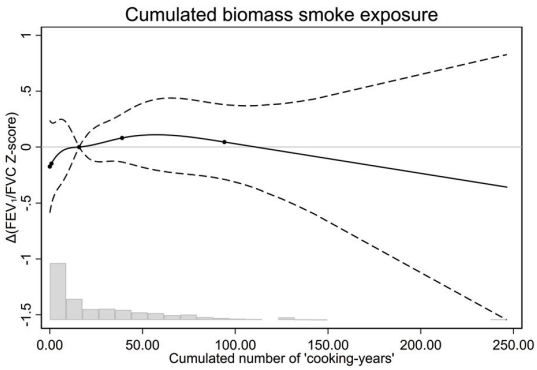
Model 06
Outcome: FEV_1/FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 791

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.037 [-0.255 ; 0.181]
23.70	0.010 [-0.131 ; 0.151]
25.90	0.000 [0.000 ; 0.000]
25.90	0 [ref.]
27.90	0.061 [-0.066 ; 0.188]
32.61	0.119 [-0.097 ; 0.335]

Age

Value	Outcome estimate [CI]
23.07	-0.570 [-0.923 ; -0.218]
37.37	-0.220 [-0.494 ; 0.053]
45.06	0 [ref.]
46.01	0.016 [-0.005 ; 0.038]
54.76	0.015 [-0.263 ; 0.292]
67.76	-0.143 [-0.456 ; 0.169]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.175 [-0.588 ; 0.238]
0.86	-0.148 [-0.515 ; 0.219]
15.81	-0.000 [-0.002 ; 0.002]
15.89	0 [ref.]
38.96	0.081 [-0.135 ; 0.297]
94.12	0.045 [-0.290 ; 0.380]

Regression results for categorical and linear variables

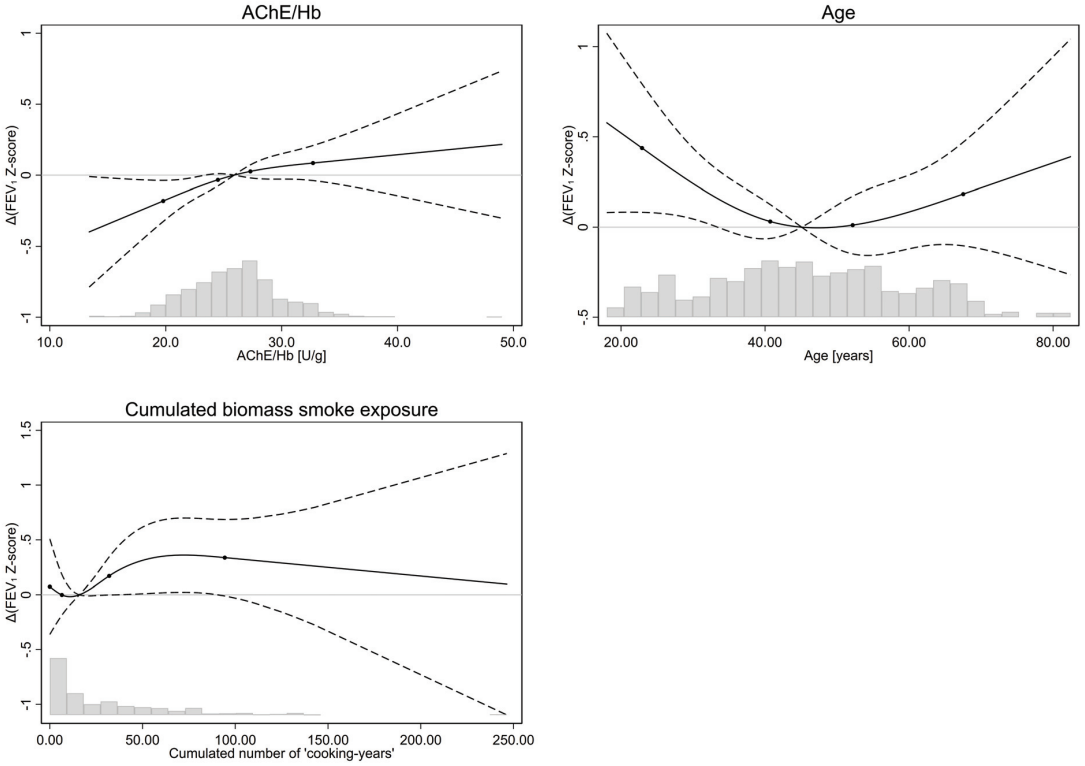
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.039 [-0.351 ; 0.429]
Pack-years	-0.051 [-0.103 ; 0.001]

Analysis specification

Model 07
Outcome: FEV_1 Z-score
Covariate adjustment: Basic

Number of observations in model: 736

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.78	-0.181 [-0.326 ; -0.036]
24.50	-0.033 [-0.076 ; 0.010]
25.90	0 [ref.]
27.30	0.026 [-0.020 ; 0.072]
32.70	0.085 [-0.038 ; 0.208]

Age

Value	Outcome estimate [CI]
22.91	0.438 [0.082 ; 0.793]
40.71	0.031 [-0.063 ; 0.125]
45.09	0 [ref.]
52.17	0.011 [-0.148 ; 0.171]
67.51	0.183 [-0.104 ; 0.470]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.073 [-0.362 ; 0.509]
6.51	-0.001 [-0.186 ; 0.184]
15.95	0 [ref.]
32.00	0.171 [-0.002 ; 0.344]
94.32	0.338 [-0.010 ; 0.686]

Regression results for categorical and linear variables

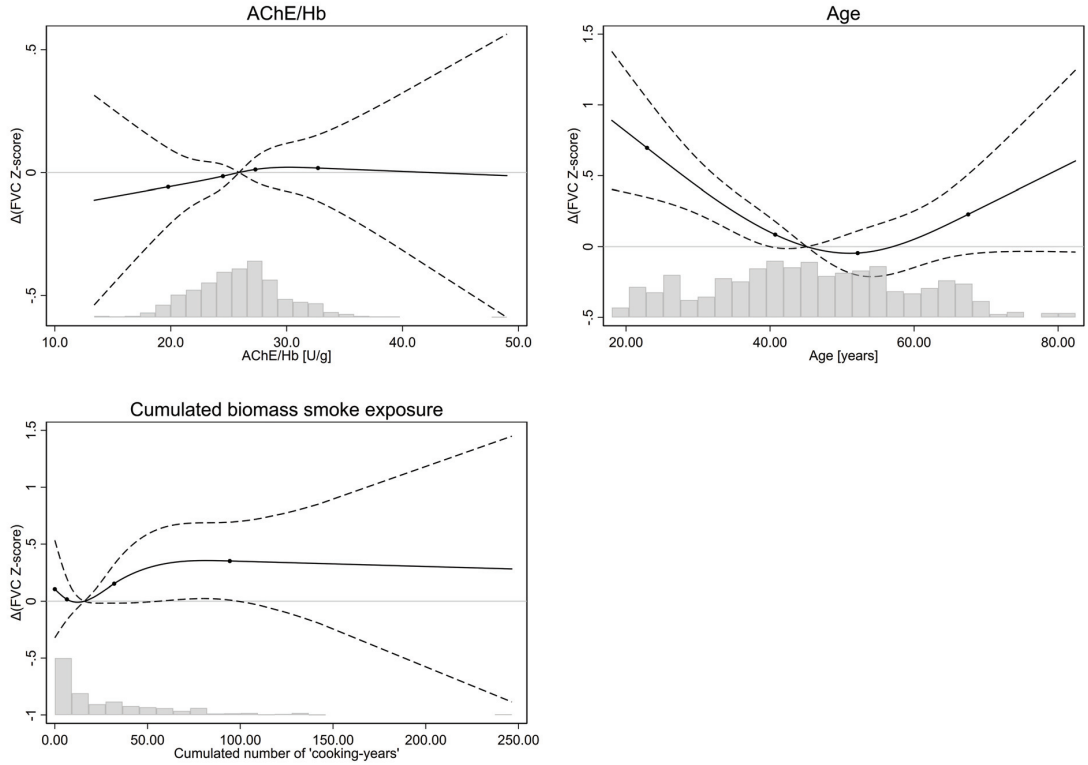
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.308 [-0.096 ; 0.713]
Pack-years	-0.015 [-0.071 ; 0.041]

Analysis specification

Model 07
Outcome: FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 735

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.78	-0.058 [-0.215 ; 0.099]
24.50	-0.015 [-0.062 ; 0.032]
25.90	0 [ref.]
27.30	0.012 [-0.038 ; 0.063]
32.70	0.018 [-0.117 ; 0.153]

Age

Value	Outcome estimate [CI]
22.91	0.697 [0.348 ; 1.045]
40.71	0.085 [-0.007 ; 0.178]
45.09	0 [ref.]
52.17	-0.045 [-0.202 ; 0.111]
67.51	0.228 [-0.053 ; 0.509]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.106 [-0.322 ; 0.534]
6.51	0.017 [-0.165 ; 0.199]
15.95	0 [ref.]
32.00	0.152 [-0.017 ; 0.322]
94.32	0.351 [0.010 ; 0.692]

Regression results for categorical and linear variables

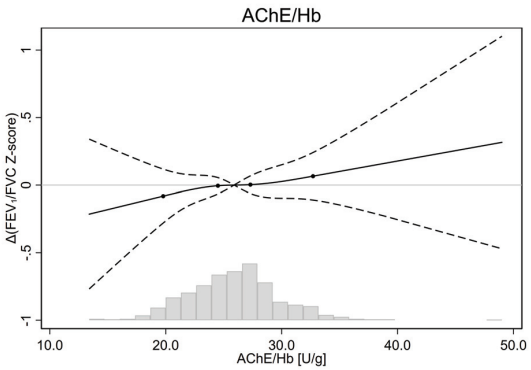
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.350 [-0.047 ; 0.748]
Pack-years	-0.006 [-0.061 ; 0.049]

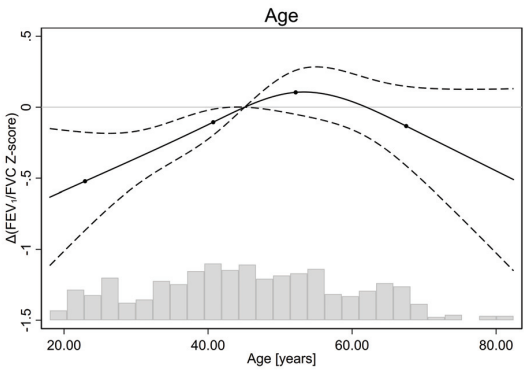
Analysis specification

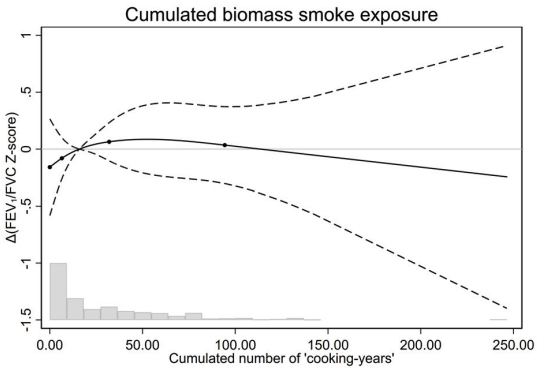
Model 07
Outcome: FEV_1/FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 735

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.78	-0.081 [-0.280 ; 0.118]
24.50	-0.005 [-0.065 ; 0.055]
25.90	0 [ref.]
27.30	0.003 [-0.062 ; 0.068]
32.70	0.066 [-0.110 ; 0.241]

Age

Value	Outcome estimate [CI]
22.91	-0.522 [-0.867 ; -0.177]
40.71	-0.106 [-0.197 ; -0.014]
45.09	0 [ref.]
52.17	0.105 [-0.051 ; 0.260]
67.51	-0.133 [-0.413 ; 0.147]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.159 [-0.583 ; 0.266]
6.51	-0.080 [-0.261 ; 0.100]
15.95	0 [ref.]
32.00	0.064 [-0.103 ; 0.232]
94.32	0.035 [-0.303 ; 0.373]

Regression results for categorical and linear variables

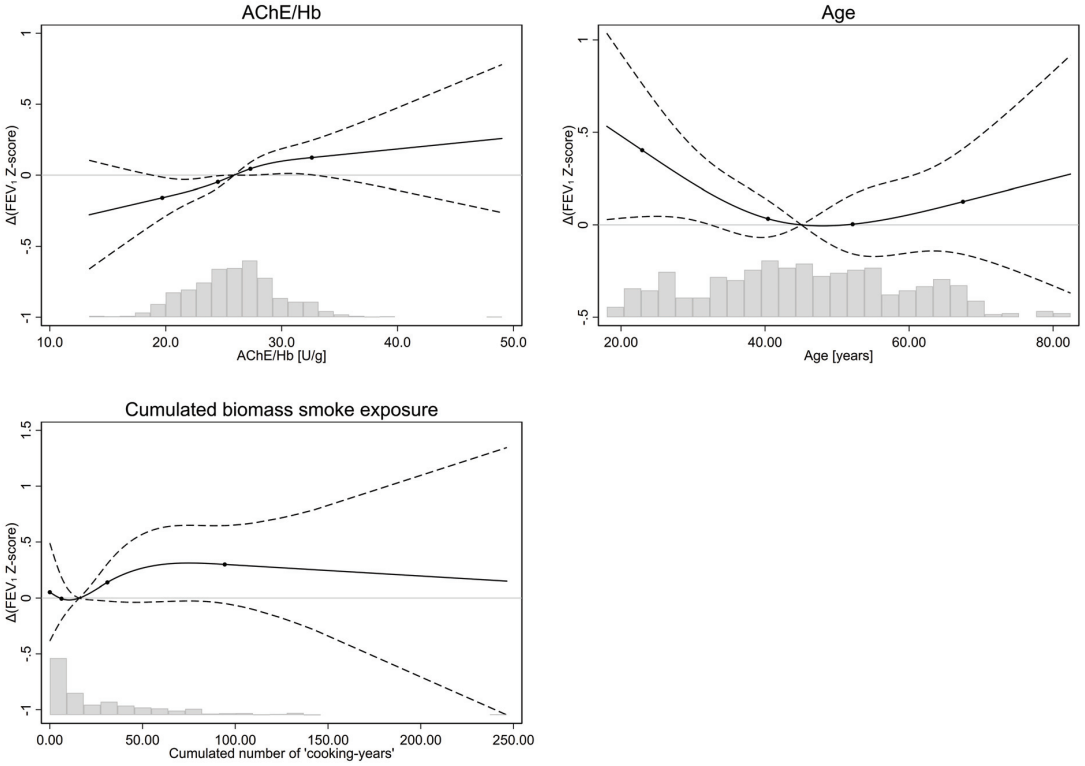
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.049 [-0.346 ; 0.443]
Pack-years	-0.053 [-0.107 ; 0.001]

Analysis specification

Model 09
Outcome: FEV_1 Z-score
Covariate adjustment: Basic

Number of observations in model: 778

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.70	-0.158 [-0.303 ; -0.014]
24.50	-0.047 [-0.090 ; -0.005]
25.90	0 [ref.]
27.30	0.045 [-0.000 ; 0.090]
32.60	0.124 [0.002 ; 0.245]

Age

Value	Outcome estimate [CI]
22.94	0.403 [0.044 ; 0.762]
40.41	0.033 [-0.066 ; 0.132]
45.05	0 [ref.]
52.16	0.004 [-0.157 ; 0.164]
67.48	0.125 [-0.160 ; 0.410]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.053 [-0.385 ; 0.491]
6.30	-0.005 [-0.195 ; 0.185]
15.91	0 [ref.]
31.03	0.138 [-0.027 ; 0.304]
94.30	0.299 [-0.049 ; 0.647]

Regression results for categorical and linear variables

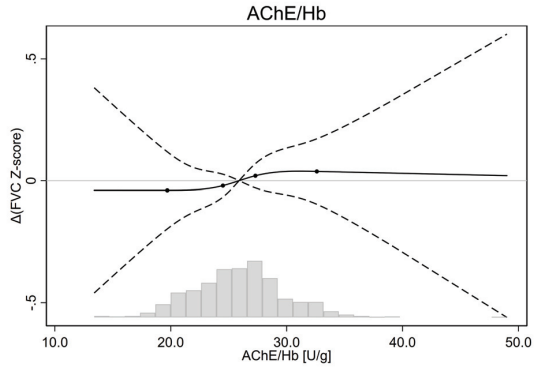
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.302 [-0.100 ; 0.704]
Pack-years	-0.018 [-0.072 ; 0.037]

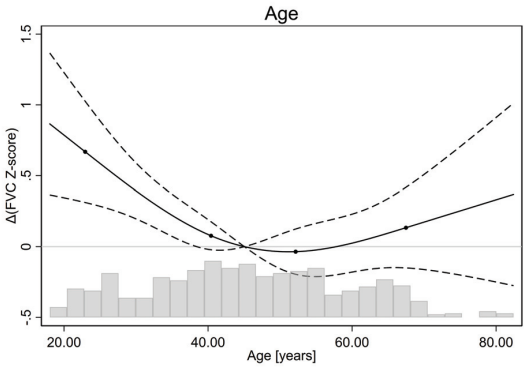
Analysis specification

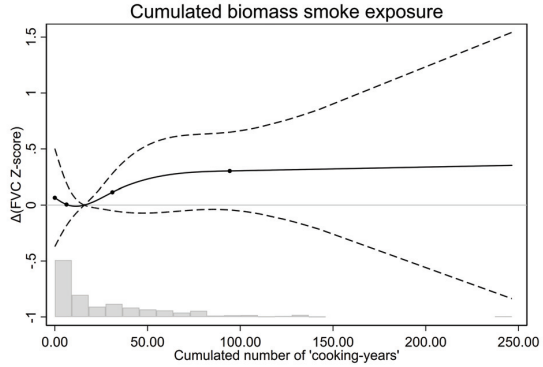
Model 09
Outcome: FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 776

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.70	-0.039 [-0.197 ; 0.119]
24.50	-0.020 [-0.067 ; 0.026]
25.90	0 [ref.]
27.30	0.020 [-0.029 ; 0.070]
32.60	0.038 [-0.096 ; 0.172]

Age

Value	Outcome estimate [CI]
22.94	0.669 [0.312 ; 1.026]
40.41	0.077 [-0.022 ; 0.176]
45.05	0 [ref.]
52.16	-0.035 [-0.195 ; 0.125]
67.48	0.134 [-0.150 ; 0.418]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.066 [-0.372 ; 0.503]
6.30	0.006 [-0.184 ; 0.195]
15.91	0 [ref.]
31.03	0.115 [-0.050 ; 0.279]
94.30	0.303 [-0.043 ; 0.650]

Regression results for categorical and linear variables

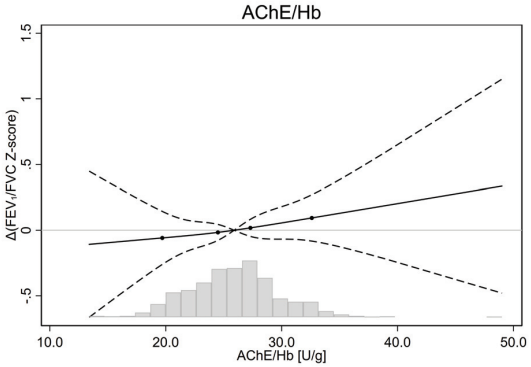
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.362 [-0.041 ; 0.764]
Pack-years	-0.007 [-0.061 ; 0.047]

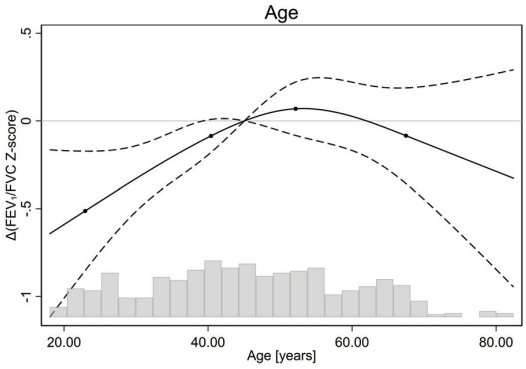
Analysis specification

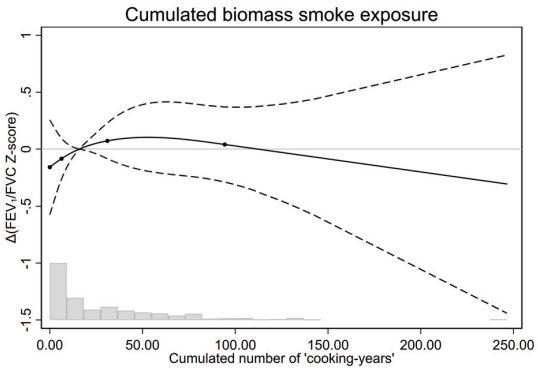
Model 09
Outcome: FEV_1/FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 776

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.70	-0.059 [-0.261 ; 0.144]
24.50	-0.016 [-0.077 ; 0.044]
25.90	0 [ref.]
27.30	0.018 [-0.047 ; 0.083]
32.60	0.094 [-0.083 ; 0.270]

Age

Value	Outcome estimate [CI]
22.94	-0.512 [-0.852 ; -0.173]
40.41	-0.086 [-0.180 ; 0.009]
45.05	0 [ref.]
52.16	0.069 [-0.083 ; 0.222]
67.48	-0.084 [-0.357 ; 0.188]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.159 [-0.575 ; 0.257]
6.30	-0.085 [-0.265 ; 0.096]
15.91	0 [ref.]
31.03	0.072 [-0.085 ; 0.230]
94.30	0.040 [-0.290 ; 0.371]

Regression results for categorical and linear variables

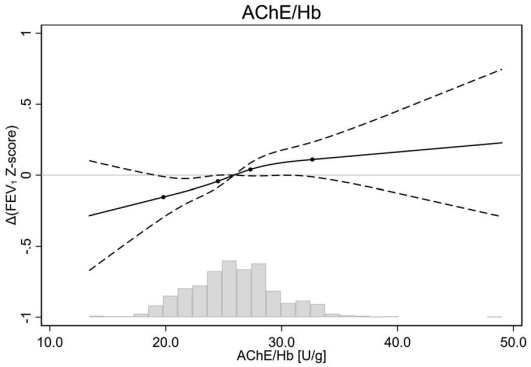
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.038 [-0.345 ; 0.421]
Pack-years	-0.053 [-0.105 ; -0.001]

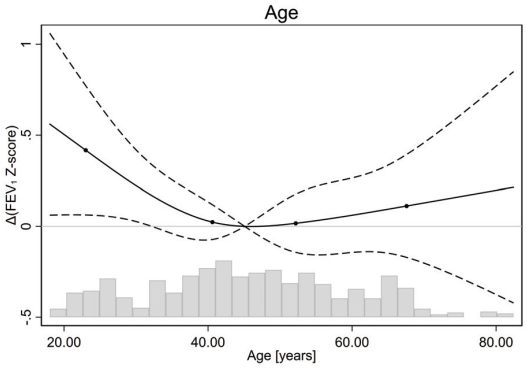
Analysis specification

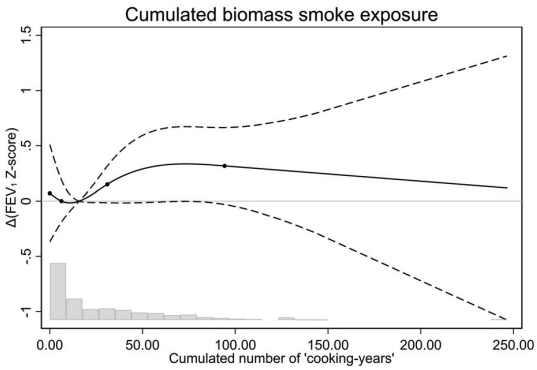
Model 10
Outcome: FEV_1 Z-score
Covariate adjustment: Basic

Number of observations in model: 786

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.80	-0.153 [-0.296 ; -0.010]
24.50	-0.043 [-0.085 ; -0.001]
25.90	0 [ref.]
27.30	0.040 [-0.005 ; 0.085]
32.65	0.110 [-0.012 ; 0.232]

Age

Value	Outcome estimate [CI]
23.01	0.417 [0.063 ; 0.772]
40.60	0.023 [-0.072 ; 0.119]
45.08	0 [ref.]
52.17	0.017 [-0.143 ; 0.176]
67.56	0.112 [-0.171 ; 0.394]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.071 [-0.369 ; 0.510]
6.27	0.000 [-0.191 ; 0.191]
15.89	0 [ref.]
31.01	0.151 [-0.015 ; 0.316]
94.21	0.317 [-0.030 ; 0.664]

Regression results for categorical and linear variables

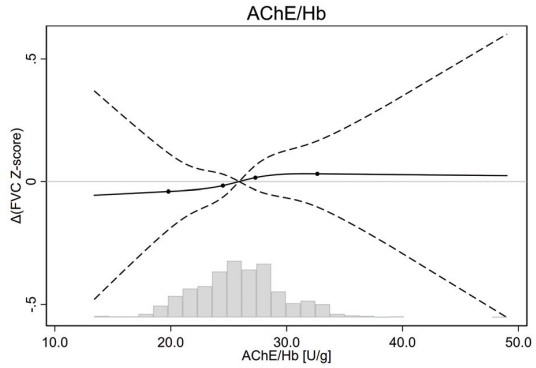
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.298 [-0.108 ; 0.704]
Pack-years	-0.016 [-0.070 ; 0.039]

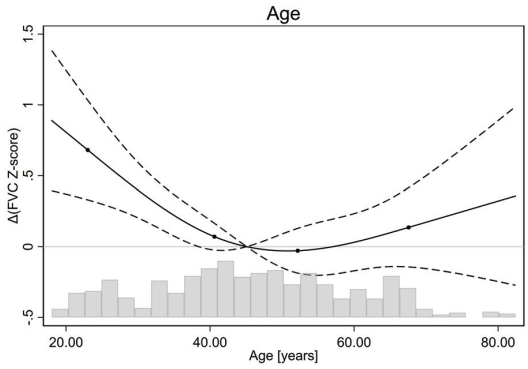
Analysis specification

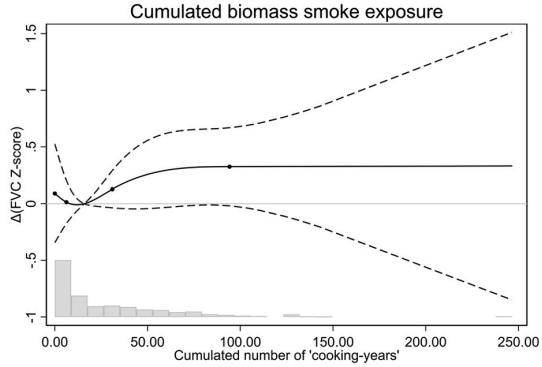
Model 10
Outcome: FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 784

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.80	-0.040 [-0.196 ; 0.116]
24.50	-0.016 [-0.063 ; 0.030]
25.90	0 [ref.]
27.30	0.016 [-0.034 ; 0.066]
32.65	0.031 [-0.103 ; 0.166]

Age

Value	Outcome estimate [CI]
23.01	0.682 [0.330 ; 1.033]
40.60	0.071 [-0.024 ; 0.165]
45.08	0 [ref.]
52.17	-0.029 [-0.187 ; 0.129]
67.56	0.136 [-0.143 ; 0.415]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.091 [-0.345 ; 0.527]
6.27	0.014 [-0.176 ; 0.204]
15.89	0 [ref.]
31.01	0.127 [-0.036 ; 0.291]
94.21	0.325 [-0.018 ; 0.669]

Regression results for categorical and linear variables

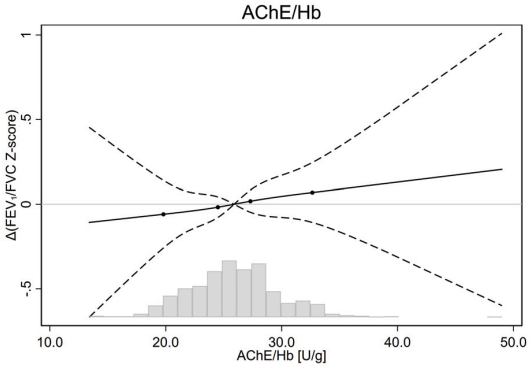
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.358 [-0.045 ; 0.761]
Pack-years	-0.007 [-0.061 ; 0.047]

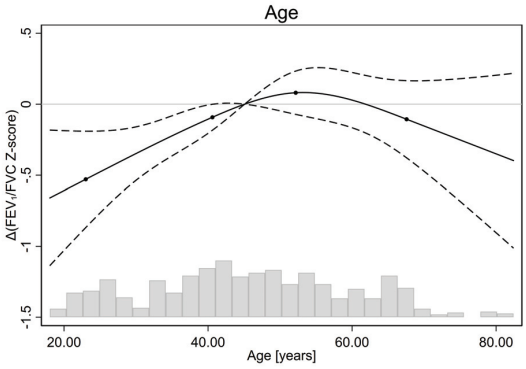
Analysis specification

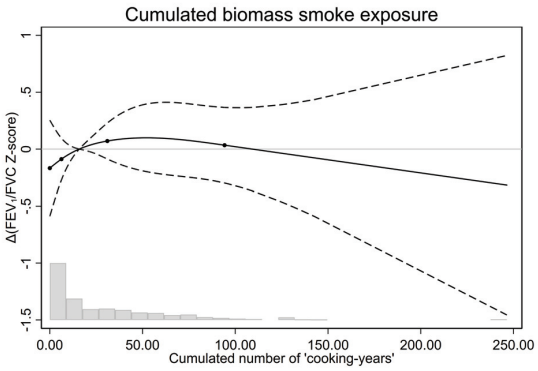
Model 10
Outcome: FEV_1/FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 784

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.80	-0.059 [-0.259 ; 0.140]
24.50	-0.017 [-0.078 ; 0.043]
25.90	0 [ref.]
27.30	0.018 [-0.048 ; 0.083]
32.65	0.069 [-0.108 ; 0.246]

Age

Value	Outcome estimate [CI]
23.01	-0.529 [-0.868 ; -0.190]
40.60	-0.092 [-0.184 ; -0.001]
45.08	0 [ref.]
52.17	0.081 [-0.072 ; 0.233]
67.56	-0.106 [-0.378 ; 0.166]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.167 [-0.589 ; 0.255]
6.27	-0.088 [-0.272 ; 0.095]
15.89	0 [ref.]
31.01	0.071 [-0.087 ; 0.229]
94.21	0.034 [-0.298 ; 0.366]

Regression results for categorical and linear variables

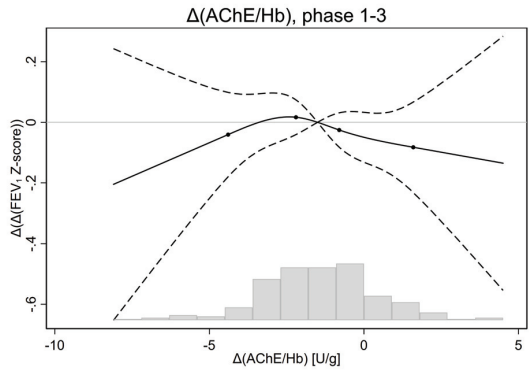
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.043 [-0.348 ; 0.433]
Pack-years	-0.051 [-0.103 ; 0.001]

Analysis specification

Model 11
Outcome: Δ(FEV_1 Z-score), phase 1-3
Unadjusted

Number of observations in model: 220

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 1-3

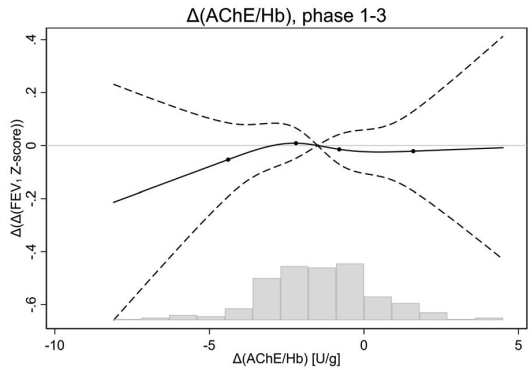
Value	Outcome estimate [CI]
-4.39	-0.041 [-0.180 ; 0.099]
-2.20	0.017 [-0.041 ; 0.074]
-1.50	0 [ref.]
-0.80	-0.025 [-0.082 ; 0.031]
1.60	-0.082 [-0.232 ; 0.067]

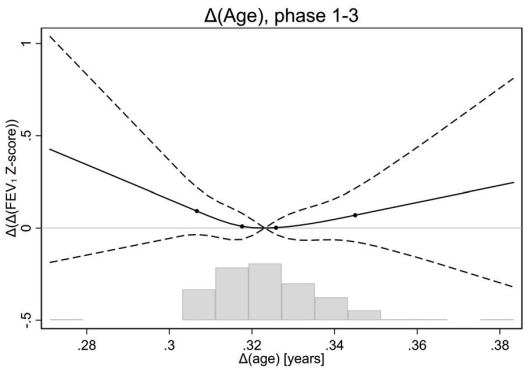
Analysis specification

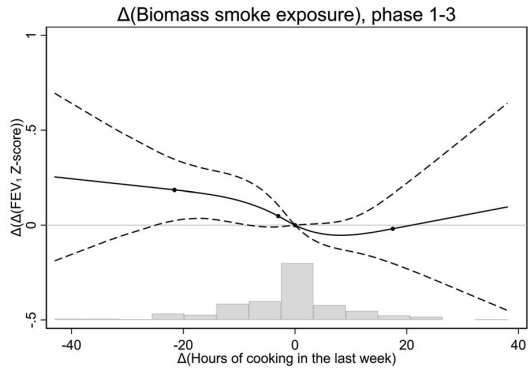
Model 11
Outcome: Δ(FEV_1 Z-score), phase 1-3
Covariate adjustment: Basic

Number of observations in model: 215

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 1-3

Value	Outcome estimate [CI]
-4.39	-0.053 [-0.192 ; 0.085]
-2.20	0.009 [-0.048 ; 0.066]
-1.50	0 [ref.]
-0.80	-0.014 [-0.071 ; 0.042]
1.60	-0.021 [-0.172 ; 0.129]

Î”(Age), phase 1-3

Value	Outcome estimate [CI]
0.31	0.092 [-0.035 ; 0.220]
0.32	0.009 [-0.062 ; 0.080]
0.32	0 [ref.]
0.33	0.002 [-0.035 ; 0.040]
0.34	0.070 [-0.074 ; 0.214]

Î”(Biomass smoke exposure), phase 1-3

Value	Outcome estimate [CI]
-21.58	0.185 [0.024 ; 0.346]
-3.00	0.048 [-0.009 ; 0.105]
0.00	0.000 [0.000 ; 0.000]
0.00	0 [ref.]
17.50	-0.019 [-0.202 ; 0.165]

Regression results for categorical and linear variables

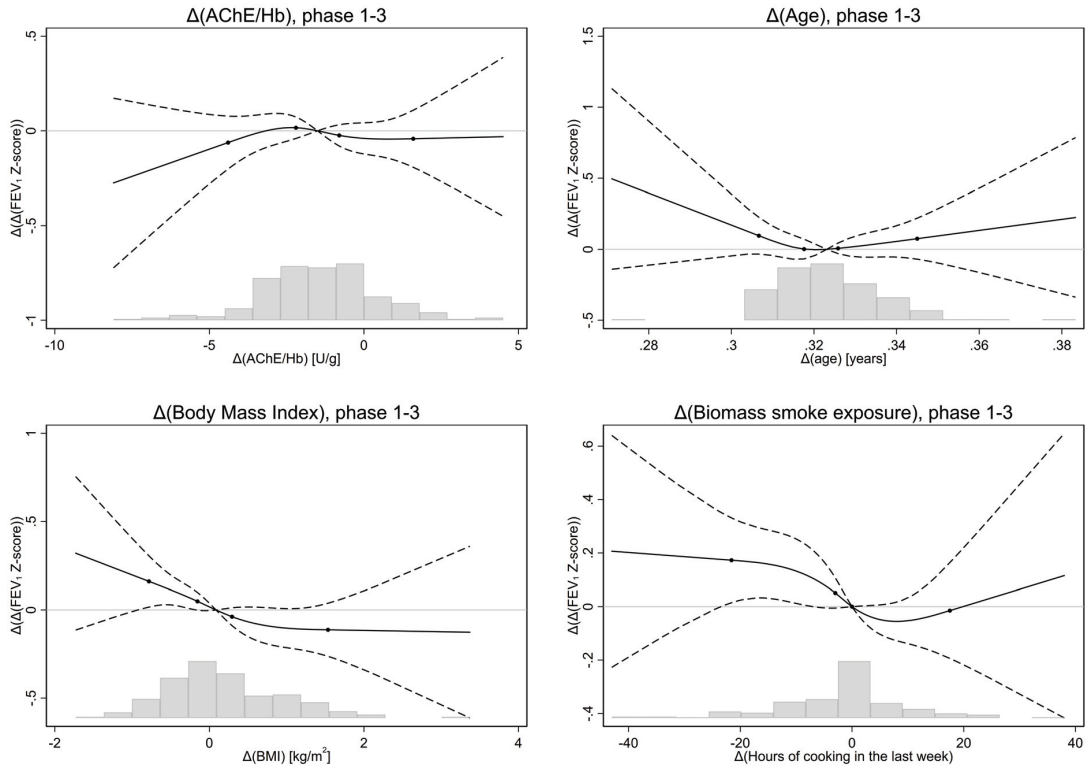
Parameter	Estimate [95% CI]
Δ(Pack-years)	0.321 [-4.495 ; 5.137]

Analysis specification

Model 11
Outcome: Δ(FEV_1 Z-score), phase 1-3
Covariate adjustment: Extended

Number of observations in model: 215

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 1-3

Value	Outcome estimate [CI]
-4.39	-0.062 [-0.202 ; 0.078]
-2.20	0.016 [-0.040 ; 0.073]
-1.50	0 [ref.]
-0.80	-0.024 [-0.080 ; 0.032]
1.60	-0.042 [-0.193 ; 0.109]

Î”(Age), phase 1-3

Value	Outcome estimate [CI]
0.31	0.096 [-0.034 ; 0.226]
0.32	0.002 [-0.068 ; 0.071]
0.32	0 [ref.]
0.33	0.007 [-0.030 ; 0.044]
0.34	0.075 [-0.069 ; 0.219]

Î”(Body Mass Index), phase 1-3

Value	Outcome estimate [CI]
-0.78	0.161 [0.016 ; 0.306]
-0.15	0.049 [-0.001 ; 0.099]
0.09	0 [ref.]
0.29	-0.038 [-0.089 ; 0.012]
1.53	-0.112 [-0.263 ; 0.038]

Î”(Biomass smoke exposure), phase 1-3

Value	Outcome estimate [CI]
-21.58	0.173 [0.014 ; 0.332]
-3.00	0.051 [-0.005 ; 0.107]
0.00	0 [ref.]
0.00	0.000 [0.000 ; 0.000]
17.50	-0.015 [-0.194 ; 0.164]

Regression results for categorical and linear variables

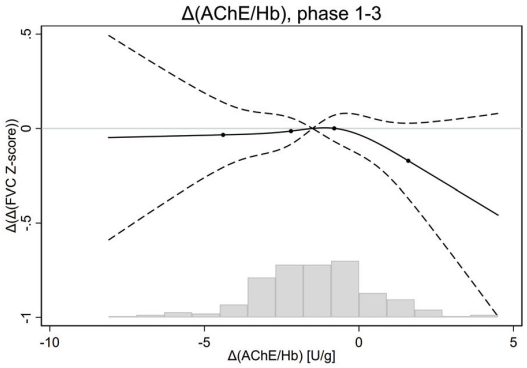
Parameter	Estimate [95% CI]
Δ(Pack-years)	-0.219 [-4.923 ; 4.486]

Analysis specification

Model 11
Outcome: Δ(FVC Z-score), phase 1-3
Unadjusted

Number of observations in model: 219

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 1-3

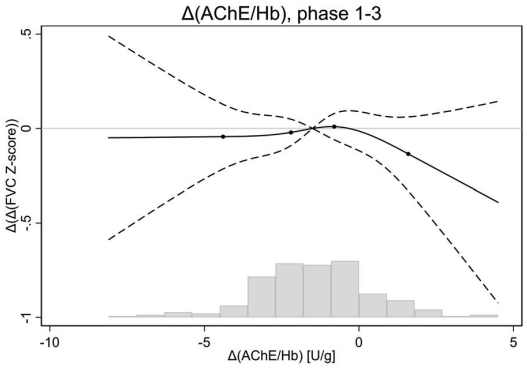
Value	Outcome estimate [CI]
-4.39	-0.034 [-0.206 ; 0.139]
-2.20	-0.014 [-0.084 ; 0.056]
-1.50	0 [ref.]
-0.80	0.001 [-0.069 ; 0.070]
1.60	-0.171 [-0.370 ; 0.028]

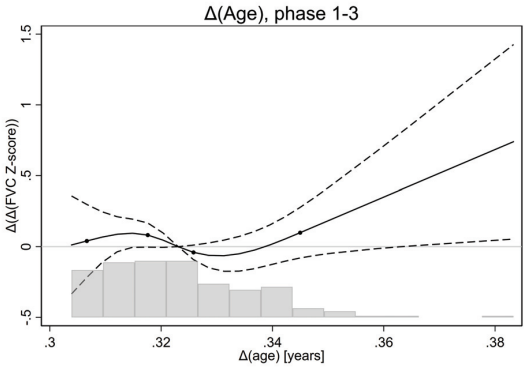
Analysis specification

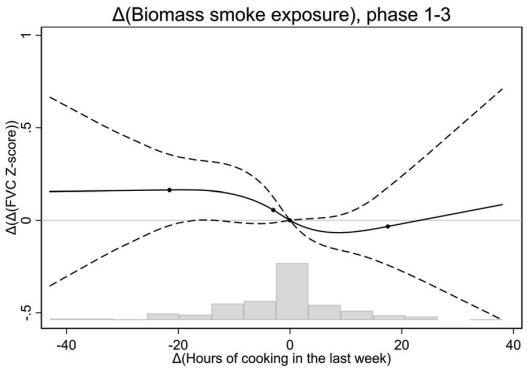
Model 11
Outcome: Δ(FVC Z-score), phase 1-3
Covariate adjustment: Basic

Number of observations in model: 214

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 1-3

Value	Outcome estimate [CI]
-4.39	-0.043 [-0.214 ; 0.128]
-2.20	-0.021 [-0.091 ; 0.049]
-1.50	0 [ref.]
-0.80	0.010 [-0.060 ; 0.079]
1.60	-0.135 [-0.331 ; 0.061]

Î”(Age), phase 1-3

Value	Outcome estimate [CI]
0.31	0.040 [-0.218 ; 0.298]
0.32	0.082 [-0.003 ; 0.167]
0.32	0 [ref.]
0.33	-0.040 [-0.092 ; 0.011]
0.34	0.099 [-0.080 ; 0.278]

Î”(Biomass smoke exposure), phase 1-3

Value	Outcome estimate [CI]
-21.58	0.164 [-0.028 ; 0.355]
-3.00	0.056 [-0.013 ; 0.126]
0.00	0 [ref.]
0.00	0.000 [0.000 ; 0.000]
17.50	-0.033 [-0.242 ; 0.176]

Regression results for categorical and linear variables

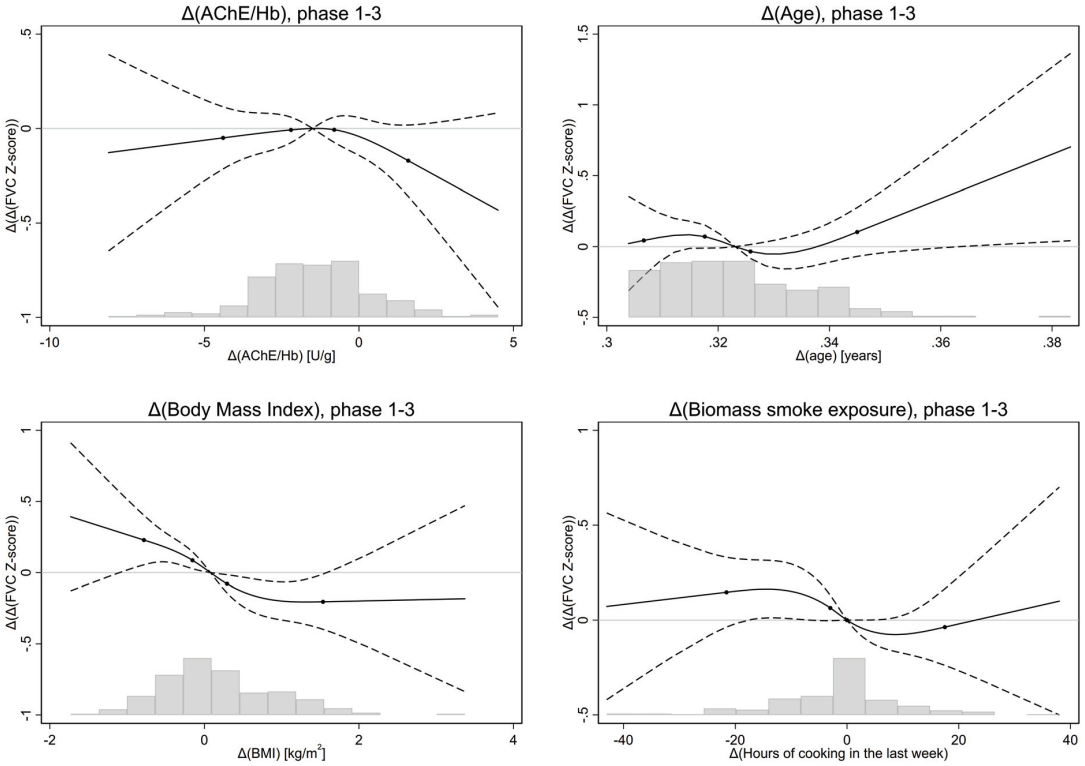
Parameter	Estimate [95% CI]
Δ(Pack-years)	0.140 [-5.457 ; 5.737]

Analysis specification

Model 11
Outcome: Δ(FVC Z-score), phase 1-3
Covariate adjustment: Extended

Number of observations in model: 214

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 1-3

Value	Outcome estimate [CI]
-4.39	-0.050 [-0.215 ; 0.115]
-2.20	-0.008 [-0.075 ; 0.060]
-1.50	0 [ref.]
-0.80	-0.007 [-0.074 ; 0.060]
1.60	-0.171 [-0.359 ; 0.018]

Î”(Age), phase 1-3

Value	Outcome estimate [CI]
0.31	0.044 [-0.205 ; 0.293]
0.32	0.072 [-0.010 ; 0.154]
0.32	0 [ref.]
0.33	-0.034 [-0.083 ; 0.015]
0.34	0.104 [-0.069 ; 0.276]

Î”(Body Mass Index), phase 1-3

Value	Outcome estimate [CI]
-0.78	0.229 [0.055 ; 0.402]
-0.15	0.086 [0.027 ; 0.145]
0.08	0 [ref.]
0.29	-0.079 [-0.142 ; -0.015]
1.53	-0.204 [-0.398 ; -0.010]

Î”(Biomass smoke exposure), phase 1-3

Value	Outcome estimate [CI]
-21.58	0.147 [-0.037 ; 0.331]
-3.00	0.064 [-0.003 ; 0.131]
0.00	0.000 [0.000 ; 0.000]
0.00	0 [ref.]
17.50	-0.037 [-0.238 ; 0.165]

Regression results for categorical and linear variables

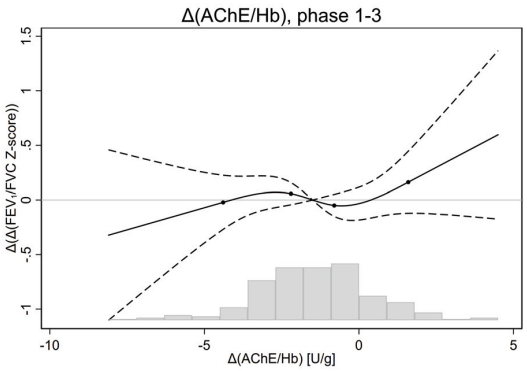
Parameter	Estimate [95% CI]
Δ(Pack-years)	-0.729 [-6.124 ; 4.666]

Analysis specification

Model 11
Outcome: Δ(FEV_1/FVC Z-score), phase 1-3
Unadjusted

Number of observations in model: 219

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 1-3

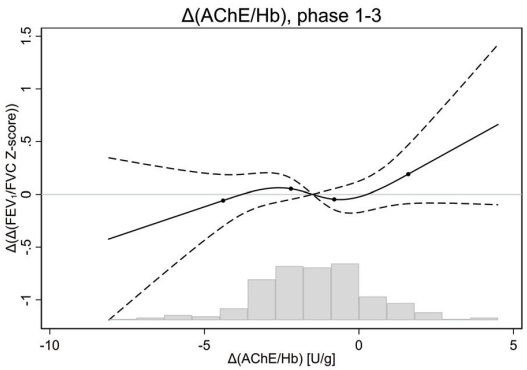
Value	Outcome estimate [CI]
-4.39	-0.022 [-0.269 ; 0.226]
-2.20	0.057 [-0.044 ; 0.158]
-1.50	0 [ref.]
-0.80	-0.050 [-0.150 ; 0.050]
1.60	0.162 [-0.122 ; 0.446]

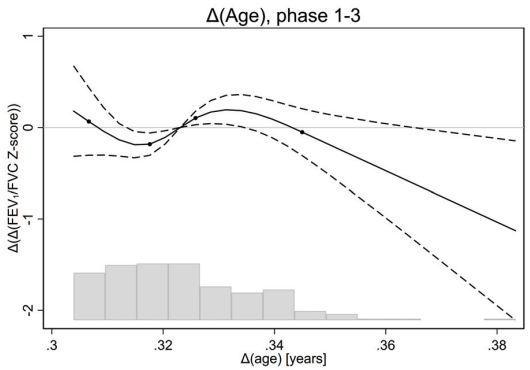
Analysis specification

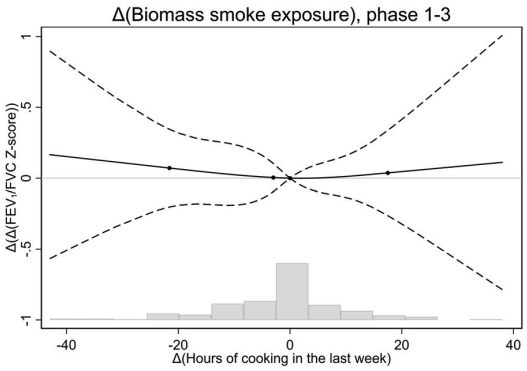
Model 11
Outcome: Δ(FEV_1/FVC Z-score), phase 1-3
Covariate adjustment: Basic

Number of observations in model: 214

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 1-3

Value	Outcome estimate [CI]
-4.39	-0.058 [-0.302 ; 0.186]
-2.20	0.053 [-0.047 ; 0.153]
-1.50	0 [ref.]
-0.80	-0.046 [-0.145 ; 0.053]
1.60	0.191 [-0.087 ; 0.469]

Î”(Age), phase 1-3

Value	Outcome estimate [CI]
0.31	0.066 [-0.304 ; 0.437]
0.32	-0.183 [-0.305 ; -0.060]
0.32	0 [ref.]
0.33	0.104 [0.030 ; 0.178]
0.34	-0.051 [-0.307 ; 0.206]

Î”(Biomass smoke exposure), phase 1-3

Value	Outcome estimate [CI]
-21.58	0.072 [-0.203 ; 0.346]
-3.00	0.005 [-0.095 ; 0.104]
0.00	0 [ref.]
0.00	0.000 [0.000 ; 0.000]
17.50	0.037 [-0.263 ; 0.338]

Regression results for categorical and linear variables

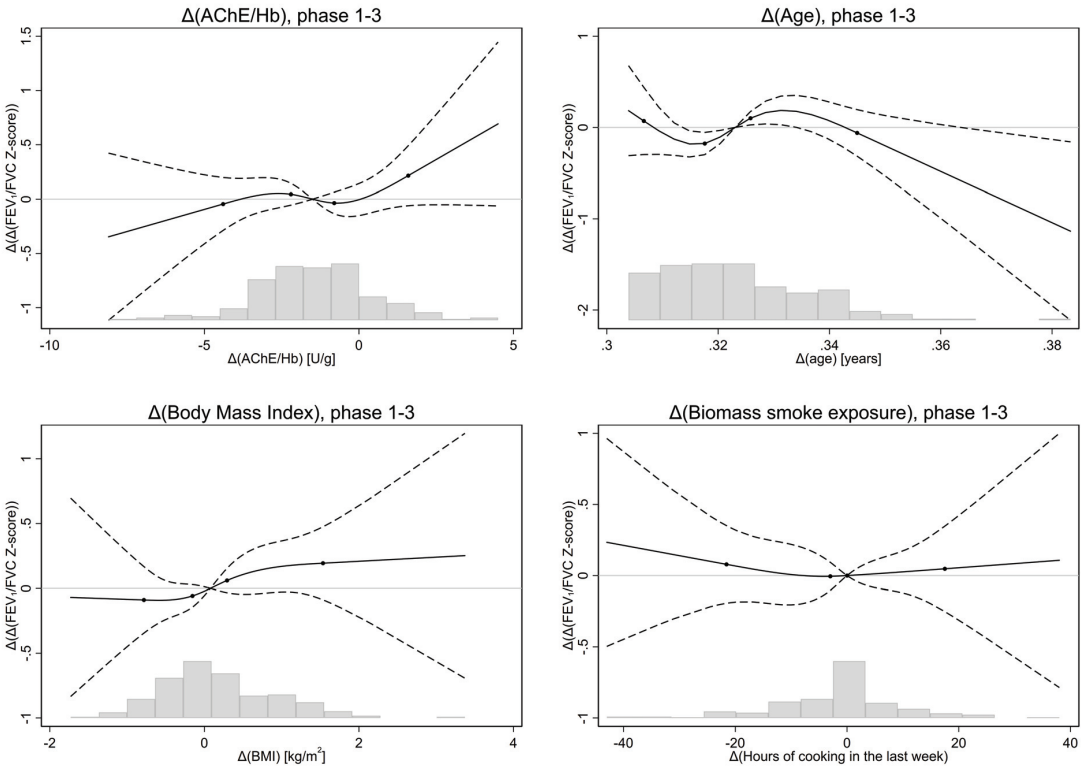
Parameter	Estimate [95% CI]
Δ(Pack-years)	0.115 [-7.926 ; 8.156]

Analysis specification

Model 11
Outcome: Δ(FEV_1/FVC Z-score), phase 1-3
Covariate adjustment: Extended

Number of observations in model: 214

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 1-3

Value	Outcome estimate [CI]
-4.39	-0.045 [-0.288 ; 0.198]
-2.20	0.045 [-0.055 ; 0.145]
-1.50	0 [ref.]
-0.80	-0.036 [-0.134 ; 0.063]
1.60	0.215 [-0.060 ; 0.491]

Î”(Age), phase 1-3

Value	Outcome estimate [CI]
0.31	0.071 [-0.298 ; 0.440]
0.32	-0.177 [-0.299 ; -0.055]
0.32	0 [ref.]
0.33	0.101 [0.028 ; 0.174]
0.34	-0.060 [-0.316 ; 0.195]

Î”(Body Mass Index), phase 1-3

Value	Outcome estimate [CI]
-0.78	-0.089 [-0.345 ; 0.167]
-0.15	-0.057 [-0.144 ; 0.029]
0.08	0 [ref.]
0.29	0.060 [-0.033 ; 0.154]
1.53	0.193 [-0.088 ; 0.475]

Î”(Biomass smoke exposure), phase 1-3

Value	Outcome estimate [CI]
-21.58	0.079 [-0.194 ; 0.351]
-3.00	-0.005 [-0.104 ; 0.093]
0.00	0.000 [0.000 ; 0.000]
0.00	0 [ref.]
17.50	0.047 [-0.252 ; 0.347]

Regression results for categorical and linear variables

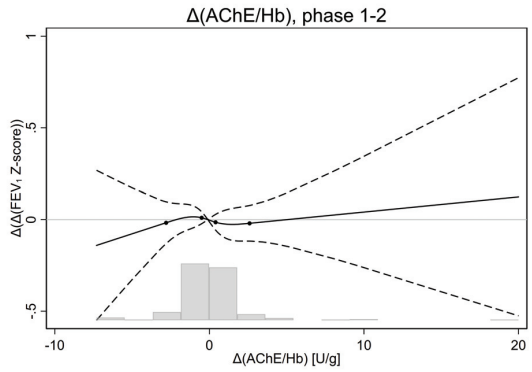
Parameter	Estimate [95% CI]
Δ(Pack-years)	0.619 [-7.408 ; 8.646]

Analysis specification

Model 12
Outcome: Δ(FEV_1 Z-score), phase 1-2
Unadjusted

Number of observations in model: 239

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 1-2

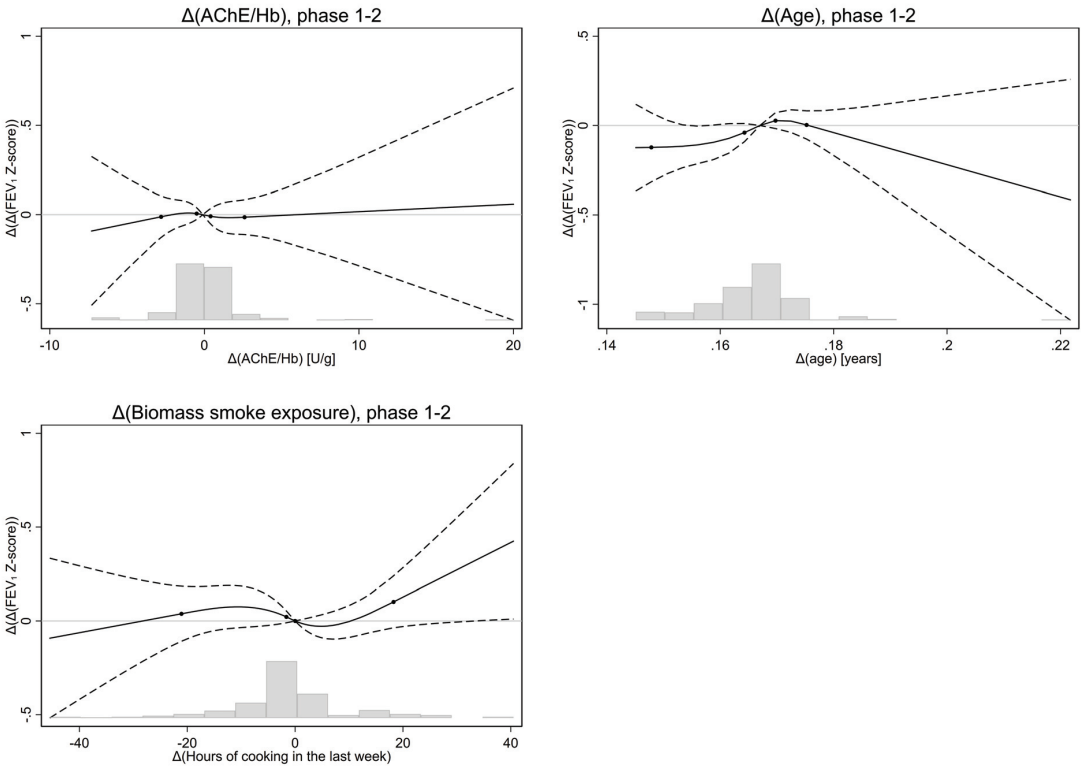
Value	Outcome estimate [CI]
-2.80	-0.017 [-0.131 ; 0.097]
-0.50	0.010 [-0.023 ; 0.043]
-0.10	0 [ref.]
0.40	-0.014 [-0.057 ; 0.028]
2.60	-0.020 [-0.117 ; 0.077]

Analysis specification

Model 12
Outcome: Δ(FEV_1 Z-score), phase 1-2
Covariate adjustment: Basic

Number of observations in model: 233

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 1-2

Value	Outcome estimate [CI]
-2.80	-0.012 [-0.128 ; 0.104]
-0.50	0.006 [-0.027 ; 0.039]
-0.10	0 [ref.]
0.40	-0.009 [-0.052 ; 0.034]
2.60	-0.014 [-0.112 ; 0.083]

Î”(Age), phase 1-2

Value	Outcome estimate [CI]
0.15	-0.123 [-0.316 ; 0.071]
0.16	-0.040 [-0.091 ; 0.011]
0.17	0 [ref.]
0.17	0.027 [-0.017 ; 0.072]
0.18	0.003 [-0.076 ; 0.082]

Î”(Biomass smoke exposure), phase 1-2

Value	Outcome estimate [CI]
-21.09	0.038 [-0.108 ; 0.185]
-1.62	0.022 [-0.010 ; 0.053]
0.00	0 [ref.]
0.00	0.000 [0.000 ; 0.000]
18.25	0.102 [-0.037 ; 0.240]

Regression results for categorical and linear variables

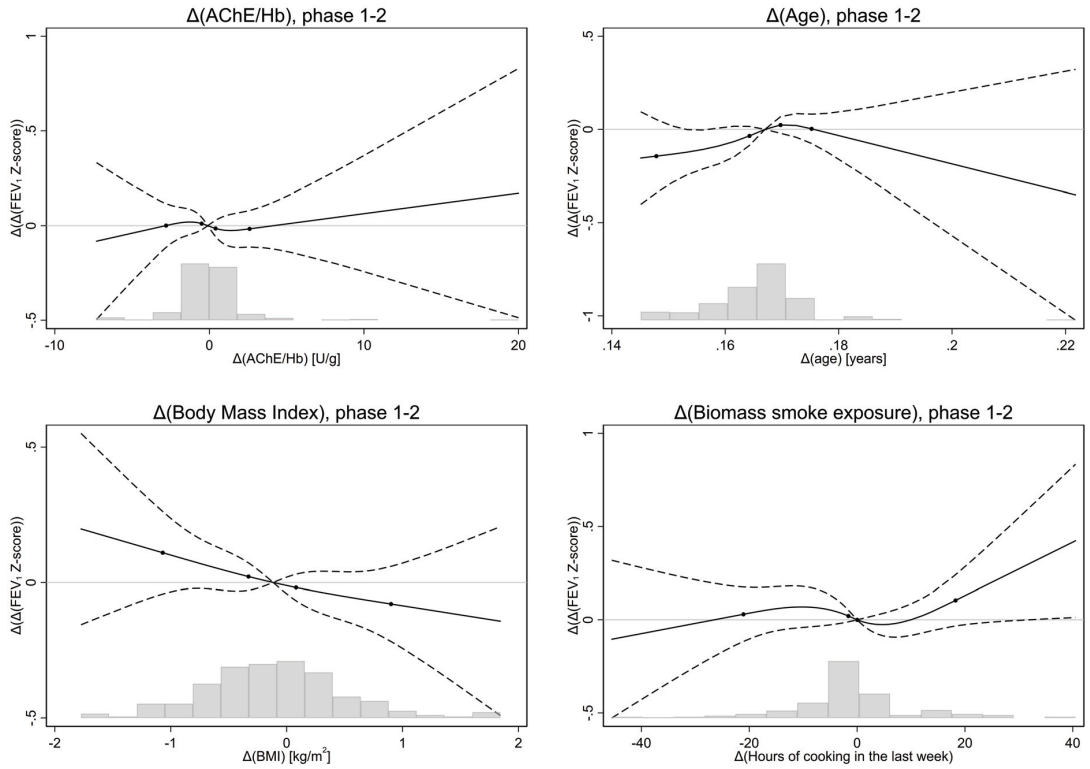
Parameter	Estimate [95% CI]
Δ(Pack-years)	-0.941 [-8.642 ; 6.760]

Analysis specification

Model 12
Outcome: Δ(FEV_1 Z-score), phase 1-2
Covariate adjustment: Extended

Number of observations in model: 233

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 1-2

Value	Outcome estimate [CI]
-2.80	0.001 [-0.115 ; 0.116]
-0.50	0.011 [-0.022 ; 0.044]
-0.10	0 [ref.]
0.40	-0.015 [-0.058 ; 0.028]
2.60	-0.017 [-0.113 ; 0.080]

Î”(Age), phase 1-2

Value	Outcome estimate [CI]
0.15	-0.144 [-0.341 ; 0.053]
0.16	-0.035 [-0.086 ; 0.016]
0.17	0 [ref.]
0.17	0.023 [-0.021 ; 0.068]
0.18	0.003 [-0.076 ; 0.082]

Î”(Body Mass Index), phase 1-2

Value	Outcome estimate [CI]
-1.07	0.110 [-0.043 ; 0.262]
-0.33	0.022 [-0.029 ; 0.072]
-0.12	0 [ref.]
0.08	-0.018 [-0.067 ; 0.030]
0.90	-0.079 [-0.217 ; 0.059]

Î”(Biomass smoke exposure), phase 1-2

Value	Outcome estimate [CI]
-21.09	0.030 [-0.116 ; 0.176]
-1.62	0.020 [-0.011 ; 0.052]
0.00	0 [ref.]
0.00	0.000 [0.000 ; 0.000]
18.25	0.104 [-0.033 ; 0.241]

Regression results for categorical and linear variables

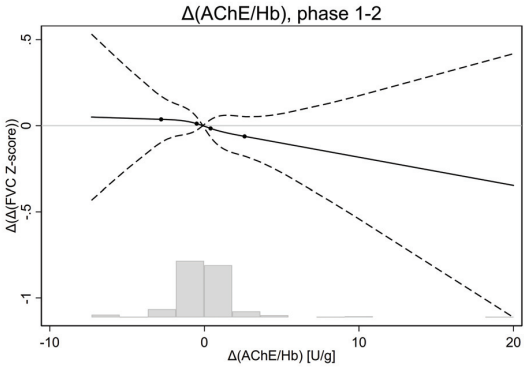
Parameter	Estimate [95% CI]
Δ(Pack-years)	-0.174 [-7.882 ; 7.533]

Analysis specification

Model 12
Outcome: Δ(FVC Z-score), phase 1-2
Unadjusted

Number of observations in model: 238

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 1-2

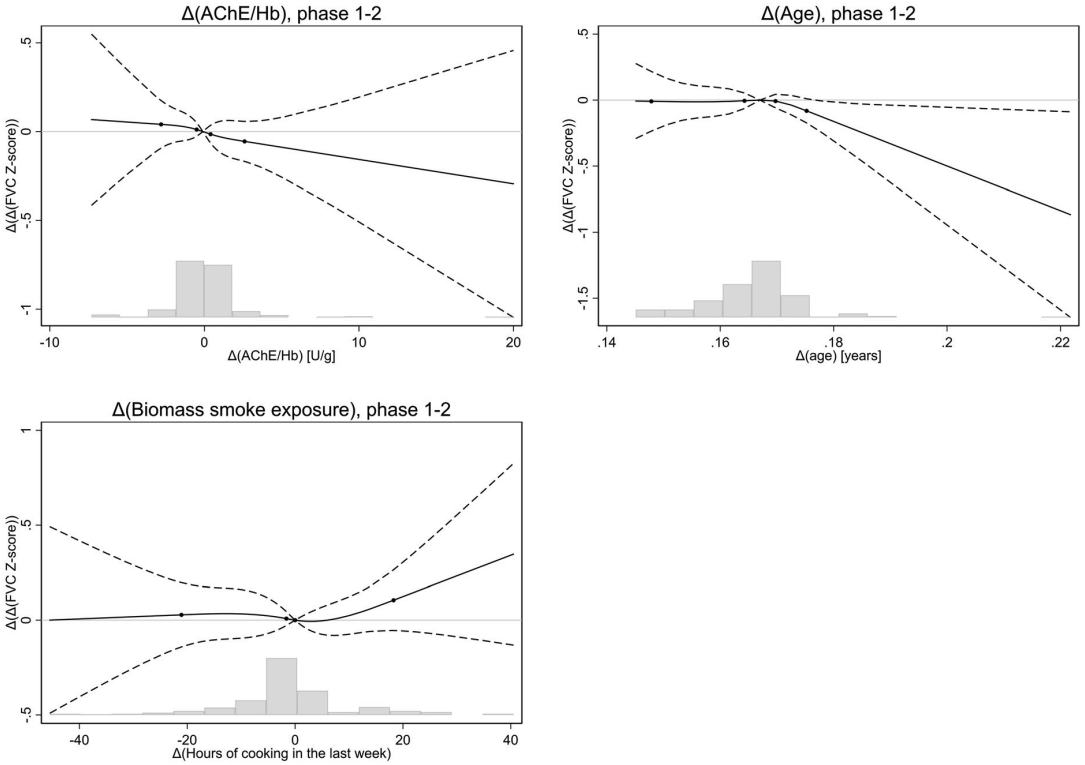
Value	Outcome estimate [CI]
-2.80	0.037 [-0.098 ; 0.171]
-0.50	0.012 [-0.027 ; 0.051]
-0.10	0 [ref.]
0.40	-0.016 [-0.067 ; 0.035]
2.60	-0.062 [-0.177 ; 0.053]

Analysis specification

Model 12
Outcome: Δ(FVC Z-score), phase 1-2
Covariate adjustment: Basic

Number of observations in model: 232

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 1-2

Value	Outcome estimate [CI]
-2.80	0.040 [-0.094 ; 0.175]
-0.50	0.011 [-0.027 ; 0.049]
-0.10	0 [ref.]
0.40	-0.015 [-0.065 ; 0.035]
2.60	-0.056 [-0.168 ; 0.057]

Î”(Age), phase 1-2

Value	Outcome estimate [CI]
0.15	-0.009 [-0.235 ; 0.217]
0.16	-0.005 [-0.064 ; 0.054]
0.17	0 [ref.]
0.17	-0.007 [-0.059 ; 0.044]
0.18	-0.081 [-0.173 ; 0.010]

Î”(Biomass smoke exposure), phase 1-2

Value	Outcome estimate [CI]
-21.09	0.028 [-0.141 ; 0.197]
-1.62	0.008 [-0.028 ; 0.045]
0.00	0.000 [0.000 ; 0.000]
0.00	0 [ref.]
18.25	0.105 [-0.055 ; 0.265]

Regression results for categorical and linear variables

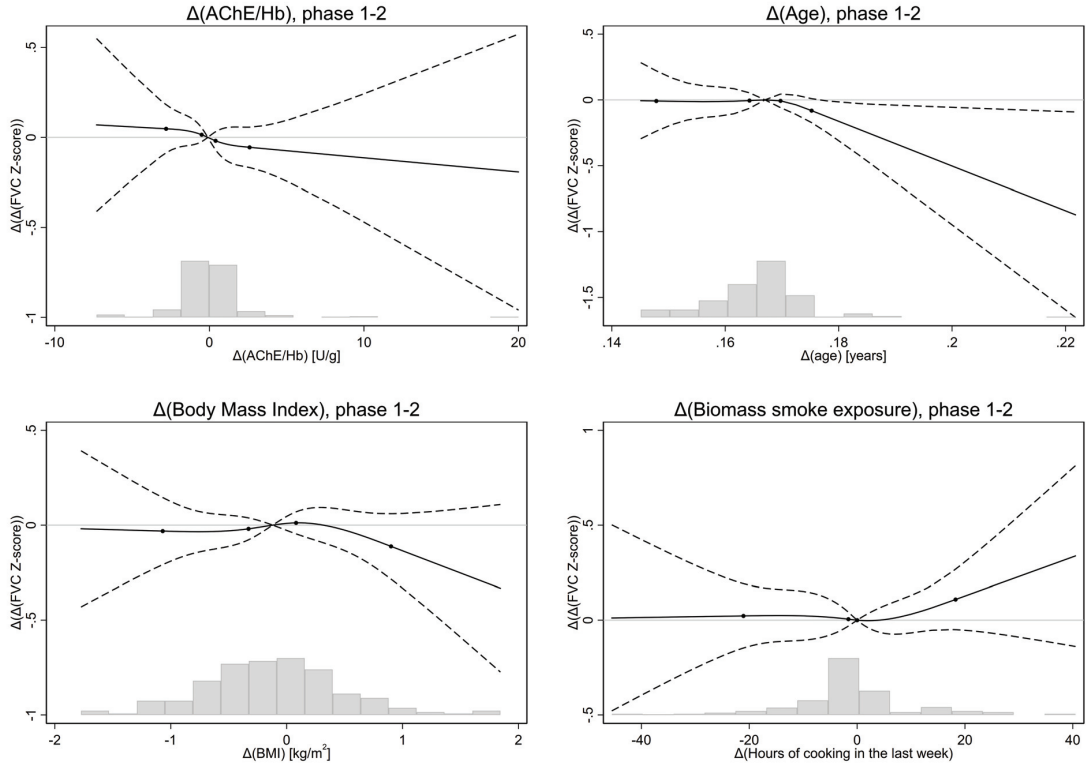
Parameter	Estimate [95% CI]
Δ(Pack-years)	-2.287 [-11.175 ; 6.601]

Analysis specification

Model 12
Outcome: Δ(FVC Z-score), phase 1-2
Covariate adjustment: Extended

Number of observations in model: 232

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 1-2

Value	Outcome estimate [CI]
-2.80	0.048 [-0.087 ; 0.182]
-0.50	0.015 [-0.024 ; 0.053]
-0.10	0 [ref.]
0.40	-0.019 [-0.069 ; 0.031]
2.60	-0.055 [-0.168 ; 0.057]

Î”(Age), phase 1-2

Value	Outcome estimate [CI]
0.15	-0.009 [-0.238 ; 0.221]
0.16	-0.005 [-0.064 ; 0.054]
0.17	0 [ref.]
0.17	-0.007 [-0.059 ; 0.044]
0.18	-0.082 [-0.173 ; 0.009]

Î”(Body Mass Index), phase 1-2

Value	Outcome estimate [CI]
-1.07	-0.031 [-0.208 ; 0.146]
-0.33	-0.020 [-0.077 ; 0.038]
-0.12	0 [ref.]
0.08	0.012 [-0.046 ; 0.070]
0.90	-0.112 [-0.284 ; 0.060]

Î”(Biomass smoke exposure), phase 1-2

Value	Outcome estimate [CI]
-21.09	0.022 [-0.147 ; 0.192]
-1.62	0.005 [-0.031 ; 0.042]
0.00	0 [ref.]
0.00	0.000 [0.000 ; 0.000]
18.25	0.109 [-0.050 ; 0.268]

Regression results for categorical and linear variables

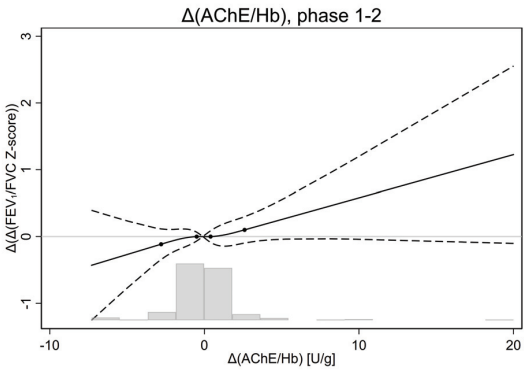
Parameter	Estimate [95% CI]
Δ(Pack-years)	-1.579 [-10.510 ; 7.352]

Analysis specification

Model 12
Outcome: Δ(FEV_1/FVC Z-score), phase 1-2
Unadjusted

Number of observations in model: 238

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 1-2

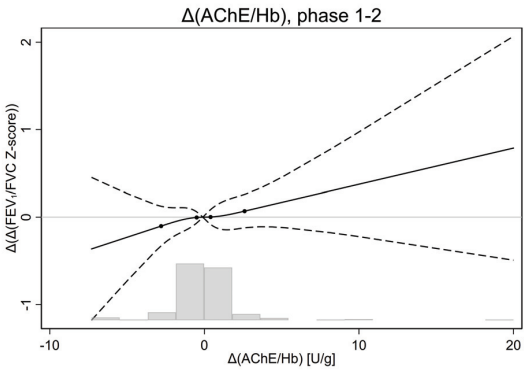
Value	Outcome estimate [CI]
-2.80	-0.115 [-0.345 ; 0.115]
-0.50	-0.000 [-0.067 ; 0.066]
-0.10	0 [ref.]
0.40	-0.000 [-0.087 ; 0.087]
2.60	0.101 [-0.096 ; 0.298]

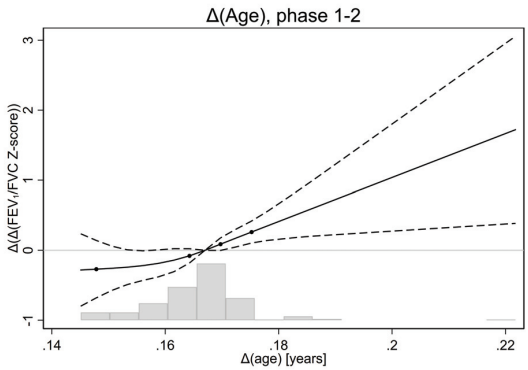
Analysis specification

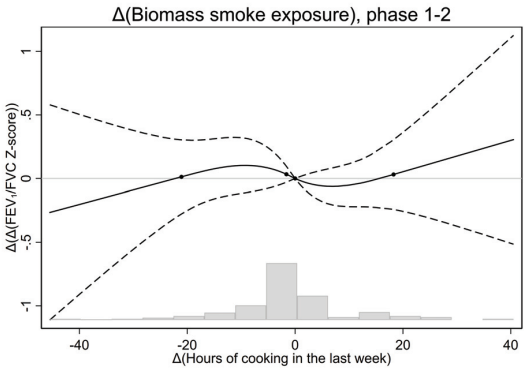
Model 12
Outcome: Δ(FEV_1/FVC Z-score), phase 1-2
Covariate adjustment: Basic

Number of observations in model: 232

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 1-2

Value	Outcome estimate [CI]
-2.80	-0.102 [-0.329 ; 0.125]
-0.50	-0.003 [-0.067 ; 0.061]
-0.10	0 [ref.]
0.40	0.002 [-0.082 ; 0.086]
2.60	0.069 [-0.122 ; 0.260]

Î”(Age), phase 1-2

Value	Outcome estimate [CI]
0.15	-0.269 [-0.680 ; 0.141]
0.16	-0.079 [-0.181 ; 0.023]
0.17	0 [ref.]
0.17	0.088 [-0.001 ; 0.177]
0.18	0.261 [0.104 ; 0.418]

Î”(Biomass smoke exposure), phase 1-2

Value	Outcome estimate [CI]
-21.09	0.013 [-0.278 ; 0.304]
-1.62	0.033 [-0.029 ; 0.096]
0.00	0.000 [0.000 ; 0.000]
0.00	0 [ref.]
18.25	0.031 [-0.242 ; 0.305]

Regression results for categorical and linear variables

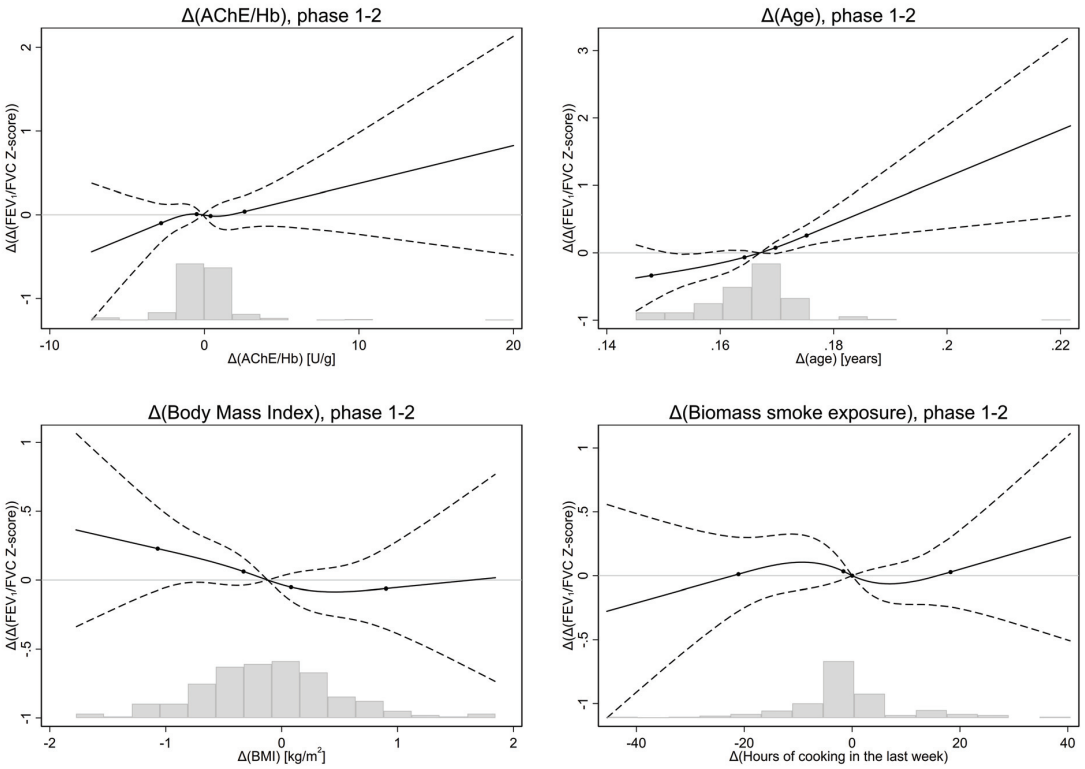
Parameter	Estimate [95% CI]
Δ(Pack-years)	3.108 [-12.177 ; 18.393]

Analysis specification

Model 12
Outcome: Δ(FEV_1/FVC Z-score), phase 1-2
Covariate adjustment: Extended

Number of observations in model: 232

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 1-2

Value	Outcome estimate [CI]
-2.80	-0.099 [-0.328 ; 0.130]
-0.50	0.009 [-0.057 ; 0.075]
-0.10	0 [ref.]
0.40	-0.014 [-0.099 ; 0.072]
2.60	0.039 [-0.153 ; 0.230]

Î”(Age), phase 1-2

Value	Outcome estimate [CI]
0.15	-0.336 [-0.727 ; 0.056]
0.16	-0.066 [-0.167 ; 0.035]
0.17	0 [ref.]
0.17	0.076 [-0.012 ; 0.164]
0.18	0.259 [0.103 ; 0.414]

Î”(Body Mass Index), phase 1-2

Value	Outcome estimate [CI]
-1.07	0.228 [-0.074 ; 0.530]
-0.33	0.062 [-0.036 ; 0.161]
-0.12	0 [ref.]
0.08	-0.051 [-0.150 ; 0.048]
0.90	-0.061 [-0.355 ; 0.233]

Î”(Biomass smoke exposure), phase 1-2

Value	Outcome estimate [CI]
-21.09	0.012 [-0.277 ; 0.301]
-1.62	0.034 [-0.028 ; 0.097]
0.00	0 [ref.]
0.00	0.000 [0.000 ; 0.000]
18.25	0.028 [-0.243 ; 0.300]

Regression results for categorical and linear variables

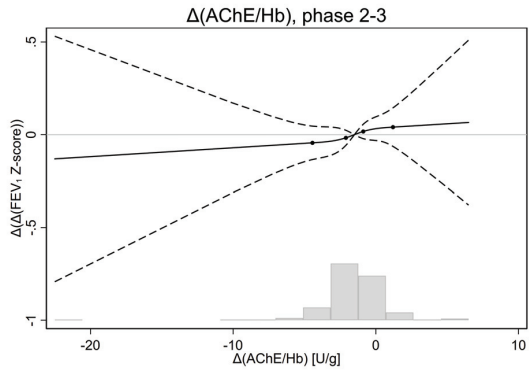
Parameter	Estimate [95% CI]
Δ(Pack-years)	4.118 [-11.108 ; 19.344]

Analysis specification

Model 13
Outcome: Δ(FEV_1 Z-score), phase 2-3
Unadjusted

Number of observations in model: 230

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 2-3

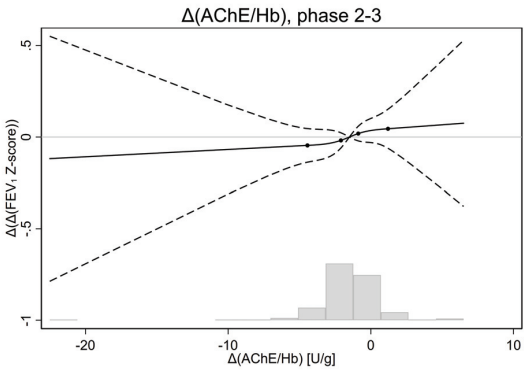
Value	Outcome estimate [CI]
-4.45	-0.044 [-0.134 ; 0.046]
-2.10	-0.017 [-0.058 ; 0.024]
-1.50	0 [ref.]
-0.88	0.017 [-0.021 ; 0.056]
1.20	0.041 [-0.063 ; 0.144]

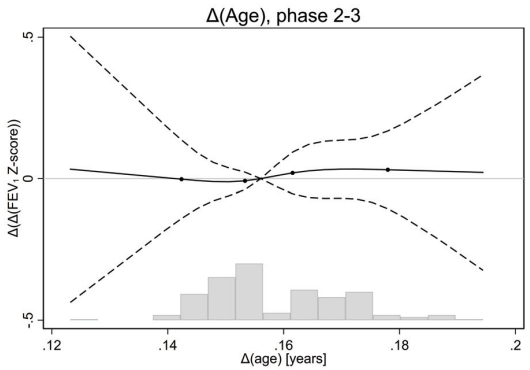
Analysis specification

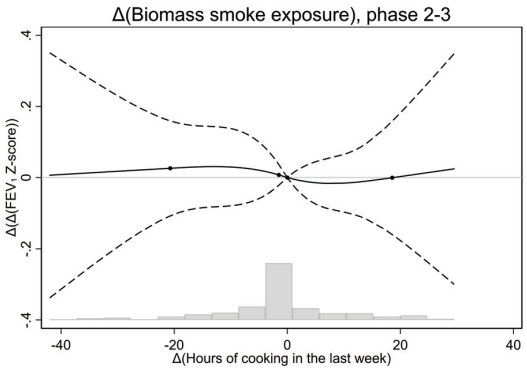
Model 13
Outcome: Δ(FEV_1 Z-score), phase 2-3
Covariate adjustment: Basic

Number of observations in model: 225

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 2-3

Value	Outcome estimate [CI]
-4.45	-0.046 [-0.137 ; 0.046]
-2.10	-0.018 [-0.060 ; 0.023]
-1.50	0 [ref.]
-0.88	0.019 [-0.021 ; 0.059]
1.20	0.045 [-0.061 ; 0.152]

Î”(Age), phase 2-3

Value	Outcome estimate [CI]
0.14	-0.002 [-0.141 ; 0.137]
0.15	-0.008 [-0.039 ; 0.023]
0.16	0 [ref.]
0.16	0.020 [-0.053 ; 0.094]
0.18	0.031 [-0.106 ; 0.168]

Î”(Biomass smoke exposure), phase 2-3

Value	Outcome estimate [CI]
-20.70	0.026 [-0.107 ; 0.159]
-1.50	0.007 [-0.022 ; 0.036]
0.00	0 [ref.]
0.00	0.000 [0.000 ; 0.000]
18.55	-0.001 [-0.160 ; 0.159]

Regression results for categorical and linear variables

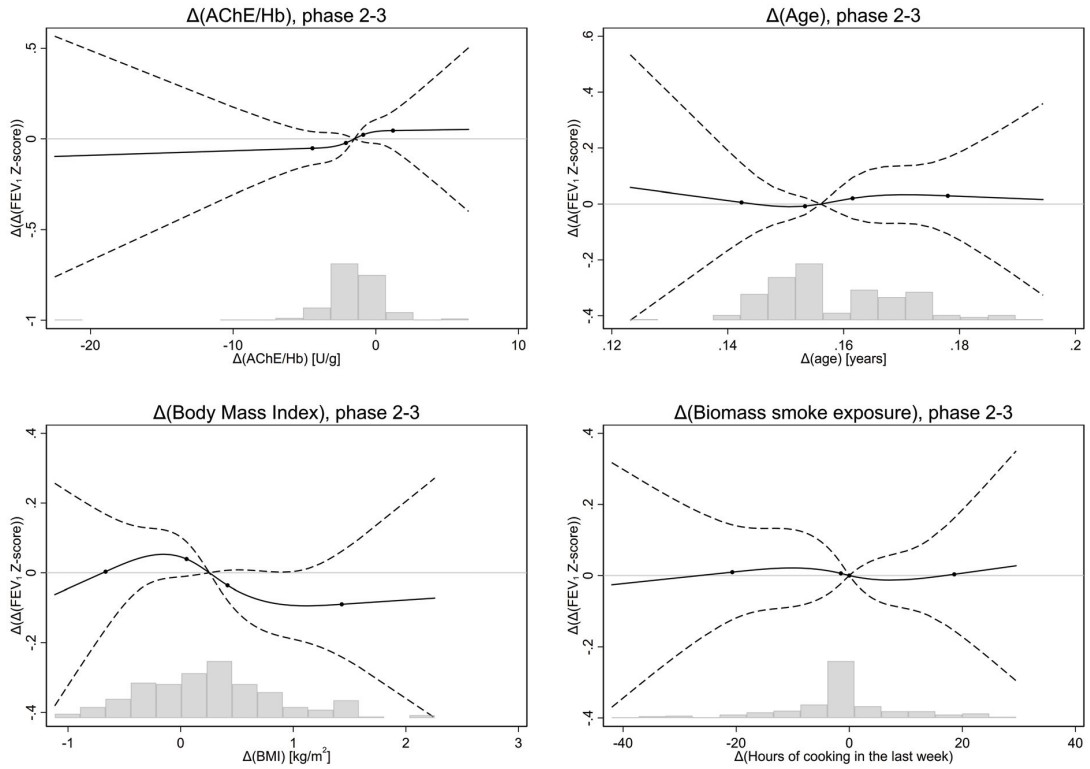
Parameter	Estimate [95% CI]
Δ(Pack-years)	2.329 [-5.939 ; 10.596]

Analysis specification

Model 13
Outcome: Δ(FEV_1 Z-score), phase 2-3
Covariate adjustment: Extended

Number of observations in model: 225

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 2-3

Value	Outcome estimate [CI]
-4.45	-0.052 [-0.144 ; 0.040]
-2.10	-0.023 [-0.064 ; 0.019]
-1.50	0 [ref.]
-0.88	0.023 [-0.017 ; 0.063]
1.20	0.046 [-0.061 ; 0.152]

Î”(Age), phase 2-3

Value	Outcome estimate [CI]
0.14	0.006 [-0.133 ; 0.145]
0.15	-0.008 [-0.038 ; 0.023]
0.16	0 [ref.]
0.16	0.021 [-0.053 ; 0.094]
0.18	0.030 [-0.107 ; 0.166]

Î”(Body Mass Index), phase 2-3

Value	Outcome estimate [CI]
-0.67	0.003 [-0.162 ; 0.168]
0.05	0.039 [-0.010 ; 0.089]
0.25	0 [ref.]
0.42	-0.036 [-0.079 ; 0.007]
1.43	-0.090 [-0.241 ; 0.062]

Î”(Biomass smoke exposure), phase 2-3

Value	Outcome estimate [CI]
-20.70	0.009 [-0.124 ; 0.143]
-1.50	0.006 [-0.023 ; 0.035]
0.00	0 [ref.]
0.00	0.000 [0.000 ; 0.000]
18.55	0.003 [-0.155 ; 0.162]

Regression results for categorical and linear variables

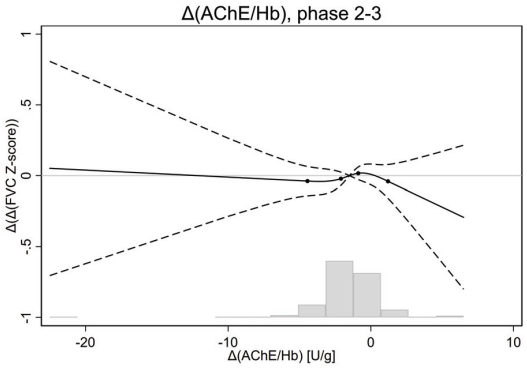
Parameter	Estimate [95% CI]
Δ(Pack-years)	1.856 [-6.738 ; 10.450]

Analysis specification

Model 13
Outcome: Δ(FVC Z-score), phase 2-3
Unadjusted

Number of observations in model: 230

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 2-3

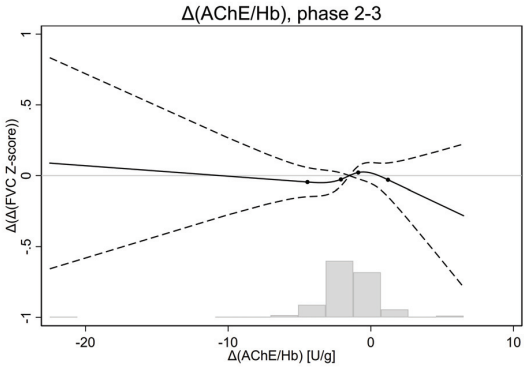
Value	Outcome estimate [CI]
-4.45	-0.038 [-0.141 ; 0.065]
-2.10	-0.022 [-0.068 ; 0.025]
-1.50	0 [ref.]
-0.88	0.017 [-0.027 ; 0.061]
1.20	-0.040 [-0.158 ; 0.079]

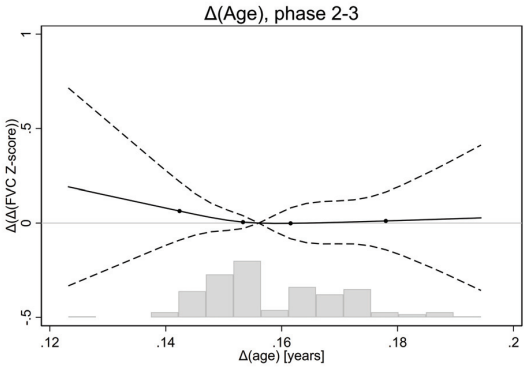
Analysis specification

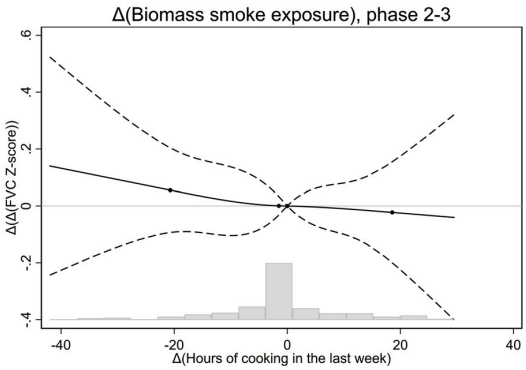
Model 13
Outcome: Δ(FVC Z-score), phase 2-3
Covariate adjustment: Basic

Number of observations in model: 225

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 2-3

Value	Outcome estimate [CI]
-4.45	-0.045 [-0.147 ; 0.057]
-2.10	-0.027 [-0.073 ; 0.020]
-1.50	0 [ref.]
-0.88	0.022 [-0.022 ; 0.067]
1.20	-0.029 [-0.148 ; 0.090]

Î”(Age), phase 2-3

Value	Outcome estimate [CI]
0.14	0.064 [-0.091 ; 0.218]
0.15	0.005 [-0.029 ; 0.040]
0.16	0 [ref.]
0.16	-0.001 [-0.083 ; 0.081]
0.18	0.011 [-0.141 ; 0.164]

Î”(Biomass smoke exposure), phase 2-3

Value	Outcome estimate [CI]
-20.70	0.055 [-0.093 ; 0.204]
-1.50	0.001 [-0.032 ; 0.033]
0.00	0 [ref.]
0.00	0.000 [0.000 ; 0.000]
18.55	-0.023 [-0.200 ; 0.155]

Regression results for categorical and linear variables

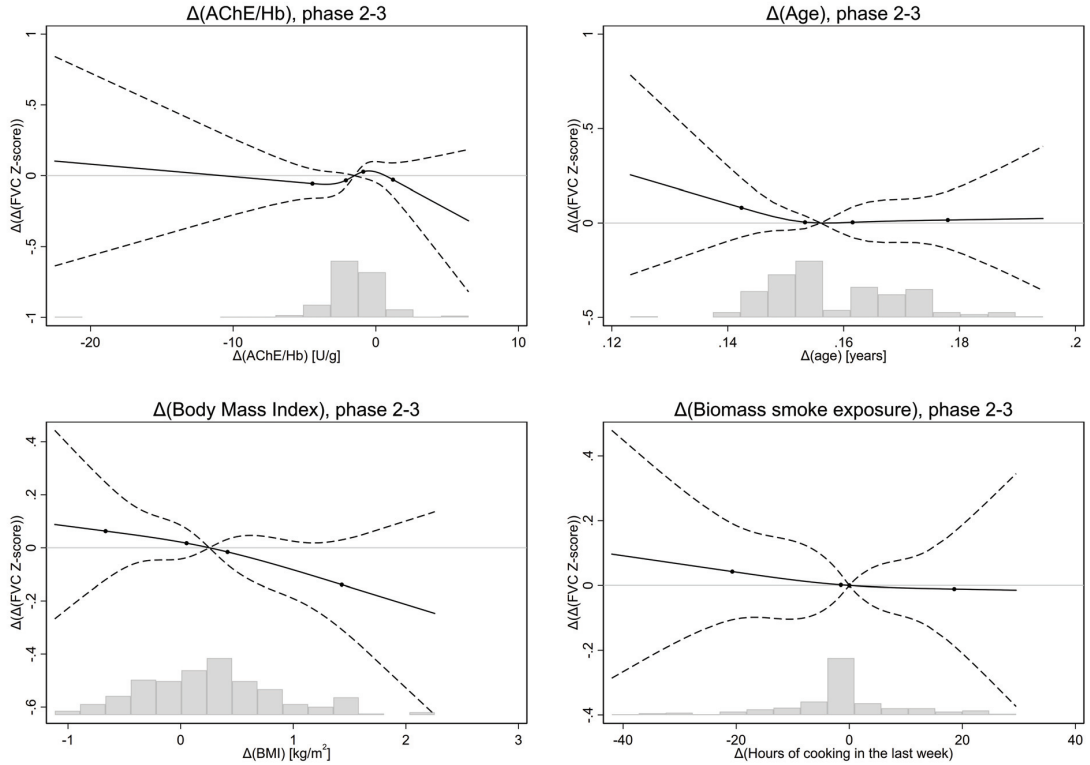
Parameter	Estimate [95% CI]
Δ(Pack-years)	1.963 [-7.246 ; 11.171]

Analysis specification

Model 13
Outcome: Δ(FVC Z-score), phase 2-3
Covariate adjustment: Extended

Number of observations in model: 225

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 2-3

Value	Outcome estimate [CI]
-4.45	-0.056 [-0.158 ; 0.046]
-2.10	-0.033 [-0.080 ; 0.014]
-1.50	0 [ref.]
-0.88	0.028 [-0.016 ; 0.073]
1.20	-0.028 [-0.147 ; 0.090]

Î”(Age), phase 2-3

Value	Outcome estimate [CI]
0.14	0.081 [-0.074 ; 0.236]
0.15	0.004 [-0.030 ; 0.039]
0.16	0 [ref.]
0.16	0.004 [-0.078 ; 0.086]
0.18	0.016 [-0.136 ; 0.168]

Î”(Body Mass Index), phase 2-3

Value	Outcome estimate [CI]
-0.67	0.063 [-0.121 ; 0.246]
0.05	0.017 [-0.037 ; 0.072]
0.25	0 [ref.]
0.42	-0.016 [-0.064 ; 0.032]
1.43	-0.139 [-0.307 ; 0.030]

Î”(Biomass smoke exposure), phase 2-3

Value	Outcome estimate [CI]
-20.70	0.043 [-0.106 ; 0.191]
-1.50	0.002 [-0.030 ; 0.034]
0.00	0 [ref.]
0.00	0.000 [0.000 ; 0.000]
18.55	-0.011 [-0.187 ; 0.165]

Regression results for categorical and linear variables

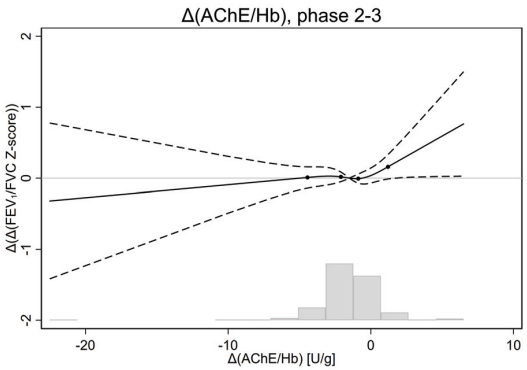
Parameter	Estimate [95% CI]
Δ(Pack-years)	0.362 [-9.208 ; 9.931]

Analysis specification

Model 13
Outcome: Δ(FEV_1/FVC Z-score), phase 2-3
Unadjusted

Number of observations in model: 230

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 2-3

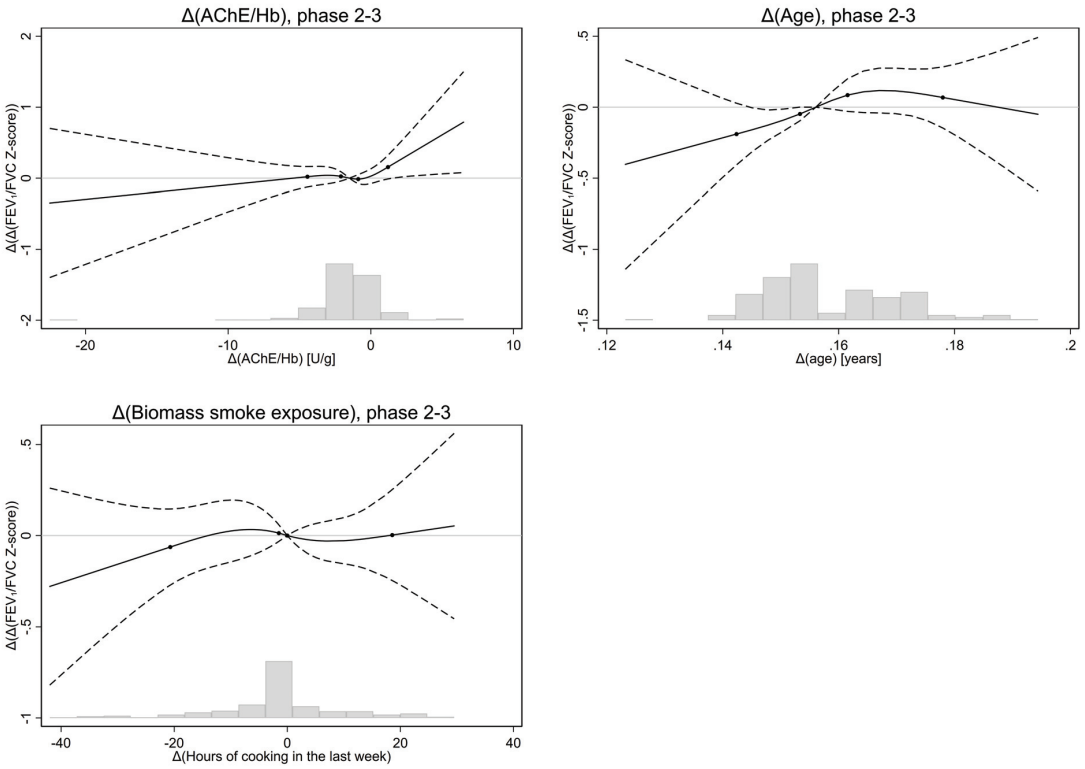
Value	Outcome estimate [CI]
-4.45	0.009 [-0.140 ; 0.159]
-2.10	0.018 [-0.049 ; 0.085]
-1.50	0 [ref.]
-0.88	-0.007 [-0.071 ; 0.057]
1.20	0.159 [-0.013 ; 0.331]

Analysis specification

Model 13
Outcome: Δ(FEV_1/FVC Z-score), phase 2-3
Covariate adjustment: Basic

Number of observations in model: 225

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 2-3

Value	Outcome estimate [CI]
-4.45	0.020 [-0.124 ; 0.164]
-2.10	0.025 [-0.041 ; 0.090]
-1.50	0 [ref.]
-0.88	-0.013 [-0.076 ; 0.049]
1.20	0.155 [-0.012 ; 0.323]

Î”(Age), phase 2-3

Value	Outcome estimate [CI]
0.14	-0.190 [-0.407 ; 0.028]
0.15	-0.048 [-0.096 ; 0.001]
0.16	0 [ref.]
0.16	0.085 [-0.030 ; 0.200]
0.18	0.068 [-0.147 ; 0.284]

Î”(Biomass smoke exposure), phase 2-3

Value	Outcome estimate [CI]
-20.70	-0.063 [-0.272 ; 0.146]
-1.50	0.013 [-0.032 ; 0.059]
0.00	0 [ref.]
0.00	0.000 [0.000 ; 0.000]
18.55	0.003 [-0.247 ; 0.253]

Regression results for categorical and linear variables

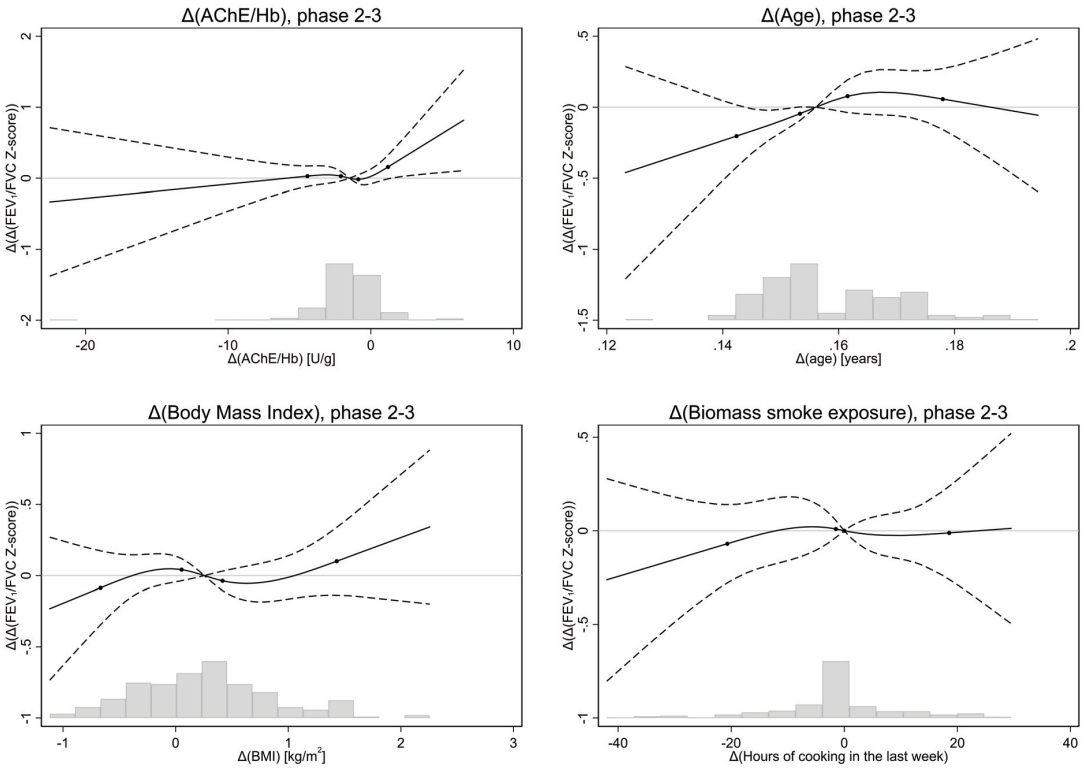
Parameter	Estimate [95% CI]
Δ(Pack-years)	1.955 [-11.013 ; 14.922]

Analysis specification

Model 13
Outcome: Δ(FEV_1/FVC Z-score), phase 2-3
Covariate adjustment: Extended

Number of observations in model: 225

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

Î”(AChE/Hb), phase 2-3

Value	Outcome estimate [CI]
-4.45	0.028 [-0.116 ; 0.172]
-2.10	0.028 [-0.038 ; 0.094]
-1.50	0 [ref.]
-0.88	-0.016 [-0.079 ; 0.047]
1.20	0.157 [-0.010 ; 0.324]

Î”(Age), phase 2-3

Value	Outcome estimate [CI]
0.14	-0.204 [-0.423 ; 0.016]
0.15	-0.046 [-0.094 ; 0.002]
0.16	0 [ref.]
0.16	0.078 [-0.038 ; 0.193]
0.18	0.057 [-0.157 ; 0.272]

Î”(Body Mass Index), phase 2-3

Value	Outcome estimate [CI]
-0.67	-0.086 [-0.345 ; 0.174]
0.05	0.041 [-0.036 ; 0.119]
0.25	0 [ref.]
0.42	-0.037 [-0.104 ; 0.031]
1.43	0.101 [-0.138 ; 0.339]

Î”(Biomass smoke exposure), phase 2-3

Value	Outcome estimate [CI]
-20.70	-0.070 [-0.279 ; 0.140]
-1.50	0.009 [-0.036 ; 0.055]
0.00	0.000 [0.000 ; 0.000]
0.00	0 [ref.]
18.55	-0.011 [-0.261 ; 0.238]

Regression results for categorical and linear variables

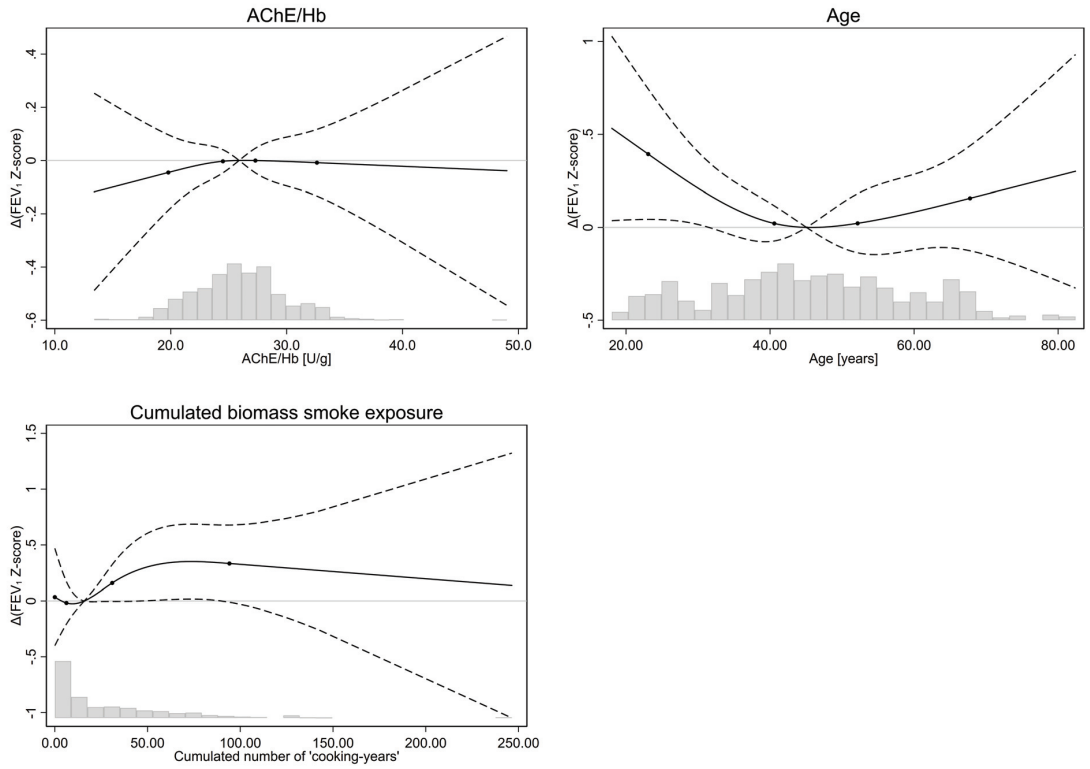
Parameter	Estimate [95% CI]
Δ(Pack-years)	3.679 [-9.851 ; 17.209]

Analysis specification

Model 14
Outcome: FEV_1 Z-score
Covariate adjustment: Basic + project phase

Number of observations in model: 793

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.045 [-0.187 ; 0.097]
24.50	-0.003 [-0.047 ; 0.040]
25.90	0 [ref.]
27.30	-0.000 [-0.046 ; 0.046]
32.61	-0.008 [-0.133 ; 0.117]

Age

Value	Outcome estimate [CI]
23.07	0.394 [0.043 ; 0.744]
40.58	0.021 [-0.073 ; 0.116]
45.06	0 [ref.]
52.16	0.022 [-0.137 ; 0.181]
67.76	0.156 [-0.126 ; 0.438]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.035 [-0.401 ; 0.470]
6.25	-0.018 [-0.207 ; 0.172]
15.89	0 [ref.]
30.95	0.160 [-0.004 ; 0.324]
94.12	0.334 [-0.010 ; 0.678]

Regression results for categorical and linear variables

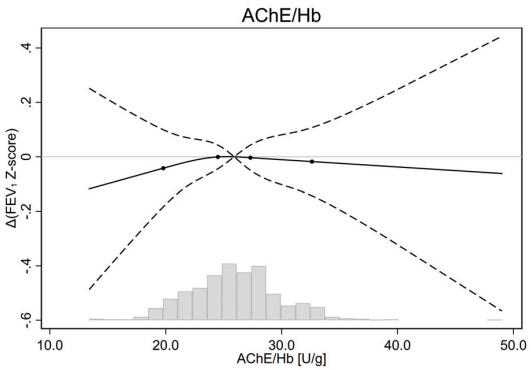
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.355 [-0.047 ; 0.757]
Pack-years	-0.016 [-0.071 ; 0.038]
Phase 1	0 (ref.)
Phase 2	-0.107 [-0.161 ; -0.052]
Phase 3	-0.207 [-0.268 ; -0.146]

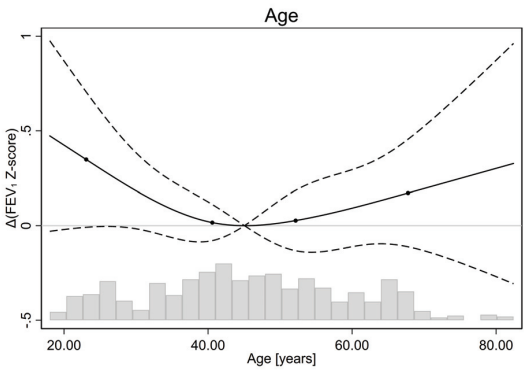
Analysis specification

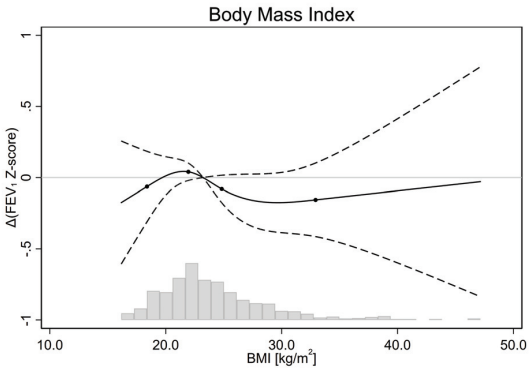
Model 14
Outcome: FEV_1 Z-score
Covariate adjustment: Extended + project phase

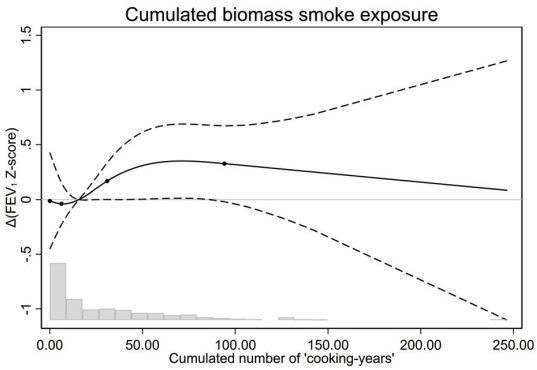
Number of observations in model: 789

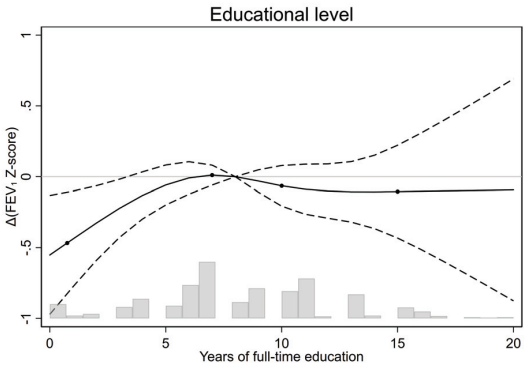
Regression results for variables modeled using splines











Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.042 [-0.183 ; 0.099]
24.50	-0.001 [-0.044 ; 0.043]
25.90	0 [ref.]
27.30	-0.003 [-0.049 ; 0.043]
32.61	-0.018 [-0.143 ; 0.107]

Body Mass Index

Value	Outcome estimate [CI]
18.38	-0.063 [-0.310 ; 0.184]
21.95	0.040 [-0.020 ; 0.101]
23.22	0 [ref.]
24.83	-0.080 [-0.176 ; 0.016]
32.92	-0.156 [-0.414 ; 0.102]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.013 [-0.455 ; 0.429]
6.25	-0.039 [-0.231 ; 0.153]
15.72	0 [ref.]
30.95	0.167 [0.000 ; 0.334]
94.12	0.326 [-0.020 ; 0.673]

Educational level

Value	Outcome estimate [CI]
0.75	-0.467 [-0.825 ; -0.109]
7.00	0.011 [-0.059 ; 0.082]
8.00	0 [ref.]
10.00	-0.064 [-0.207 ; 0.079]
15.00	-0.105 [-0.432 ; 0.222]

Age

Value	Outcome estimate [CI]
23.07	0.349 [-0.009 ; 0.706]
40.58	0.016 [-0.079 ; 0.112]
45.06	0 [ref.]
52.16	0.027 [-0.132 ; 0.186]
67.76	0.172 [-0.112 ; 0.455]

Regression results for categorical and linear variables

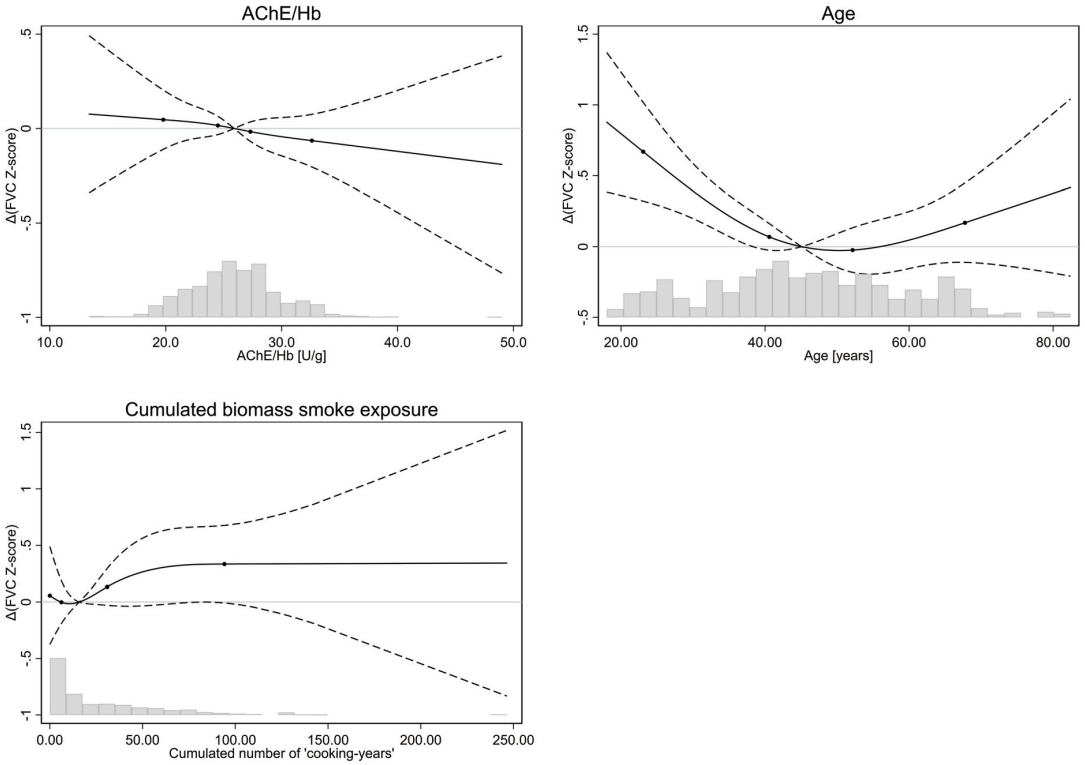
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.296 [-0.134 ; 0.727]
Pack-years	-0.011 [-0.065 ; 0.043]
Phase 1	0 (ref.)
Phase 2	-0.107 [-0.161 ; -0.053]
Phase 3	-0.209 [-0.270 ; -0.148]

Analysis specification

Model 14
Outcome: FVC Z-score
Covariate adjustment: Basic + project phase

Number of observations in model: 791

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	0.047 [-0.111 ; 0.204]
24.50	0.016 [-0.032 ; 0.064]
25.90	0 [ref.]
27.30	-0.017 [-0.068 ; 0.034]
32.61	-0.064 [-0.204 ; 0.075]

Age

Value	Outcome estimate [CI]
23.07	0.670 [0.321 ; 1.018]
40.58	0.069 [-0.025 ; 0.163]
45.06	0 [ref.]
52.16	-0.024 [-0.182 ; 0.133]
67.76	0.169 [-0.111 ; 0.449]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.057 [-0.376 ; 0.490]
6.25	-0.002 [-0.191 ; 0.187]
15.89	0 [ref.]
30.95	0.133 [-0.029 ; 0.295]
94.12	0.334 [-0.008 ; 0.676]

Regression results for categorical and linear variables

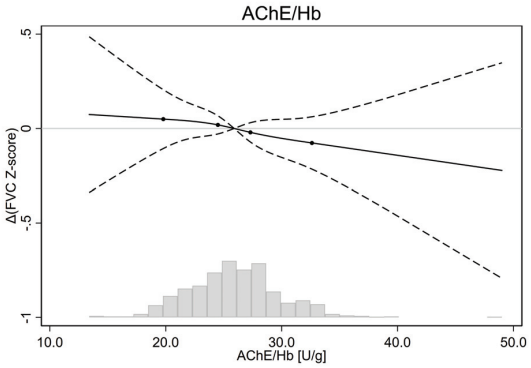
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.404 [0.005 ; 0.804]
Pack-years	-0.007 [-0.061 ; 0.046]
Phase 1	0 (ref.)
Phase 2	-0.039 [-0.101 ; 0.024]
Phase 3	-0.148 [-0.218 ; -0.078]

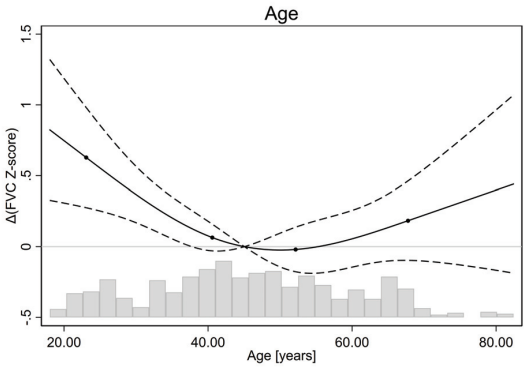
Analysis specification

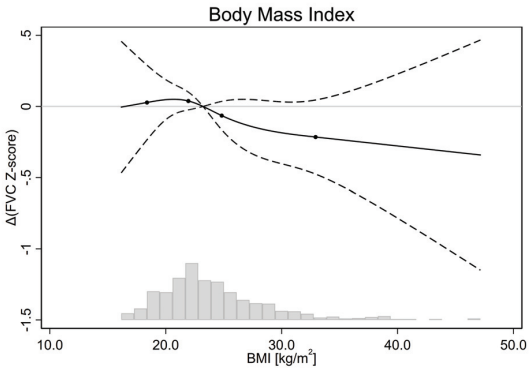
Model 14
Outcome: FVC Z-score
Covariate adjustment: Extended + project phase

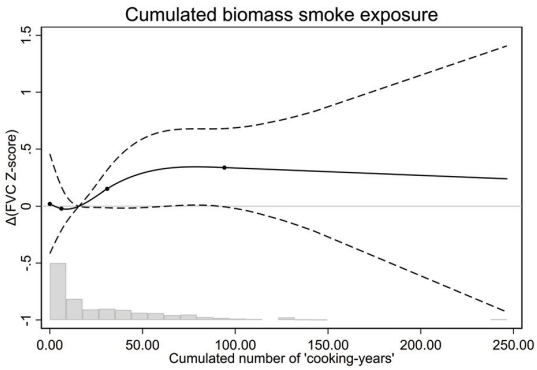
Number of observations in model: 787

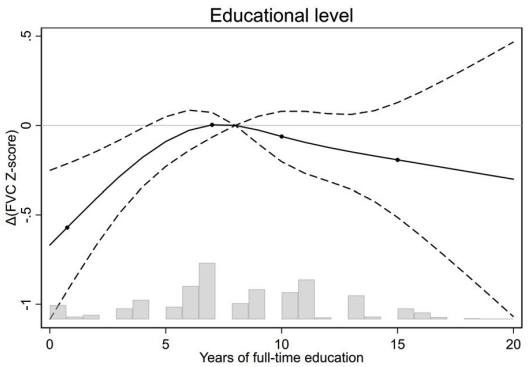
Regression results for variables modeled using splines











Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	0.050 [-0.106 ; 0.206]
24.50	0.019 [-0.029 ; 0.067]
25.90	0 [ref.]
27.30	-0.021 [-0.072 ; 0.031]
32.61	-0.077 [-0.215 ; 0.062]

Body Mass Index

Value	Outcome estimate [CI]
18.38	0.028 [-0.235 ; 0.291]
21.95	0.038 [-0.024 ; 0.101]
23.22	0 [ref.]
24.83	-0.064 [-0.164 ; 0.036]
32.92	-0.215 [-0.476 ; 0.045]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.021 [-0.417 ; 0.458]
6.25	-0.021 [-0.211 ; 0.169]
15.72	0 [ref.]
30.95	0.151 [-0.013 ; 0.316]
94.12	0.337 [-0.005 ; 0.680]

Educational level

Value	Outcome estimate [CI]
0.75	-0.570 [-0.926 ; -0.215]
7.00	0.003 [-0.066 ; 0.073]
8.00	0 [ref.]
10.00	-0.062 [-0.203 ; 0.079]
15.00	-0.193 [-0.514 ; 0.128]

Age

Value	Outcome estimate [CI]
23.07	0.628 [0.275 ; 0.982]
40.58	0.065 [-0.030 ; 0.159]
45.06	0 [ref.]
52.16	-0.020 [-0.177 ; 0.137]
67.76	0.183 [-0.097 ; 0.463]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.330 [-0.097 ; 0.757]
Pack-years	-0.000 [-0.054 ; 0.053]
Phase 1	0 (ref.)
Phase 2	-0.038 [-0.100 ; 0.025]
Phase 3	-0.150 [-0.220 ; -0.081]

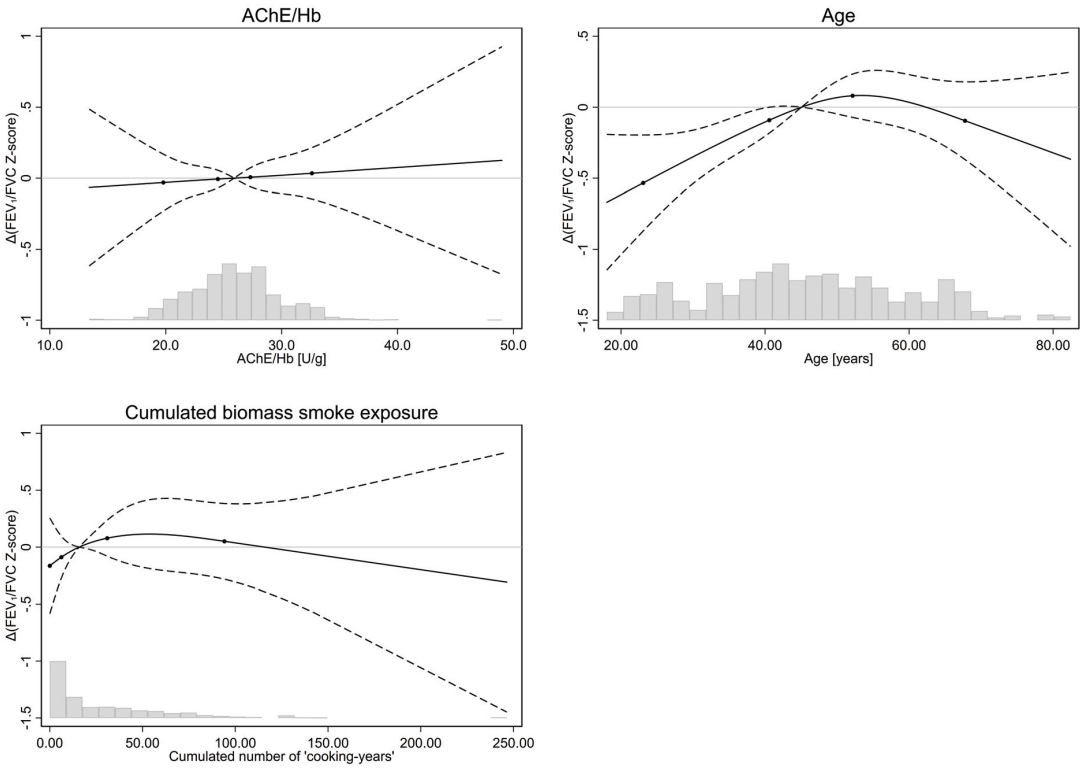
Hansen MRH, *et al. Thorax* 2021; 76:1–10. doi: 10.1136/thoraxjnl-2020-214609

Analysis specification

Model 14
Outcome: FEV_1/FVC Z-score
Covariate adjustment: Basic + project phase

Number of observations in model: 791

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.031 [-0.231 ; 0.169]
24.50	-0.006 [-0.069 ; 0.056]
25.90	0 [ref.]
27.30	0.006 [-0.060 ; 0.073]
32.61	0.034 [-0.146 ; 0.215]

Age

Value	Outcome estimate [CI]
23.07	-0.534 [-0.871 ; -0.196]
40.58	-0.091 [-0.183 ; -0.000]
45.06	0 [ref.]
52.16	0.081 [-0.072 ; 0.234]
67.76	-0.095 [-0.369 ; 0.178]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.164 [-0.585 ; 0.256]
6.25	-0.089 [-0.272 ; 0.095]
15.89	0 [ref.]
30.95	0.078 [-0.080 ; 0.236]
94.12	0.051 [-0.281 ; 0.383]

Regression results for categorical and linear variables

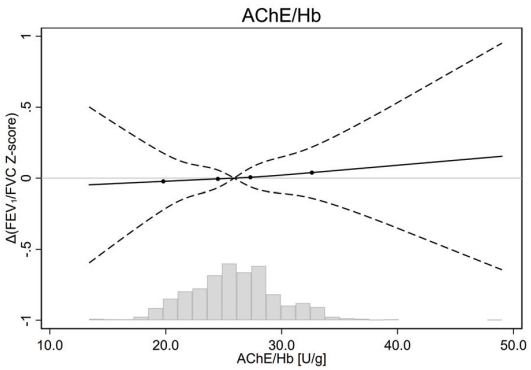
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.057 [-0.332 ; 0.446]
Pack-years	-0.051 [-0.103 ; 0.001]
Phase 1	0 (ref.)
Phase 2	-0.138 [-0.232 ; -0.044]
Phase 3	-0.150 [-0.252 ; -0.048]

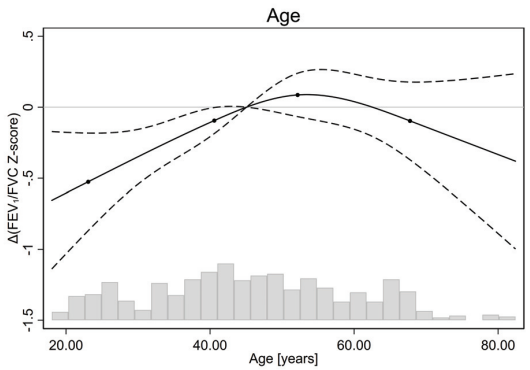
Analysis specification

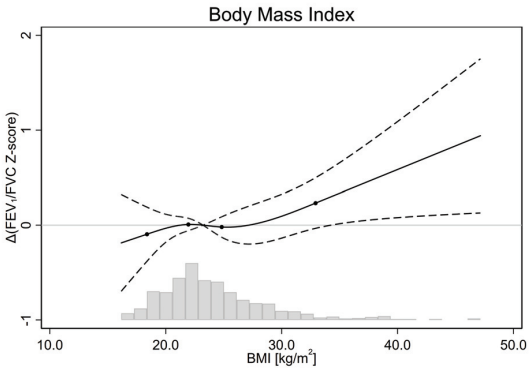
Model 14
Outcome: FEV_1/FVC Z-score
Covariate adjustment: Extended + project phase

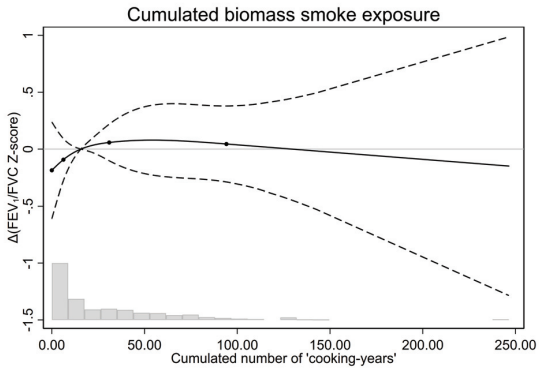
Number of observations in model: 787

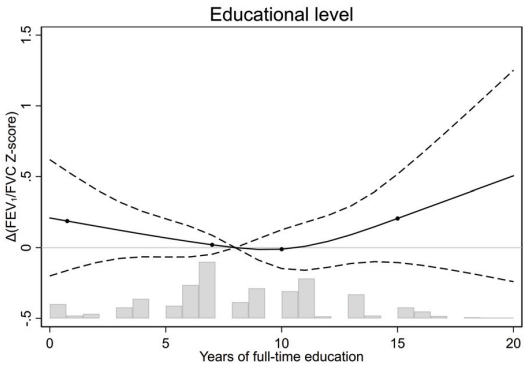
Regression results for variables modeled using splines











Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.79	-0.023 [-0.222 ; 0.176]
24.50	-0.005 [-0.067 ; 0.057]
25.90	0 [ref.]
27.30	0.006 [-0.060 ; 0.072]
32.61	0.039 [-0.141 ; 0.219]

Body Mass Index

Value	Outcome estimate [CI]
18.38	-0.095 [-0.381 ; 0.190]
21.95	0.008 [-0.058 ; 0.073]
23.22	0 [ref.]
24.83	-0.019 [-0.127 ; 0.088]
32.92	0.233 [-0.033 ; 0.498]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.186 [-0.612 ; 0.239]
6.25	-0.093 [-0.278 ; 0.092]
15.72	0 [ref.]
30.95	0.058 [-0.103 ; 0.219]
94.12	0.045 [-0.289 ; 0.379]

Educational level

Value	Outcome estimate [CI]
0.75	0.188 [-0.162 ; 0.538]
7.00	0.020 [-0.047 ; 0.088]
8.00	0 [ref.]
10.00	-0.011 [-0.148 ; 0.126]
15.00	0.206 [-0.105 ; 0.518]

Age

Value	Outcome estimate [CI]
23.07	-0.526 [-0.869 ; -0.182]
40.58	-0.094 [-0.186 ; -0.003]
45.06	0 [ref.]
52.16	0.086 [-0.067 ; 0.239]
67.76	-0.097 [-0.371 ; 0.177]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.107 [-0.309 ; 0.523]
Pack-years	-0.054 [-0.106 ; -0.002]
Phase 1	0 (ref.)
Phase 2	-0.140 [-0.234 ; -0.046]
Phase 3	-0.151 [-0.252 ; -0.049]

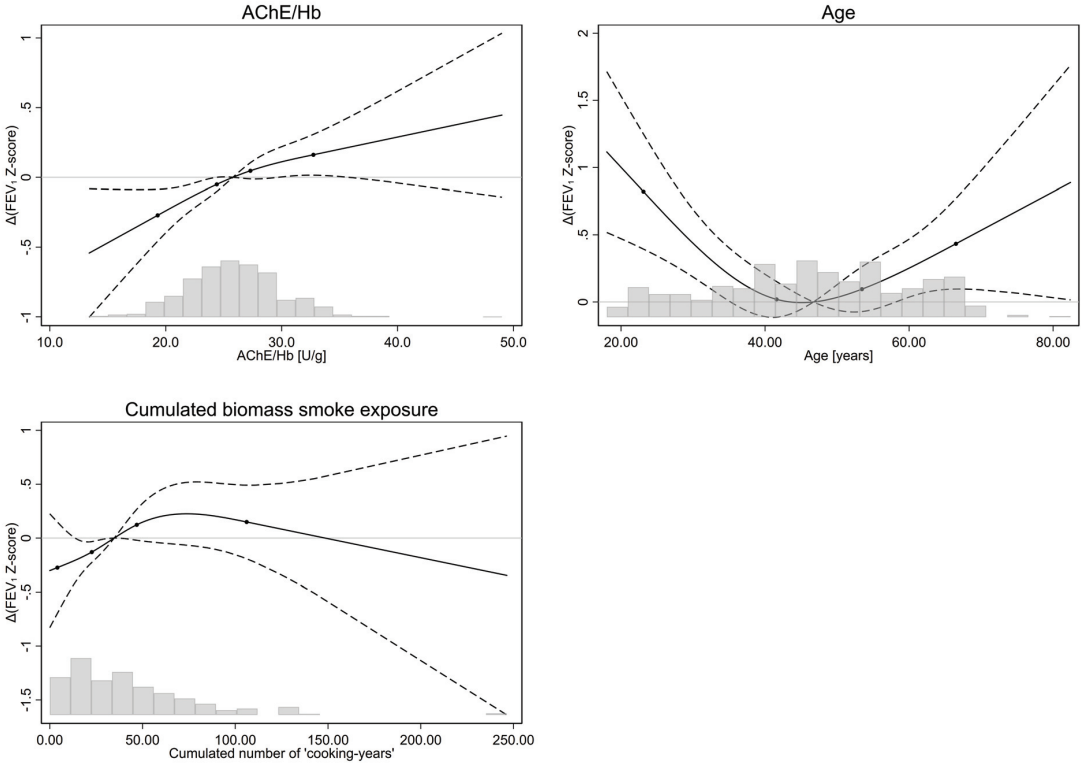
Hansen MRH, *et al. Thorax* 2021; 76:1–10. doi: 10.1136/thoraxjnl-2020-214609

Analysis specification

Model 15
Outcome: FEV_1 Z-score
Covariate adjustment: Basic

Number of observations in model: 511

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.30	-0.272 [-0.458 ; -0.086]
24.40	-0.051 [-0.101 ; -0.000]
25.80	0 [ref.]
27.30	0.047 [-0.011 ; 0.104]
32.74	0.161 [0.015 ; 0.308]

Age

Value	Outcome estimate [CI]
23.11	0.822 [0.394 ; 1.249]
41.59	0.020 [-0.113 ; 0.152]
46.71	0 [ref.]
53.45	0.095 [-0.072 ; 0.262]
66.50	0.434 [0.096 ; 0.771]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
4.07	-0.274 [-0.698 ; 0.150]
22.62	-0.130 [-0.227 ; -0.033]
34.71	0 [ref.]
46.87	0.123 [-0.020 ; 0.267]
106.11	0.150 [-0.192 ; 0.491]

Regression results for categorical and linear variables

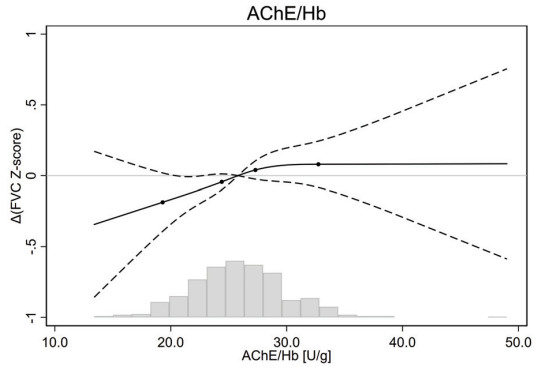
Parameter	Estimate [95% CI]
Pack-years	-0.084 [-0.207 ; 0.040]

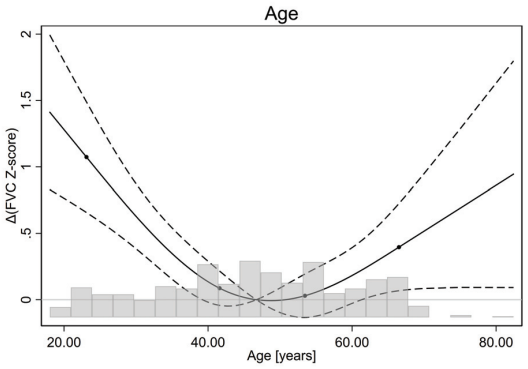
Analysis specification

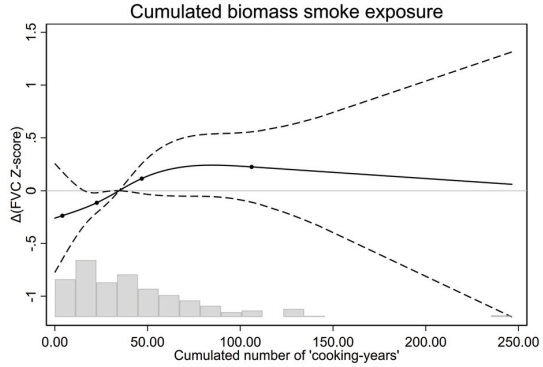
Model 15
Outcome: FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 510

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.30	-0.187 [-0.392 ; 0.019]
24.40	-0.044 [-0.100 ; 0.012]
25.80	0 [ref.]
27.30	0.040 [-0.024 ; 0.104]
32.74	0.080 [-0.083 ; 0.244]

Age

Value	Outcome estimate [CI]
23.11	1.074 [0.657 ; 1.490]
41.59	0.087 [-0.042 ; 0.217]
46.71	0 [ref.]
53.45	0.030 [-0.133 ; 0.193]
66.50	0.396 [0.068 ; 0.725]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
4.07	-0.236 [-0.651 ; 0.178]
22.62	-0.114 [-0.208 ; -0.019]
34.69	0 [ref.]
46.87	0.113 [-0.027 ; 0.252]
106.11	0.224 [-0.109 ; 0.556]

Regression results for categorical and linear variables

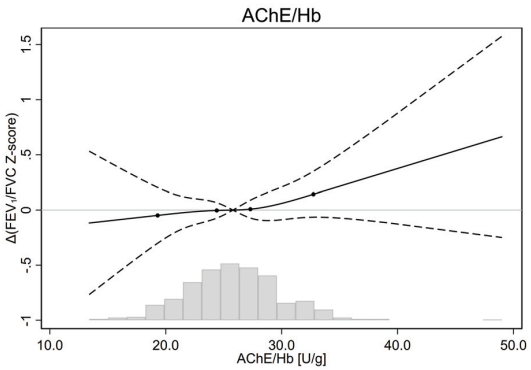
Parameter	Estimate [95% CI]
Pack-years	-0.087 [-0.209 ; 0.035]

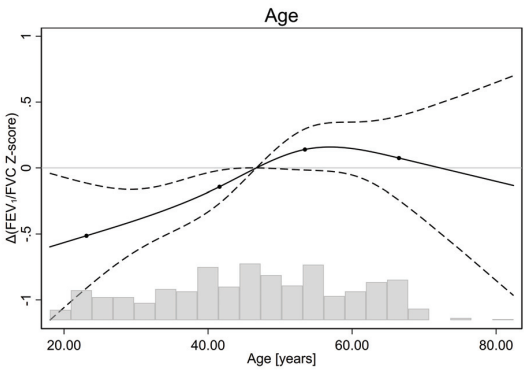
Analysis specification

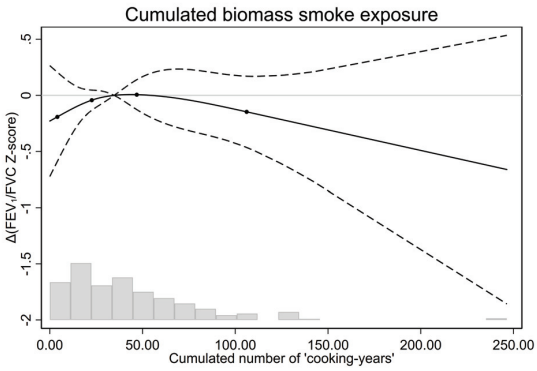
Model 15
Outcome: FEV_1/FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 510

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
19.30	-0.048 [-0.301 ; 0.204]
24.40	-0.003 [-0.073 ; 0.067]
25.80	0 [ref.]
27.30	0.008 [-0.072 ; 0.089]
32.74	0.143 [-0.065 ; 0.350]

Age

Value	Outcome estimate [CI]
23.11	-0.513 [-0.911 ; -0.115]
41.59	-0.143 [-0.267 ; -0.018]
46.71	0 [ref.]
53.45	0.140 [-0.016 ; 0.296]
66.50	0.075 [-0.244 ; 0.394]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
4.07	-0.192 [-0.589 ; 0.206]
22.62	-0.043 [-0.133 ; 0.047]
34.69	0 [ref.]
46.87	0.006 [-0.127 ; 0.139]
106.11	-0.147 [-0.465 ; 0.171]

Regression results for categorical and linear variables

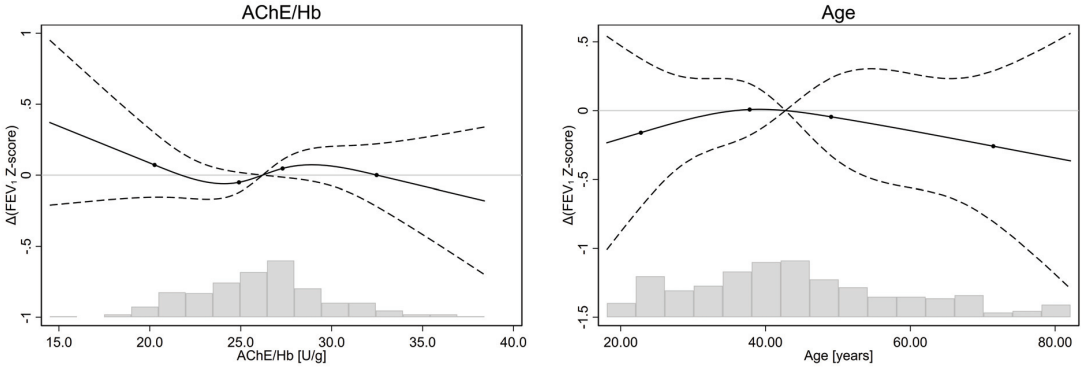
Parameter	Estimate [95% CI]
Pack-years	-0.008 [-0.131 ; 0.115]

Analysis specification

Model 16
Outcome: FEV_1 Z-score
Covariate adjustment: Basic

Number of observations in model: 282

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
20.26	0.072 [-0.154 ; 0.298]
24.90	-0.051 [-0.121 ; 0.020]
26.20	0 [ref.]
27.30	0.047 [-0.014 ; 0.108]
32.47	0.001 [-0.219 ; 0.221]

Age

Value	Outcome estimate [CI]
22.78	-0.160 [-0.698 ; 0.377]
37.81	0.008 [-0.180 ; 0.196]
42.75	0 [ref.]
49.06	-0.045 [-0.328 ; 0.238]
71.46	-0.259 [-0.806 ; 0.288]

Regression results for categorical and linear variables

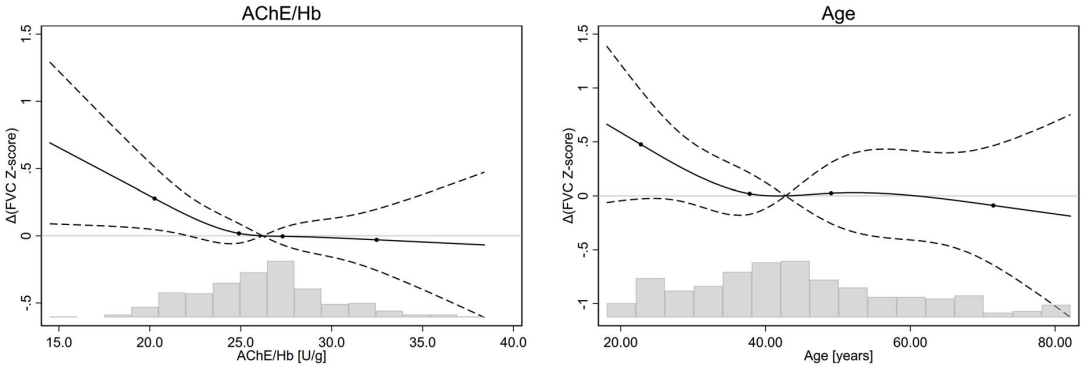
Parameter	Estimate [95% CI]
Pack-years	-0.021 [-0.083 ; 0.042]
Cumulated number of 'cooking-years'	-0.005 [-0.040 ; 0.031]

Analysis specification

Model 16
Outcome: FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 281

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
20.26	0.278 [0.046 ; 0.510]
24.90	0.018 [-0.055 ; 0.091]
26.20	0 [ref.]
27.30	-0.004 [-0.067 ; 0.060]
32.47	-0.030 [-0.258 ; 0.198]

Age

Value	Outcome estimate [CI]
22.78	0.476 [-0.027 ; 0.979]
37.81	0.020 [-0.171 ; 0.210]
42.77	0 [ref.]
49.06	0.025 [-0.258 ; 0.308]
71.46	-0.089 [-0.641 ; 0.464]

Regression results for categorical and linear variables

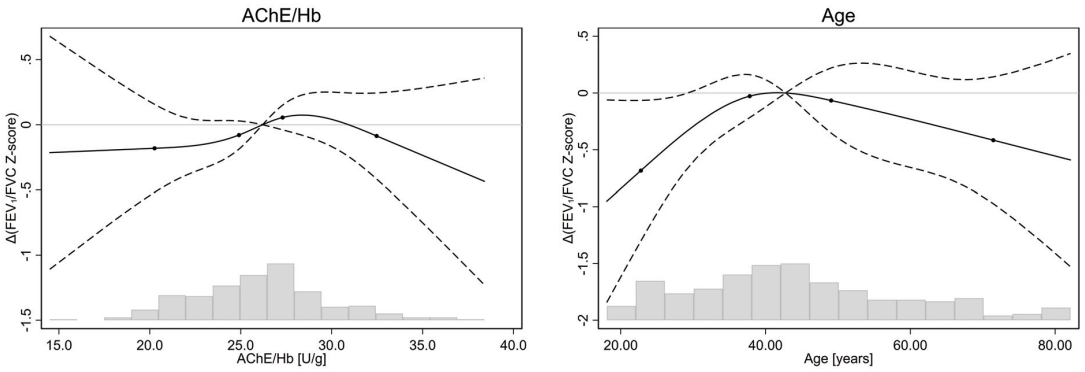
Parameter	Estimate [95% CI]
Pack-years	-0.005 [-0.067 ; 0.056]
Cumulated number of 'cooking-years'	-0.005 [-0.039 ; 0.029]

Analysis specification

Model 16
Outcome: FEV_1/FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 281

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
20.26	-0.181 [-0.519 ; 0.157]
24.90	-0.079 [-0.187 ; 0.029]
26.20	0 [ref.]
27.30	0.056 [-0.039 ; 0.150]
32.47	-0.086 [-0.416 ; 0.244]

Age

Value	Outcome estimate [CI]
22.78	-0.684 [-1.302 ; -0.065]
37.81	-0.028 [-0.217 ; 0.161]
42.77	0 [ref.]
49.06	-0.066 [-0.353 ; 0.221]
71.46	-0.416 [-0.974 ; 0.142]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Pack-years	-0.054 [-0.119 ; 0.012]
Cumulated number of 'cooking-years'	0.006 [-0.033 ; 0.045]

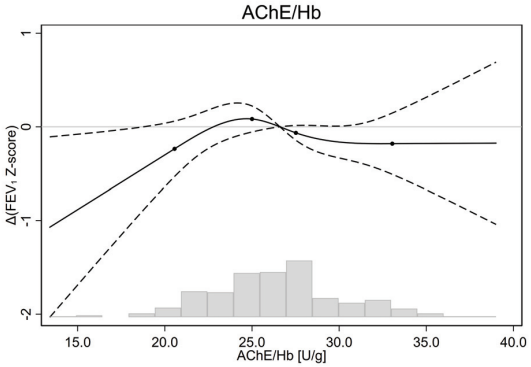
Hansen MRH, *et al. Thorax* 2021; 76:1–10. doi: 10.1136/thoraxjnl-2020-214609

Analysis specification

Model 17
Outcome: FEV_1 Z-score
Unadjusted

Number of observations in model: 290

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

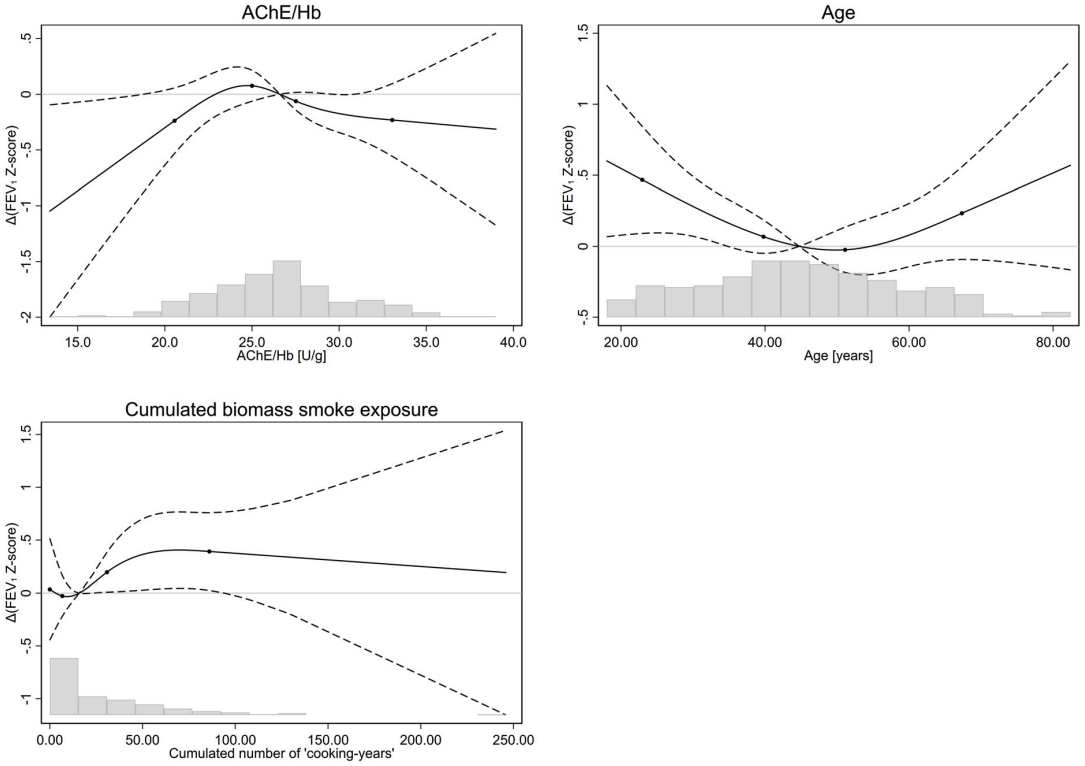
Value	Outcome estimate [CI]
20.56	-0.235 [-0.532 ; 0.061]
25.00	0.084 [-0.055 ; 0.222]
26.60	0 [ref.]
27.51	-0.065 [-0.144 ; 0.014]
33.04	-0.180 [-0.507 ; 0.147]

Analysis specification

Model 17
Outcome: FEV_1 Z-score
Covariate adjustment: Basic

Number of observations in model: 277

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
20.56	-0.238 [-0.532 ; 0.057]
25.00	0.076 [-0.063 ; 0.215]
26.60	0 [ref.]
27.51	-0.062 [-0.141 ; 0.017]
33.04	-0.231 [-0.557 ; 0.095]

Age

Value	Outcome estimate [CI]
22.94	0.467 [0.091 ; 0.844]
39.79	0.068 [-0.049 ; 0.185]
44.73	0 [ref.]
51.12	-0.024 [-0.184 ; 0.135]
67.33	0.233 [-0.092 ; 0.558]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.035 [-0.446 ; 0.516]
6.74	-0.027 [-0.221 ; 0.166]
15.91	0 [ref.]
30.84	0.196 [0.008 ; 0.384]
86.00	0.392 [0.025 ; 0.759]

Regression results for categorical and linear variables

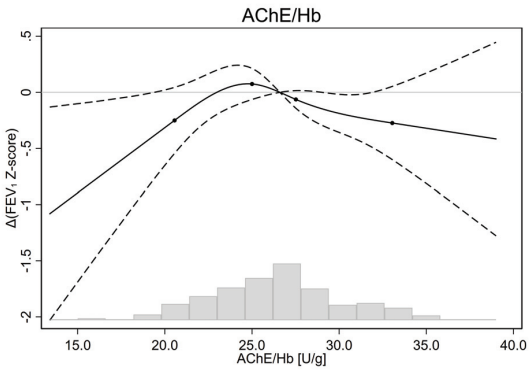
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.364 [-0.078 ; 0.806]
Pack-years	0.029 [-0.036 ; 0.093]

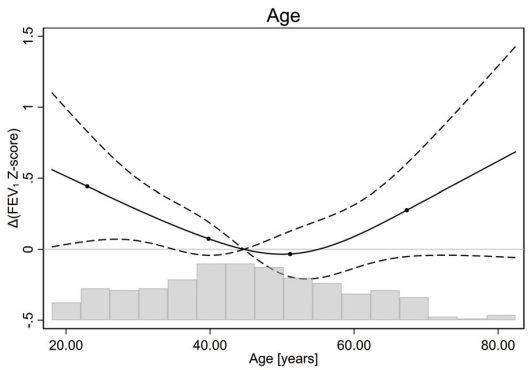
Analysis specification

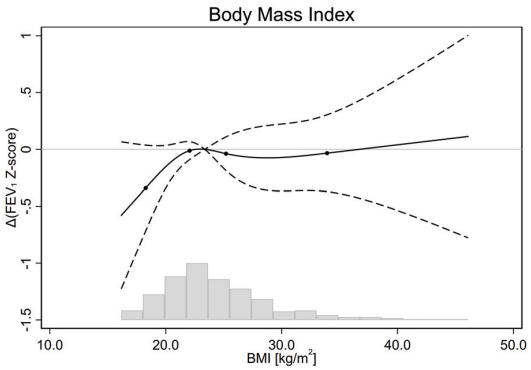
Model 17
Outcome: FEV_1 Z-score
Covariate adjustment: Extended

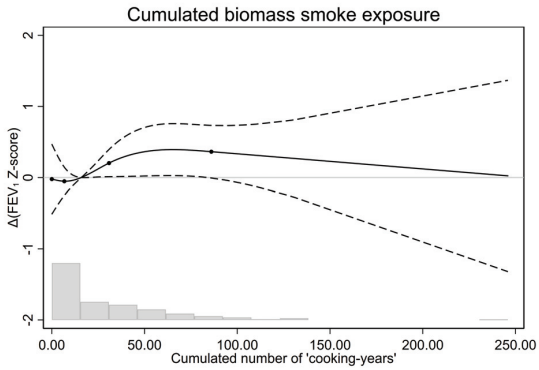
Number of observations in model: 276

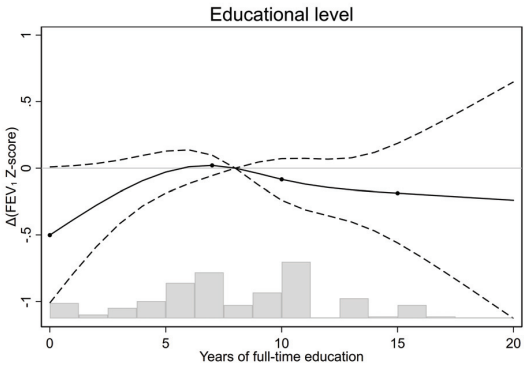
Regression results for variables modeled using splines











Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
20.56	-0.250 [-0.545 ; 0.044]
25.00	0.075 [-0.064 ; 0.213]
26.60	0 [ref.]
27.51	-0.063 [-0.142 ; 0.015]
33.04	-0.274 [-0.600 ; 0.053]

Body Mass Index

Value	Outcome estimate [CI]
18.27	-0.340 [-0.717 ; 0.037]
22.06	-0.012 [-0.091 ; 0.067]
23.37	0 [ref.]
25.20	-0.038 [-0.185 ; 0.109]
33.91	-0.034 [-0.371 ; 0.304]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.022 [-0.513 ; 0.470]
6.74	-0.052 [-0.250 ; 0.146]
15.91	0 [ref.]
30.84	0.203 [0.012 ; 0.395]
86.00	0.363 [-0.007 ; 0.733]

Educational level

Value	Outcome estimate [CI]
0.00	-0.501 [-1.012 ; 0.009]
7.00	0.021 [-0.056 ; 0.098]
8.00	0 [ref.]
10.00	-0.084 [-0.240 ; 0.072]
15.00	-0.187 [-0.560 ; 0.187]

Age

Value	Outcome estimate [CI]
22.94	0.443 [0.057 ; 0.829]
39.79	0.075 [-0.042 ; 0.192]
44.69	0 [ref.]
51.12	-0.033 [-0.194 ; 0.128]
67.33	0.276 [-0.051 ; 0.604]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.428 [-0.045 ; 0.900]
Pack-years	0.024 [-0.040 ; 0.088]

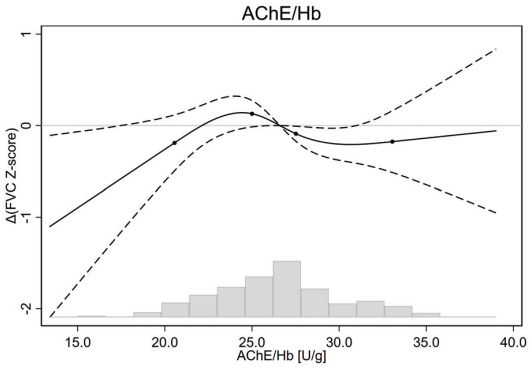
Hansen MRH, *et al. Thorax* 2021; 76:1–10. doi: 10.1136/thoraxjnl-2020-214609

Analysis specification

Model 17
Outcome: FVC Z-score
Unadjusted

Number of observations in model: 288

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

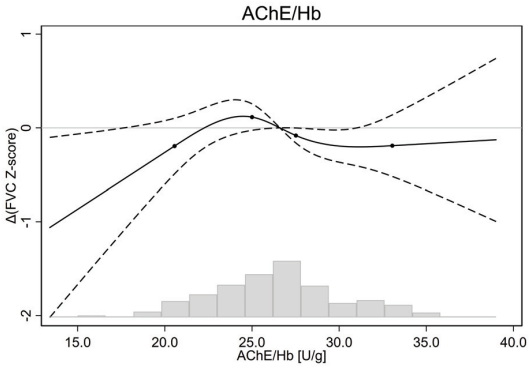
Value	Outcome estimate [CI]
20.56	-0.189 [-0.495 ; 0.116]
25.00	0.130 [-0.015 ; 0.274]
26.60	0 [ref.]
27.51	-0.089 [-0.171 ; -0.007]
33.04	-0.176 [-0.513 ; 0.161]

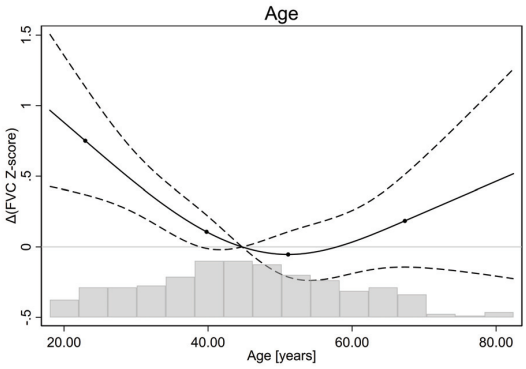
Analysis specification

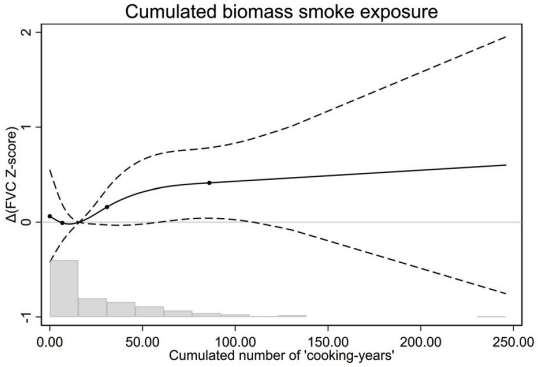
Model 17
Outcome: FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 275

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
20.56	-0.194 [-0.491 ; 0.102]
25.00	0.115 [-0.026 ; 0.256]
26.60	0 [ref.]
27.51	-0.082 [-0.162 ; -0.002]
33.04	-0.190 [-0.518 ; 0.138]

Age

Value	Outcome estimate [CI]
22.94	0.751 [0.369 ; 1.133]
39.79	0.107 [-0.011 ; 0.225]
44.73	0 [ref.]
51.12	-0.053 [-0.214 ; 0.107]
67.33	0.185 [-0.143 ; 0.512]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.063 [-0.423 ; 0.549]
6.74	-0.007 [-0.203 ; 0.188]
15.91	0 [ref.]
30.84	0.160 [-0.029 ; 0.349]
86.00	0.412 [0.042 ; 0.782]

Regression results for categorical and linear variables

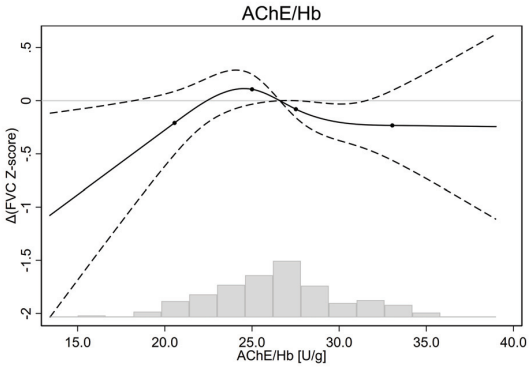
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.426 [-0.021 ; 0.874]
Pack-years	0.033 [-0.032 ; 0.098]

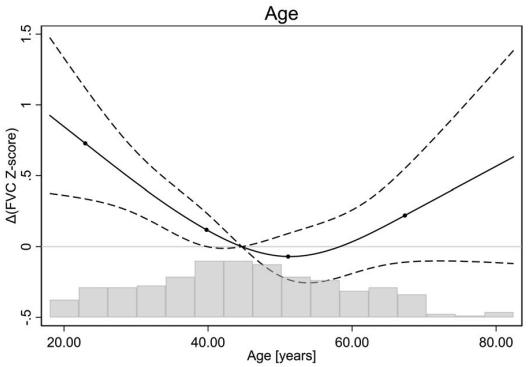
Analysis specification

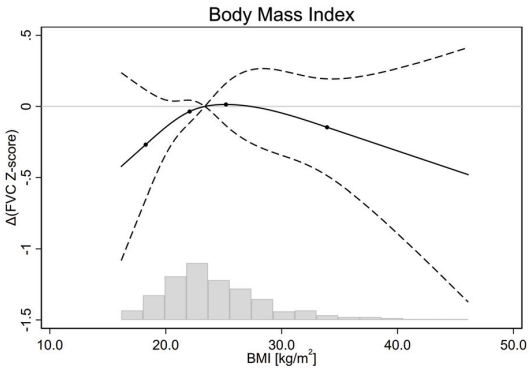
Model 17
Outcome: FVC Z-score
Covariate adjustment: Extended

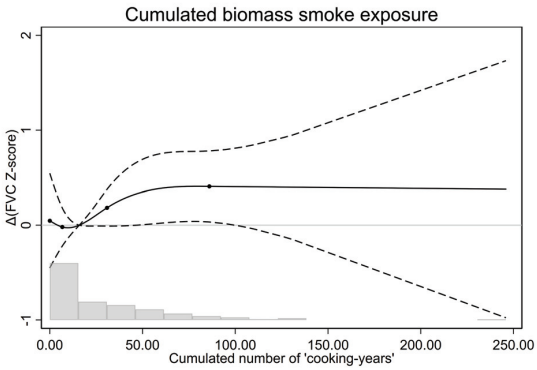
Number of observations in model: 274

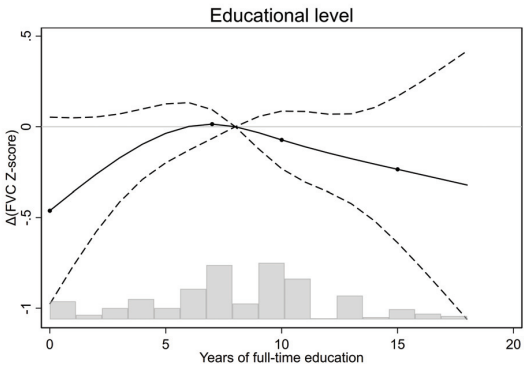
Regression results for variables modeled using splines











Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
20.56	-0.209 [-0.506 ; 0.088]
25.00	0.108 [-0.033 ; 0.248]
26.60	0 [ref.]
27.51	-0.079 [-0.159 ; 0.000]
33.04	-0.232 [-0.561 ; 0.096]

Body Mass Index

Value	Outcome estimate [CI]
18.27	-0.269 [-0.654 ; 0.117]
22.06	-0.036 [-0.116 ; 0.044]
23.37	0 [ref.]
25.20	0.014 [-0.135 ; 0.162]
33.91	-0.146 [-0.487 ; 0.194]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	0.047 [-0.451 ; 0.545]
6.74	-0.019 [-0.220 ; 0.182]
15.91	0 [ref.]
30.84	0.183 [-0.010 ; 0.376]
86.00	0.407 [0.033 ; 0.781]

Educational level

Value	Outcome estimate [CI]
0.00	-0.462 [-0.977 ; 0.053]
7.00	0.014 [-0.065 ; 0.094]
8.00	0 [ref.]
10.00	-0.073 [-0.232 ; 0.086]
15.00	-0.235 [-0.639 ; 0.169]

Age

Value	Outcome estimate [CI]
22.94	0.728 [0.337 ; 1.120]
39.79	0.119 [0.001 ; 0.238]
44.69	0 [ref.]
51.12	-0.070 [-0.232 ; 0.093]
67.33	0.220 [-0.110 ; 0.551]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.464 [-0.014 ; 0.943]
Pack-years	0.030 [-0.035 ; 0.095]

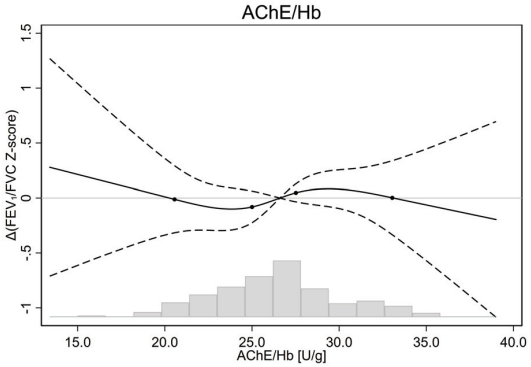
Hansen MRH, *et al. Thorax* 2021; 76:1–10. doi: 10.1136/thoraxjnl-2020-214609

Analysis specification

Model 17
Outcome: FEV_1/FVC Z-score
Unadjusted

Number of observations in model: 288

Regression results for variables modeled using splines



Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

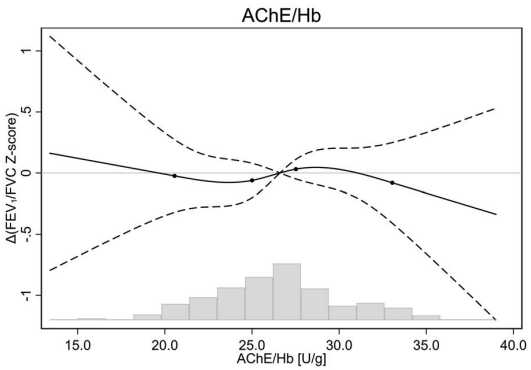
Value	Outcome estimate [CI]
20.56	-0.012 [-0.316 ; 0.293]
25.00	-0.081 [-0.225 ; 0.063]
26.60	0 [ref.]
27.51	0.047 [-0.035 ; 0.129]
33.04	0.002 [-0.334 ; 0.339]

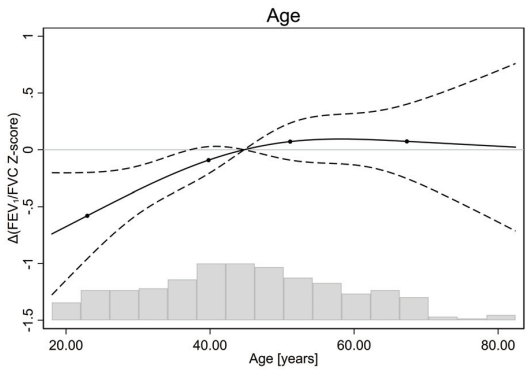
Analysis specification

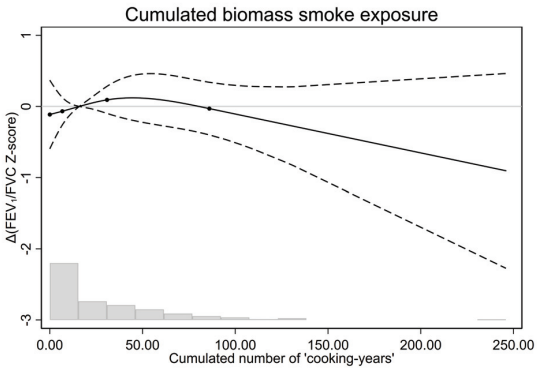
Model 17
Outcome: FEV_1/FVC Z-score
Covariate adjustment: Basic

Number of observations in model: 275

Regression results for variables modeled using splines







Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
20.56	-0.024 [-0.321 ; 0.274]
25.00	-0.061 [-0.201 ; 0.080]
26.60	0 [ref.]
27.51	0.032 [-0.048 ; 0.111]
33.04	-0.080 [-0.409 ; 0.249]

Age

Value	Outcome estimate [CI]
22.94	-0.579 [-0.959 ; -0.200]
39.79	-0.092 [-0.211 ; 0.027]
44.73	0 [ref.]
51.12	0.072 [-0.091 ; 0.235]
67.33	0.074 [-0.254 ; 0.401]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.113 [-0.596 ; 0.369]
6.74	-0.068 [-0.261 ; 0.126]
15.91	0 [ref.]
30.84	0.092 [-0.098 ; 0.283]
86.00	-0.030 [-0.401 ; 0.340]

Regression results for categorical and linear variables

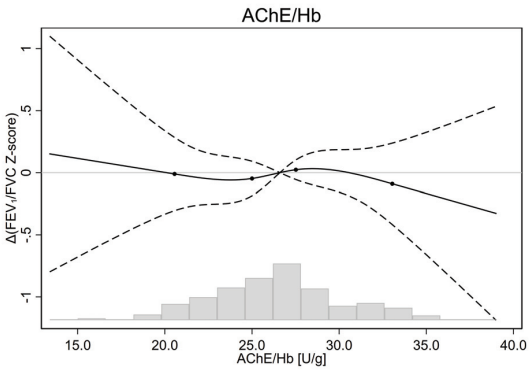
Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	-0.028 [-0.475 ; 0.418]
Pack-years	-0.020 [-0.086 ; 0.046]

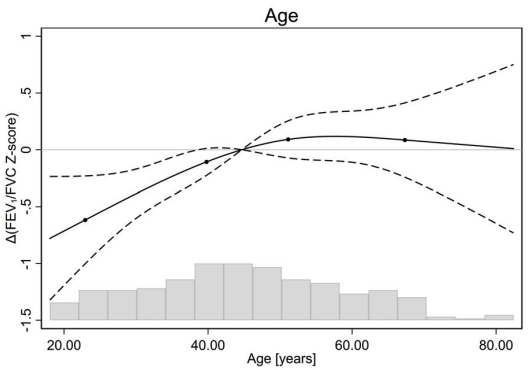
Analysis specification

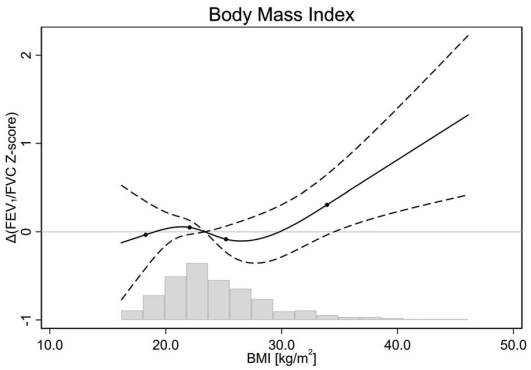
Model 17
Outcome: FEV_1/FVC Z-score
Covariate adjustment: Extended

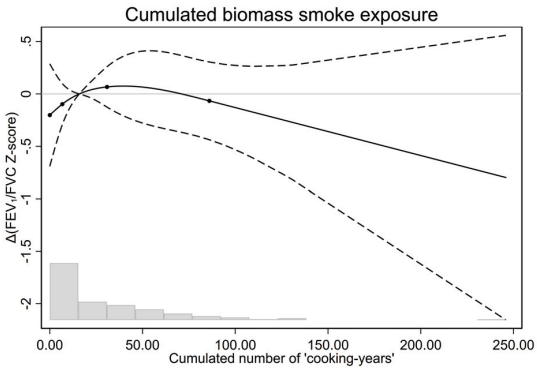
Number of observations in model: 274

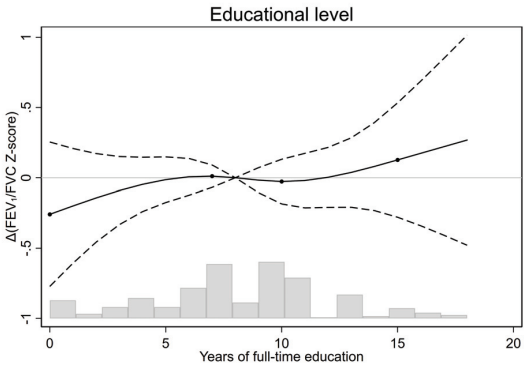
Regression results for variables modeled using splines











Numerical results for variables modeled using splines (see graphs for units)

AChE/Hb

Value	Outcome estimate [CI]
20.56	-0.010 [-0.305 ; 0.284]
25.00	-0.047 [-0.185 ; 0.092]
26.60	0 [ref.]
27.51	0.024 [-0.055 ; 0.102]
33.04	-0.089 [-0.417 ; 0.238]

Body Mass Index

Value	Outcome estimate [CI]
18.27	-0.033 [-0.413 ; 0.346]
22.06	0.050 [-0.030 ; 0.129]
23.37	0 [ref.]
25.20	-0.084 [-0.232 ; 0.064]
33.91	0.306 [-0.035 ; 0.648]

Cumulated biomass smoke exposure

Value	Outcome estimate [CI]
0.00	-0.202 [-0.691 ; 0.287]
6.74	-0.098 [-0.295 ; 0.099]
15.91	0 [ref.]
30.84	0.067 [-0.126 ; 0.260]
86.00	-0.066 [-0.437 ; 0.305]

Educational level

Value	Outcome estimate [CI]
0.00	-0.259 [-0.772 ; 0.254]
7.00	0.011 [-0.068 ; 0.091]
8.00	0 [ref.]
10.00	-0.027 [-0.185 ; 0.131]
15.00	0.127 [-0.280 ; 0.533]

Age

Value	Outcome estimate [CI]
22.94	-0.616 [-1.002 ; -0.231]
39.79	-0.107 [-0.225 ; 0.012]
44.69	0 [ref.]
51.12	0.091 [-0.072 ; 0.254]
67.33	0.086 [-0.242 ; 0.413]

Regression results for categorical and linear variables

Parameter	Estimate [95% CI]
Female sex	0 (ref.)
Male sex	0.022 [-0.447 ; 0.490]
Pack-years	-0.024 [-0.089 ; 0.041]