

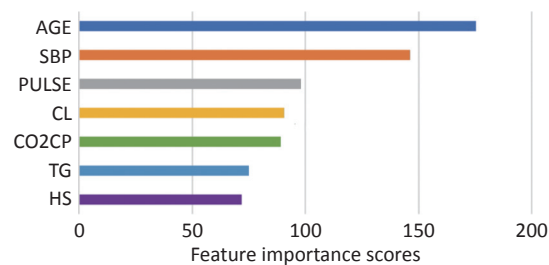
Supplementary Table S1. Baseline clinical characteristics of the two groups of coal miners

Variables	Non-arterial stiffness (n = 651)	Arterial stiffness (n = 792)	t-value (F/Z)	P-value
Age, year, <i>M</i> (P25, P75)	33 (29, 36)	36 (32, 44)	-10.784	< 0.001
Work age, year, <i>M</i> (P25, P75)	11.5 (7, 14)	13 (10, 21)	-8.963	< 0.001
BMI, kg/m ² , <i>M</i> (P25, P75)	23.88 (21.67, 25.95)	24.16 (22.04, 26.57)	-2.561	0.01
Pulse, time/min, <i>M</i> (P25, P75)	72 (67, 80)	75 (68, 82)	-3.352	0.001
SBP, mmHg, <i>M</i> (P25, P75)	117 (109, 124)	124 (115, 133)	-10.738	< 0.001
DBP, mmHg, <i>M</i> (P25, P75)	84 (76, 89)	84 (76, 89)	-11.07	< 0.001
HbA1c, %, <i>M</i> (P25, P75)	4.58 (4.30, 4.99)	4.58 (4.28, 5.00)	-0.121	0.903
AMS, u/L, <i>M</i> (P25, P75)	51.00 (39.00, 66.00)	50.04 (39.00, 65.00)	-1.26	0.208
HCY, μmol/L, <i>M</i> (P25, P75)	6.32 (4.13, 8.25)	5.57 (3.62, 7.88)	-2.284	0.022
ηb 1, mPa.S, <i>M</i> (P25, P75)	23.24 (22.10, 24.31)	23.50 (22.31, 24.70)	-2.959	0.003
ηb5, mPa.S, <i>M</i> (P25, P75)	10.41 (10.12, 10.75)	10.46 (10.16, 10.83)	-2.026	0.043
ηb30, mPa.S, <i>M</i> (P25, P75)	5.79 (5.44, 6.12)	5.80 (5.48, 6.20)	-1.757	0.079
ηb200, mPa.S, <i>M</i> (P25, P75)	4.53 (4.25, 4.90)	4.60 (4.28, 5.01)	-2.689	0.007
PV, mPa.S, <i>M</i> (P25, P75)	1.43 (1.36, 1.52)	1.43 (1.36, 1.53)	-0.65	0.516
ESR, mm/h, <i>M</i> (P25, P75)	6.00 (5.00, 8.00)	6.00 (5.00, 8.00)	-0.288	0.773
HCT, L/L, <i>M</i> (P25, P75)	0.48 (0.46, 0.50)	0.49 (0.46, 0.51)	-0.736	0.462
HS, <i>M</i> (P25, P75)	3.26 (2.98, 3.50)	3.25 (2.96, 3.50)	-1.204	0.229
LS, <i>M</i> (P25, P75)	15.20 (13.40, 16.20)	14.72 (13.40, 16.20)	-0.212	0.832
ESR-K, <i>M</i> (P25, P75)	62.40 (56.10, 65.10)	62.30 (54.70, 65.10)	-0.39	0.696
Al, <i>M</i> (P25, P75)	5.24 (4.93, 5.62)	5.28 (5.01, 5.70)	-2.088	0.037
IR, <i>M</i> (P25, P75)	3.60 (3.40, 5.30)	3.55 (3.40, 5.30)	-0.913	0.361
TK, <i>M</i> (P25, P75)	0.85 (0.75, 1.02)	0.85 (0.73, 1.02)	-0.311	0.311
FPG, mmol/L, <i>M</i> (P25, P75)	5.13 (4.83, 5.47)	5.25 (4.92, 5.63)	-4.657	< 0.001
CO2CP, <i>M</i> (P25, P75)	24.00 (23.00, 25.10)	24.00 (23.00, 25.00)	-2.001	0.045
TCHO, mmol/L, <i>M</i> (P25, P75)	4.61 (4.04, 5.20)	4.80 (4.21, 5.32)	-3.982	< 0.001
TG, mmol/L, <i>M</i> (P25, P75)	1.14 (0.77, 1.67)	1.32 (0.88, 2.04)	-4.405	< 0.001
HDL, mmol/L, <i>M</i> (P25, P75)	1.54 (1.45, 1.58)	1.54 (1.43, 1.58)	-0.366	0.714
LDL, mmol/L, <i>M</i> (P25, P75)	2.59 (2.07, 3.11)	2.75 (2.21, 3.20)	-3.173	0.002
ApoA1, g/L, <i>M</i> (P25, P75)	1.25 (1.20, 1.40)	1.25 (1.20, 1.40)	-1.241	0.215
ApoB1, g/L, <i>M</i> (P25, P75)	1.00 (0.98, 1.02)	1.02 (0.99, 1.02)	-2.402	0.016
K, mmol/L, <i>M</i> (P25, P75)	4.30 (4.20, 4.80)	4.30 (4.20, 4.69)	-0.378	0.706
Na, mmol/L, <i>M</i> (P25, P75)	139.70 (139.20, 142.30)	139.50 (139.25, 142.15)	-1.375	0.169
Cl, mmol/L, <i>M</i> (P25, P75)	100.54 (98.40, 102.50)	100.25 (98.30, 102.40)	-3.473	< 0.001
Ca, mmol/L, <i>M</i> (P25, P75)	1.25 (1.24, 1.26)	1.25 (1.24, 1.26)	-0.491	0.624
Ca-free, mmol/L, <i>M</i> (P25, P75)	2.41 (2.30, 2.55)	2.45 (2.30, 2.54)	-0.255	0.799
CK, U/L, <i>M</i> (P25, P75)	137.00 (116.00, 162.00)	134.00 (112.00, 161.05)	-1.216	0.224
CKISO, U/L, <i>M</i> (P25, P75)	16.00 (12.40, 21.00)	16.00 (12.30, 21.00)	-0.637	0.524
α-HBDH, U/L, <i>M</i> (P25, P75)	159.00 (132.00, 185.00)	157.00 (132.00, 184.20)	-0.811	0.417
AST, U/L, <i>M</i> (P25, P75)	29.00 (24.00, 35.00)	31.00 (26.00, 36.00)	-3.711	< 0.001
LDH, U/L, <i>M</i> (P25, P75)	163.00 (144.60, 180.00)	163.60 (145.45, 184.10)	-0.791	0.429

Continued

Variables	Non-arterial stiffness (n = 651)	Arterial stiffness (n = 792)	t-value (F/Z)	P-value
APTT, s, M (P25, P75)	28.00 (25.00, 29.45)	27.90 (26.00, 29.60)	-0.905	0.366
Fibrinogen, g/L, M (P25, P75)	3.25 (3.14, 3.51)	3.25 (3.12, 3.52)	-0.187	0.852
TT, s, M (P25, P75)	14.15 (12.80, 15.05)	13.80 (12.70, 14.70)	-1.158	0.247
FVC/per, %, mean \pm SD	80.76 \pm 11.35	79.98 \pm 11.65	1.265	0.206
FEV1/per, %, mean \pm SD	80.52 \pm 10.39	81.18 \pm 10.84	-1.17	0.242
FEV1/FVC, %, mean \pm SD	93.30 \pm 6.27	93.01 \pm 6.26	868	0.385
coal dust, mg/m ³ -years, M (P25, P75)	18.99 (8.61, 29.05)	25.90 (14.54, 40.21)	-5.982	< 0.001
CO, mg/m ³ -years, M (P25, P75)	17.96 (10.27, 28.56)	25.09 (14.53, 40.14)	-6.132	< 0.001
CO2, mg/m ³ -years, M (P25, P75)	11775.32 (6559.46, 16705.80)	14698.84 (9028.04, 22981.75)	-6.173	< 0.001
NO, mg/m ³ -years, M (P25, P75)	0.12 (0.06, 0.18)	0.16 (0.10, 0.29)	-6.565	< 0.001
NO2, mg/m ³ -years, M (P25, P75)	0.22 (0.11, 0.38)	0.29 (0.17, 0.59)	-5.579	< 0.001
PAH, mg/m ³ -years, M (P25, P75)	0.67 (0.33, 1.08)	0.90 (0.50, 1.54)	-5.516	< 0.001

Note. HbA1c, glycosylated hemoglobin; AMS, serum amylase; HCY, homocysteine; η b1, whole blood viscosity 1; η b5, whole blood viscosity 5; η b30, whole blood viscosity 30; η b200, whole blood viscosity 200; PV, plasma specific viscosity; ESR, erythrocyte sedimentation rate; HCT, hematocrit; HS, whole blood high shear rate; LS, whole blood low shear rate; ESR-K, equation K value of erythrocyte sedimentation rate; AI, red blood cell aggregation index; IR, the index of rigidity of erythrocyte; TK, thymidine kinase; FPG, fasting plasma glucose; CO2CP, carbon dioxide-combining power; TCHO, total cholesterol; TG, triglycerides; HDL, high density lipoprotein; LDL, low density lipoprotein; ApoA1, apolipoprotein A1; ApoB1, apolipoprotein B1; Ca-free, free calcium; CK, creatine kinase; CKISO, creatine kinase isoenzyme; α -HBDH, alpha-hydroxybutyric dehydrogenase; AST, aspartate amino transferase; LDH, lactic dehydrogenase; APTT, activated partial thromboplastin time; TT, thrombin time; FVC/per, predicted percentage of forced vital capacity; FEV1/per, percentage of predicted forced expiratory volume in the first second; FEV1/FVC, ratio of forced expiratory volume in the first second to forced vital capacity; PAH, polycyclic aromatic hydrocarbons.



Supplementary Figure S1. Feature importance scores.