

**Supplementary Table S1.** The primer sequences of polymorphic loci

Gene	SNP	Primer	Primer Sequence (5'–3')
TEP1	rs1713449	Forward	ACGTTGGATGAAGAGTGGATGCCATAACCG
		Reverse	ACGTTGGATGCTCTGTGCTTATCAGCTGG
		UEP-SEQ	GAGGGGTCAGAGCTTCTGGTGGTAACC
	rs1760897	Forward	ACGTTGGATGTGTAGACTCTGGAACAAGGG
		Reverse	ACGTTGGATGACATCCTCTCCTGGAGAAC
		UEP-SEQ	CCCCGTGCCTGGCCACCTC
	rs1760903	Forward	ACGTTGGATGGTCTGCTTAGGTAGCTCTTC
		Reverse	ACGTTGGATGAGATGCCTGGAATCTGAC
		UEP-SEQ	TCTGAAGAGGCCGCA
	rs938886	Forward	ACGTTGGATGCCTCATTTTTGTGTGCCAGC
		Reverse	ACGTTGGATGTTACCTGTGGTCCATTCTCC
		UEP-SEQ	GGGTCTGCATTGGCCAGGTTCCATAG
	rs1760904	Forward	ACGTTGGATGATGCAGGCATCTTGTGTGC
		Reverse	ACGTTGGATGCCCCAGAAAAGTGAAGAAG
		UEP-SEQ	CAAGAAAAGTGAAGAAGACTAATG
rs4246977	Forward	ACGTTGGATGCTCCATGACCTAATGACCTC	
	Reverse	ACGTTGGATGGAACCTAATCCCAATGCG	
	UEP-SEQ	ACCCAATGCGATGGTA	
TPP1	rs1800752	Forward	ACGTTGGATGAGTCAAGCACTGAGTAAGCC
		Reverse	ACGTTGGATGAGTCTGTGGTCTCTACAGC
		UEP-SEQ	CCTACAGCCCACTCACT
	rs3758978	Forward	ACGTTGGATGGTTAGGGTGTGAATGGGTC
		Reverse	ACGTTGGATGTTTCTGTCCATCCCACTCC
		UEP-SEQ	CCCACCTCTGCGATCATTTGAC
	rs7488	Forward	ACGTTGGATGTGTGCCTACCTTAGCATTG
		Reverse	ACGTTGGATGAACGGTCTTGGAAAGGAAGG
		UEP-SEQ	AAACTGGCCATTCAATACTA
	rs1128396	Forward	ACGTTGGATGTTCTCAACCAAGGCTCTAC
		Reverse	ACGTTGGATGTGAAAACGTCCACACCTTC
		UEP-SEQ	CTTCCATACTTACATCAAAGAG
	rs2555173	Forward	ACGTTGGATGATGGCTACGGCAGCGCAGTT
		Reverse	ACGTTGGATGATAGTGGATCTGCGGGTTAG
		UEP-SEQ	CAGGGCGGAGACCGA

**Note.** Forward: upstream primer, Reverse: downstream primer, UEP-SEQ: single base extension primer.

**Supplementary Table S2.** General characteristics of exposure and control group, *n* (%)

Variables	Control ( <i>n</i> = 115)	Exposure ( <i>n</i> = 180)	$\chi^2$	<i>P</i>
Gender				
Male	54 (47.0)	137 (76.1)	26.130	< 0.001*
Female	61 (53.0)	43 (23.9)		
Age				
< 40	67 (58.3)	53 (29.4)	24.146	< 0.001*
≥ 40	48 (41.7)	127 (70.6)		
Smoking				
Yes	12 (10.4)	63 (35.0)	22.333	< 0.001*
No	103 (89.6)	117 (65.0)		
Drinking				
Yes	30 (26.1)	16 (8.9)	15.769	< 0.001*
No	85 (73.9)	164 (91.1)		
Working duration				
< 15		26 (14.4)		
15–30		117 (65.0)		
> 30		37 (20.6)		

**Note.** The  $\chi^2$  test was utilized to compare the general characteristics of exposure and control groups. \*The difference was statistically significant.

**Supplementary Table S3.** The comparison of cholinesterase activity between exposed group and control group

Variables	Control	Exposure	<i>t</i>	<i>P</i>
Whole blood ChE activity	3.89 ± 0.80	2.47 ± 0.53	16.790	< 0.001*
Red blood cells ChE activity	3.06 ± 0.65	2.09 ± 0.52	13.485	< 0.001*
Plasma ChE activity	0.82 ± 0.24	0.38 ± 0.21	16.621	< 0.001*

**Note.** The independent-samples *t*-test was utilized to compare the ChE activity between the exposure and control group. ChE: Cholinesterase activity. \*The difference was statistically significant.

**Supplementary Table S4.** The effects of sex, age, smoking, drinking and working duration on ChE activity

Variables		Exposure		Control		t	P
		n	$\bar{x} \pm s$	n	$\bar{x} \pm s$		
Gender	Male	137	2.16 ± 0.54	54	3.42 ± 0.54	14.504	< 0.001*
	Female	43	1.87 ± 0.37	61	2.75 ± 0.58	9.351	< 0.001*
	t		3.920		6.333		
	P		< 0.001 <sup>#</sup>		< 0.001 <sup>#</sup>		
Age	≤ 40	53	2.01 ± 0.44	67	3.18 ± 0.59	12.332	< 0.001*
	> 40	127	2.12 ± 0.54	48	2.90 ± 0.70	6.921	< 0.001*
	t		1.426		-2.273		
	P		0.157		0.025 <sup>#</sup>		
Smoking	Yes	63	2.24 ± 0.52	12	3.53 ± 0.42	8.037	< 0.001*
	No	117	2.01 ± 0.50	103	3.01 ± 0.65	12.029	< 0.001*
	t		2.995		3.803		
	P		0.003 <sup>#</sup>		0.001 <sup>#</sup>		
Drinking	Yes	16	2.39 ± 0.58	30	3.43 ± 0.53	6.102	< 0.001*
	No	164	2.06 ± 0.50	85	2.93 ± 0.64	10.871	< 0.001*
	t		2.483		3.081		
	P		0.014 <sup>#</sup>		< 0.001 <sup>#</sup>		
Working duration	< 15	26	2.12 ± 0.47				
	15–30	117	2.09 ± 0.53				
	> 30	37	2.07 ± 0.52				
	F		0.066				
	P		0.936				

**Note.** \*Indicates the comparisons of ChE activity between exposure group and control group after stratification; <sup>#</sup>Represents the comparisons among the layers after stratification.