Supplement 1. Multivariable adjusted association between serum lipid levels and frequency-specific hearing loss after excluding those study subjects who reported taking lipid lowering agents (N=9,257)

Variable	Low-frequency hearing loss				High-frequency hearing loss			
	No	Yes	OR (95% CI)*	P-value	No	Yes	OR (95% CI)	P-value
Total cholesterol (mg/dL)								
Q1 (<171)	1,566	718	1		810	1,474	1	
Q2 (172–193)	1,700	631	0.91 (0.74–1.11)	0.356	875	1,456	1.05 (0.86–1.27)	0.647
Q3 (194–217)	1,683	625	0.90 (0.75–1.08)	0.250	866	1,442	0.97 (0.80–1.19)	0.777
Q4 (≥218)	1,683	651	0.93 (0.77–1.13)	0.465	883	1,451	0.96 (0.79–1.16)	0.653
Per 1 mmol/L increase	6,632	2,625	1.16 (0.93–1.44)	0.191	3,434	5,823	1.21 (1.00–1.46)	0.050
Triglyceride (mg/dL)								
Q1 (<77)	1,661	592	1		992	1,261	1	
Q2 (77–113)	1,672	690	0.95 (0.78–1.16)	0.595	922	1,440	0.92 (0.75–1.14)	0.454
Q3 (114–169)	1,643	683	0.87 (0.71–1.05)	0.150	802	1,524	0.86 (0.70–1.05)	0.128
Q4 (≥170)	1,656	660	0.94 (0.76–1.15)	0.530	718	1,598	1.04 (0.85–1.27)	0.681
Per 1 mmol/L increase	6,632	2,625	0.98 (0.94–1.02)	0.300	3,434	5,823	0.98 (0.95–1.01)	0.122
High-density lipoprotein cholesterol (mg/dL)								
Q1 (M: <38.21, F: <42.28)	1,499	728	1		667	1,560	1	
Q2 (M: 38.21–44.31, F: 42.28–49.34)	1,721	679	0.92 (0.76–1.12)	0.421	894	1,506	0.77 (0.63–0.95)	0.014
Q3 (M: 44.32–52.37, F: 49.35–57.42)	1,712	614	0.98 (0.81–1.19)	0.846	939	1,387	0.78 (0.64–0.95)	0.014
Q4 (M: ≥52.38, F: ≥57.43)	1,700	604	0.96 (0.80–1.17)	0.696	934	1,370	0.77 (0.63–0.94)	0.011
Per 1 mmol/L increase	6,632	2,625	0.88 (0.69–1.12)	0.285	3,434	5,823	0.76 (0.61–0.94)	0.011
Low-density lipoprotein cholesterol (mg/dL)								
Q1 (<95.94)	1,615	699	1		806	1,508	1	
Q2 (95.94–116.75)	1,676	639	1.00 (0.82–1.24)	0.966	875	1,440	0.95 (0.77–1.18)	0.656
Q3 (116.76–139.05)	1,685	628	0.90 (0.76–1.07)	0.213	872	1,441	0.89 (0.73–1.09)	0.266
Q4 (≥139.06)	1,656	659	0.87 (0.71–1.06)	0.154	881	1,434	0.82 (0.67–1.01)	0.061
Per 1 mmol/L increase	6,632	2,625	0.83 (0.67–1.03)	0.097	3,434	5,823	0.79 (0.65–0.96)	0.017

Values are presented as number or OR (95% CI), unless otherwise stated.

OR, odds ratio; CI, confidence interval; M, male; F, female.

*OR and 95% CI was estimated by multiple logistic regression analysis after adjusting for age, sex, hypertension, diabetes, smoking, alcohol consumption, education level, physical activity, household income, and noise exposure.