

Supplementary Table SI. Sensitivity test of T1DM on osteoporosis in MR analysis.

Exposure	Outcome	Method	Heterogeneity test		Pleiotropy test	
			Cochrane Q	P-het	Intercept	P-pleio
T1DM	Osteoporosis	IVW	44.9	0.146		
		MR-Egger	44.7	0.125	-0.004	0.689

Notes: P-het denotes the P-value in heterogeneity test. P-pleio denotes the P-value in Pleiotropy test.

Abbreviations: T1DM, type 1 diabetes; MR, Mendelian randomization; MR-IVW, Mendelian randomization-inverse variance weighted.

Supplementary Table SII. Sensitivity test of T1DM on mediators in MR analysis.

Exposure	Outcome	method	Heterogeneity test		Pleiotropy test	
			Cochrane Q	P-het	Intercept	P-pleio
T1DM	BMI	IVW	98.0	<0.001		
		MR-Egger	82.6	<0.001	-0.003	0.014
T1DM	HbA1c	IVW	529.0	<0.001		
		MR-Egger	412.3	<0.001	-0.008	0.003
T1DM	M-VLDL-C	IVW	137.8	<0.001		
		MR-Egger	137.6	<0.001	<0.001	0.780
T1DM	SFA	IVW	89.7	<0.001		
		MR-Egger	86.6	<0.001	-0.002	0.238
T1DM	SHBG	IVW	120.2	<0.001		
		MR-Egger	120.2	<0.001	<0.001	0.945

Supplementary Table SIII. Sensitivity test of mediators on osteoporosis in MR analysis.

Exposure	Outcome	Method	Heterogeneity test		Pleiotropy test	
			Cochrane Q	P-het	Intercept	P-pleio
M-VLDL-C	Osteoporosis	IVW	56.8	0.154		
		MR-Egger	55.6	0.157	-0.009	0.317
SFA	Osteoporosis	IVW	60.0	0.134		
		MR-Egger	59.6	0.121	-0.005	0.581
SHBG	Osteoporosis	IVW	315.3	0.090		
		MR-Egger	313.6	0.095	-0.009	0.161

