

Supplementary Table SI. GWAS information for all outcomes and exposures

Trait	GWAS ID	sample size (case/control)	Number of SNPs
Diabetic nephropathy	finn-b- DM_NEPHROPATHY_EXMORE	3283/181,704	16,380,336
chronotype	GCST007565	403,195	NA
Sleep duration	GCST007559	446,118	NA
Short sleep duration	GCST007560	446,118	-
Long sleep duration	GCST007561	339,926	-
Insomnia		-	-
Daytime sleepiness		-	-
Sleep apnea syndrome	GCST90267361	25,008/ 337,630	-

Supplementary Table SIII. IV selection, using DN as the outcome

Exposure	SNPs, n	Mean F	F range	Lacking SNPs	Proxies	R ²
Chronotype	118	45.67	29.02-168.52	0	--	0.010
Sleep duration	67	40.67	29.62-220.87	0	--	0.006
Short sleep duration	24	34.35	29.90-77.04	0	--	0.002
Long sleep duration	8	31.91	29.88-52.98	2	0	0.001
Insomnia	13	41.19	30.36-94.70	0	--	0.004
Daytime sleepiness	32	42.45	29.51-118.15	0	--	0.003
Sleep apnea syndrome	5	43.43	30.17-83.83	0	--	0.000

Supplementary Table SIV. Results of heterogeneity test and pleiotropy test of instrumental variables

Exposure	Outcome	Heterogeneity		Pleiotropy	
		Q statistic (IVW)	P value	MR-Egger Intercept	P value
Chronotype	Diabetic nephropathy	130.571	0.185	-0.001	0.937
Sleep duration		95.565	0.010	0.007	0.679

Short sleep duration	25.536	0.323	-0.065	0.073
Long sleep duration	12.893	0.075	-0.082	0.193
Insomnia	14.167	0.290	0.005	0.861
Daytime sleepiness	36.243	0.277	-0.015	0.569
Sleep apnea syndrome	7.143	0.129	-0.056	0.583

Supplementary Table SV. Results of MR-PRESSO inspection

Exposure	Outcome	Raw		Outlier corrected		Global P	Number of outliers	Distortion P
		OR (CI%)	P	OR (CI%)	P			
Chronotype	Diabetic nephropathy	1.85 (0.94-3.64)	0.08	NA	NA	0.18	0	NA
Sleep duration		0.81 (0.48-1.37)	0.44	NA	NA	0.005	0	NA
Short sleep duration		1.10 (0.17-6.93)	0.92	NA	NA	0.418	0	NA
Long sleep duration		0.05 (0-30.86)	0.40	NA	NA	0.096	0	NA
Insomnia		1.20 (0.76-1.89)	0.45	NA	NA	0.339	0	NA
Daytime sleepiness		0.45 (0.11-1.93)	0.29	NA	NA	0.276	0	NA
Sleep apnea syndrome		1.86 (0.70-4.92)	0.28	NA	NA	0.200	0	NA