Table S1 Harmonized dataset of two-sample Mendelian randomization for the effect of HDLC on gallstone disease

SNP	Effect_allele.HDLC	Other_allele.HDLC	Effect_allele.cholelithiasis	Other_allele.cholelithiasis	Beta.HDLC.GLGC	se.HDLC.GLGC	Beta.HDLC.UK.both_sex	se.HDLC.UK.both_sex	Beta.cholelithiasis.UK.both_sex	se.cholelithiasis.UK.both_sex	Beta.HDLC.UK.female	se.HDLC.UK.female	Beta.cholelithiasis.UK.female	se.cholelithiasis.UK.female	Beta.HDLC.UK.male	se.HDLC.UK.male	Beta.cholelithiasis.UK.male	se.cholelithiasis.UK.male
rs10019888	A	G	A	G	0.027	0.0046	−0.024569	0.0030816	−7.26E−05	0.000544259	−0.034715	0.0046554	−9.61E−05	0.000857473	−0.018554	0.0049851	−5.51E−05	0.00062658
rs10087900	G	A	G	A	0.0231	0.0036	−0.019849	0.002288	−0.000521343	0.000404392	−0.028323	0.0034534	−0.000476448	0.00063636	−0.014819	0.0037047	−0.000583383	0.00046619
rs10282707	C	T	C	T	0.025	0.0035	−0.027124	0.0023284	0.000726787	0.000411672	−0.029358	0.0035179	0.000564464	0.000648459	−0.030678	0.0037662	0.000914013	0.000474048
rs103294	T	C	T	C	0.0523	0.0044	0.041711	0.0027161	0.000948317	0.000479954	0.050161	0.0040937	0.00100196	0.000754337	0.041499	0.0044055	0.000873819	0.000554113
rs10468017	T	C	T	C	0.1179	0.0038	0.10838	0.0024851	−0.000885099	0.000440427	0.1176	0.0037541	−0.00115257	0.000693909	0.12259	0.0040201	−0.000569362	0.000507018
rs10808546	T	C	T	C	0.0409	0.0034	0.034949	0.0022974	0.000877439	0.000406122	0.035385	0.0034668	0.000957038	0.000639104	0.041944	0.0037211	0.000774489	0.000468161
rs11045163	G	A	G	A	0.0217	0.0035	0.019082	0.0023038	0.00049067	0.000407293	0.021237	0.0034735	0.000414264	0.000640736	0.020678	0.0037351	0.000592278	0.000469697
rs11065987	A	G	A	G	0.0222	0.0035	−0.022139	0.002311	0.000583678	0.000408387	−0.022962	0.0034865	0.000262719	0.000642275	−0.026431	0.0037444	0.000964345	0.000471112
rs11789603	T	C	T	C	0.06	0.006	0.069245	0.0036787	0.000169102	0.000650385	0.074592	0.0055648	−0.000119464	0.00102518	0.078176	0.0059425	0.000495132	0.000748366
rs12286037	C	T	C	T	0.1052	0.007	−0.09094	0.0045902	0.000362853	0.000811717	−0.081006	0.0069235	0.000214479	0.00127631	−0.12243	0.0074384	0.000572421	0.000936652
rs12328675	C	T	C	T	0.0447	0.0052	0.039477	0.0035058	−0.000341362	0.000619658	0.048538	0.0053081	0.000204386	0.000978539	0.038179	0.0056568	−0.000976654	0.000711461
rs12412743	C	T	C	T	0.0291	0.0045	−0.026458	0.0030509	6.13E−05	0.000539486	−0.034187	0.0046152	0.000410352	0.000850685	−0.023903	0.0049279	−0.000311944	0.000620473
rs12740374	T	G	T	G	0.0343	0.0041	0.031133	0.0027407	0.00050474	0.000483859	0.033235	0.0041444	0.000855391	0.000762596	0.035728	0.0044286	7.67E−05	0.000556804
rs12748152	C	T	C	T	0.0506	0.0062	−0.040653	0.0041699	0.00032059	0.000736893	−0.050556	0.0062884	0.000273497	0.00115858	−0.038543	0.0067591	0.000358281	0.000850382
rs13099479	A	G	A	G	0.036	0.0062	0.027768	0.0040427	−0.0012673	0.00071498	0.036523	0.0061202	−0.00104722	0.00112844	0.02484	0.0065238	−0.00154065	0.000821416
rs13107325	C	T	C	T	0.0708	0.0078	−0.08196	0.0043295	0.000669971	0.000765675	−0.081643	0.0065678	−0.000130821	0.00121172	−0.10073	0.0069709	0.00159418	0.000876959
rs1482852	G	A	G	A	0.0209	0.0035	0.018488	0.0023328	0.00114663	0.000412419	0.012902	0.0035209	0.000958583	0.000649202	0.029087	0.0037776	0.00136305	0.000475268
rs16842	T	C	T	C	0.03	0.0038	−0.02903	0.0025266	0.000158238	0.000446445	−0.034979	0.003815	0.000450548	0.000703229	−0.029064	0.0040898	−0.000172772	0.000514093
rs1689797	C	A	C	A	0.0358	0.0036	−0.024297	0.0024173	−0.000176758	0.000427003	−0.021991	0.0036485	−0.000449507	0.000672083	−0.032397	0.0039143	0.000147899	0.000492131
rs16942887	A	G	A	G	0.0831	0.0051	0.060936	0.0035695	−0.000211923	0.000630442	0.069773	0.0053997	−0.00066389	0.000993873	0.064501	0.0057656	0.000332643	0.000725292
rs16965220	A	C	A	C	0.0219	0.0037	0.01851	0.0024479	0.000530008	0.000432728	0.019179	0.003695	−0.000116729	0.000681441	0.021828	0.0039635	0.00129667	0.000498438
rs17145738	T	C	T	C	0.0408	0.0053	0.037786	0.0034615	0.00183169	0.000611375	0.045269	0.0052179	0.00215792	0.000960796	0.037734	0.0056136	0.00144035	0.000705901
rs181360	T	G	T	G	0.0376	0.0042	−0.030627	0.0028903	0.000426229	0.000510955	−0.031452	0.0043591	0.00050944	0.000803646	−0.036758	0.0046844	0.000332851	0.000589384
rs1883025	C	T	C	T	0.0698	0.0041	−0.066763	0.0026115	−0.000343792	0.000462011	−0.085794	0.0039423	0.000355303	0.000727619	−0.060307	0.004228	−0.00114054	0.000532121
rs1942880	C	T	C	T	0.0228	0.0036	−0.019857	0.0024309	0.000383128	0.000429707	−0.023263	0.0036668	0.00107381	0.00067633	−0.020652	0.0039391	−0.000415617	0.000495264
rs1980493	T	C	T	C	0.0318	0.0048	−0.030597	0.0030163	0.00134628	0.000533097	−0.037561	0.0045502	0.00206857	0.000839243	−0.029706	0.0048874	0.000500151	0.000614288
rs205262	A	G	A	G	0.0283	0.0039	−0.025857	0.002576	0.000603569	0.000455124	−0.02646	0.0038919	0.000700644	0.000717179	−0.030991	0.0041667	0.000498031	0.000523845
rs2066714	C	T	C	T	0.0453	0.0071	0.045944	0.0034121	−0.000754509	0.000602628	0.053137	0.0051575	−0.00105045	0.00094968	0.048347	0.0055162	−0.000404148	0.000693557
rs2075650	A	G	A	G	0.0554	0.0051	−0.058663	0.0032188	−0.00123164	0.000569215	−0.053986	0.0048611	−0.00176557	0.000895899	−0.077482	0.0052088	−0.000595596	0.000656082
rs2240327	G	A	G	A	0.0242	0.0034	0.022584	0.0022778	−0.000693846	0.000402631	0.026354	0.0034389	−0.00103555	0.000633921	0.023404	0.0036874	−0.000284464	0.000463894
rs2241770	T	C	T	C	0.0989	0.0057	−0.11608	0.0038461	−0.000152056	0.000680742	−0.12643	0.0058067	−0.000292793	0.00107052	−0.13048	0.0062261	−1.75E−05	0.000785389
rs2292101	C	T	C	T	0.0518	0.0096	−0.046017	0.006527	0.00119825	0.00115158	−0.048302	0.0097775	0.00040124	0.00179869	−0.053901	0.010663	0.00213082	0.00133933
rs2303975	A	G	A	G	0.0279	0.0049	0.018523	0.003621	0.000992346	0.000640483	0.032715	0.0054674	0.00139052	0.0010088	0.0069165	0.0058609	0.000515194	0.000737578
rs231492	G	T	G	T	0.0433	0.0077	−0.0551	0.0041614	0.000707353	0.000735905	−0.048309	0.0062996	0.00195729	0.00116086	−0.075183	0.0067162	−0.000729179	0.00084599
rs2454722	G	A	G	A	0.0351	0.0044	0.038045	0.0029597	0.000237565	0.000523185	0.046059	0.0044771	0.000178431	0.000825038	0.037514	0.0047809	0.000296971	0.000601693
rs3741414	T	C	T	C	0.0296	0.004	0.031959	0.0026476	7.79E−05	0.000468387	0.03974	0.0039909	0.000596539	0.000736106	0.030386	0.0042939	−0.000534339	0.000540798

Table S1 *(continued)*

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Table S1 *(continued)*

SNP	Effect_allele.HDLC	Other_allele.HDLC	Effect_allele.cholelithiasis	Other_allele.cholelithiasis	Beta.HDLC.GLGC	se.HDLC.GLGC	Beta.HDLC.UK.both_sex	se.HDLC.UK.both_sex	Beta.cholelithiasis.UK.both_sex	se.cholelithiasis.UK.both_sex	Beta.HDLC.UK.female	se.HDLC.UK.female	Beta.cholelithiasis.UK.female	se.cholelithiasis.UK.female	Beta.HDLC.UK.male	se.HDLC.UK.male	Beta.cholelithiasis.UK.male	se.cholelithiasis.UK.male
rs3822072	G	A	G	A	0.0251	0.0034	−0.020892	0.0022873	−0.000547031	0.000404405	−0.032495	0.0034498	−0.000753746	0.000636198	−0.012518	0.0037068	−0.000309604	0.000466362
rs3936511	A	G	A	G	0.0308	0.0046	−0.032082	0.0029097	1.49E−05	0.000514443	−0.036609	0.0043998	0.000816183	0.000810473	−0.034176	0.0047019	−0.000909622	0.000592267
rs3996352	G	A	G	A	0.0296	0.0034	0.031122	0.0022795	−0.000192975	0.000402853	0.047545	0.0034368	−0.00020572	0.000633745	0.019497	0.0036955	−0.000184879	0.000464588
rs4148005	T	G	T	G	0.0283	0.0036	−0.019184	0.0024502	0.000435196	0.000432995	−0.01781	0.0036933	0.000209067	0.00068067	−0.024835	0.003974	0.000679715	0.000499772
rs4379922	C	T	C	T	0.0247	0.0036	0.023015	0.002354	0.000162479	0.000416097	0.026514	0.0035527	0.000424889	0.000655176	0.024443	0.0038123	−0.000133338	0.000479361
rs4465830	A	G	A	G	0.0597	0.0044	−0.063308	0.0029151	−3.90E−05	0.000515737	−0.089434	0.0044006	−0.000913932	0.000811933	−0.04797	0.0047193	0.00097863	0.000594252
rs4660293	A	G	A	G	0.0353	0.004	−0.042216	0.0026858	0.000535331	0.000475122	−0.044915	0.0040525	0.00083609	0.000747465	−0.048655	0.004351	0.00019015	0.000547905
rs4693156	C	T	C	T	0.0197	0.0035	0.018287	0.0023456	0.000672762	0.000414675	0.01854	0.0035355	0.00109012	0.000651904	0.021868	0.0038044	0.000209851	0.000478607
rs4917014	G	T	G	T	0.0222	0.0036	0.015987	0.0024464	0.000571274	0.000432391	0.023043	0.0036929	0.000711575	0.000680578	0.011132	0.0039611	0.000393549	0.000498339
rs492571	T	C	T	C	0.0663	0.009	−0.041743	0.0057213	0.00165069	0.00101379	−0.055287	0.0086328	0.00250382	0.00159507	−0.035456	0.0092682	0.000686533	0.00116901
rs4976033	A	G	A	G	0.0215	0.0037	−0.012458	0.0023529	3.14E−05	0.000415844	−0.013915	0.0035493	−8.81E−05	0.000654178	−0.013889	0.0038128	0.000164054	0.000479573
rs499974	C	A	C	A	0.0263	0.0044	−0.034754	0.0031368	0.000300973	0.00055427	−0.041732	0.0047234	0.00139133	0.000870287	−0.034605	0.005093	−0.000991572	0.00064061
rs593245	T	C	T	C	0.0208	0.0038	0.01161	0.0022914	−0.000774433	0.000404684	0.010439	0.0034596	−0.00134566	0.000636862	0.015217	0.0037093	−0.000108883	0.000466501
rs6031587	C	T	C	T	0.0488	0.0074	−0.053726	0.0044944	0.0024202	0.000794043	−0.055242	0.0067878	0.00323551	0.00125154	−0.063941	0.007273	0.00150084	0.000913702
rs633695	G	A	G	A	0.0885	0.0054	0.08496	0.0025125	0.00018662	0.000444804	0.096275	0.0037915	−6.37E−05	0.000700218	0.09127	0.0040694	0.000460859	0.000512553
rs676210	A	G	A	G	0.066	0.004	0.062039	0.0028222	0.00100913	0.000498922	0.069442	0.0042593	0.00184087	0.000785546	0.067623	0.0045704	3.36E−05	0.000574798
rs6898870	G	A	G	A	0.0298	0.0055	−0.01429	0.0025919	0.000240486	0.000458097	−0.0095124	0.0039115	0.000688626	0.000721016	−0.022652	0.004198	−0.000262966	0.000527988
rs7306660	G	A	G	A	0.0345	0.0036	−0.024604	0.0023791	−0.000182522	0.000420403	−0.031831	0.0035973	−0.000482376	0.000662445	−0.022059	0.0038447	0.000169924	0.000483891
rs737337	T	C	T	C	0.0565	0.0061	−0.054572	0.0042869	0.000133182	0.000757782	−0.055705	0.0064962	0.000495735	0.001197	−0.065365	0.006911	−0.000313668	0.000869817
rs765548	T	C	T	C	0.1065	0.0038	0.11913	0.0025771	−0.000526262	0.000456974	0.11678	0.0038985	−0.00096185	0.000719632	0.14903	0.0041619	−5.01E−05	0.000526385
rs884366	G	A	G	A	0.0199	0.0037	−0.018314	0.002464	−0.000461024	0.000435496	−0.024642	0.0037191	−0.000617263	0.000685308	−0.014953	0.00399	−0.000273676	0.000502051
rs9457931	A	G	A	G	0.0552	0.0073	−0.030468	0.0048529	−0.00103053	0.000857578	−0.02809	0.0073404	−0.00214183	0.00135002	−0.040419	0.0078393	0.000236768	0.000988209
rs998584	C	A	C	A	0.026	0.0038	−0.033179	0.0022835	5.98E−05	0.000403569	−0.034788	0.0034501	−0.000359708	0.000635668	−0.039329	0.0036933	0.000559874	0.00046473

Female: women specify participants in the UK Biobank; male: men specify participants in the UK Biobank. Beta, regression coefficient; se, standard error; HDLC, high-density lipoprotein cholesterol; both_sex, combined sex participants in the UK Biobank; GLGC, Global Lipids Genetics Consortium; SNP, single-nucleotide polymorphism.

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Table S2 Harmonized dataset of two-sample Mendelian randomization for the effect of triglycerides on gallstone disease

SNP	Effect_ allele.TG	Other_ allele.TG	Effect_allele. cholelithiasis	Other_allele. cholelithiasis	Beta. TG.GLGC	se.TG. GLGC	Beta. TG.UK. both_sex	se.TG. UK.both_ sex	Beta. cholelithiasis. UK.both_sex	se.cholelithiasis. UK.both_sex	beta. TG.UK. female	se.TG. UK.female	Beta. cholelithiasis. UK.female	se.cholelithiasis. UK.female	Beta.TG.UK. male	se.TG. UK.male	Beta. cholelithiasis. UK.male	se.cholelithiasis. UK.male
rs10401969	T	C	T	C	0.121	0.0065	−0.099379	0.004362	0.000531676	0.000757307	−0.081062	0.0059918	0.000677146	0.00119054	−0.12459	0.0066721	0.000352387	0.000874068
rs10501321	T	C	T	C	0.0216	0.0035	−0.022928	0.0024759	−0.000163473	0.000429506	−0.01843	0.0034044	−0.000667665	0.000676072	−0.028831	0.0037829	0.000420815	0.000494989
rs10513688	A	G	A	G	0.0306	0.0056	0.026017	0.0039316	0.000435703	0.000681974	0.030092	0.0053987	0.00128954	0.0010726	0.022901	0.0060162	−0.000566674	0.000786683
rs10861661	C	A	C	A	0.0227	0.0041	0.017942	0.0026883	−0.000534271	0.000465992	0.018454	0.0037052	−0.000934354	0.000735365	0.018255	0.0040961	−7.43E−05	0.000535473
rs11057408	G	T	G	T	0.0258	0.0035	−0.027928	0.0024585	0.00080572	0.000426334	−0.036305	0.0033829	0.000819368	0.000671797	−0.019988	0.0037529	0.000782971	0.000490722
rs11613352	C	T	C	T	0.028	0.0039	−0.028067	0.0027009	3.94E−05	0.000468681	−0.024369	0.0037081	0.000595823	0.000736497	−0.033686	0.0041339	−0.000616153	0.000541195
rs11820504	C	T	C	T	0.0604	0.0044	0.067505	0.0030573	−0.000344427	0.000530629	0.067433	0.0042069	−0.00124828	0.000836081	0.071214	0.0046671	0.00070735	0.000610834
rs1211644	T	C	T	C	0.0298	0.0053	−0.018736	0.0026331	−0.000367478	0.000456761	−0.022972	0.0036146	9.34E−05	0.000717743	−0.014913	0.0040309	−0.000896656	0.000527453
rs12412743	T	C	T	C	0.0238	0.0044	0.016102	0.0031102	6.13E−05	0.000539486	0.020078	0.004284	0.000410352	0.000850685	0.012433	0.0047423	−0.000311944	0.000620473
rs12602912	T	C	T	C	0.0241	0.0041	0.024129	0.0029281	0.000861337	0.000507722	0.02429	0.0040251	0.00114964	0.000798995	0.025239	0.004475	0.000526359	0.000585278
rs12676857	C	T	C	T	0.0332	0.0046	0.034976	0.0032805	−0.000191865	0.000569072	0.034155	0.0045156	−0.000860148	0.000896461	0.037763	0.005006	0.000592019	0.000655234
rs12679834	T	C	T	C	0.1647	0.0054	−0.19636	0.0038337	−0.000528781	0.00066743	−0.19469	0.0052721	−0.00042999	0.00105041	−0.20839	0.005856	−0.00065831	0.00076932
rs12748152	T	C	T	C	0.0372	0.0059	0.03194	0.0042467	0.00032059	0.000736893	0.038854	0.0058283	0.000273497	0.00115858	0.025615	0.0065025	0.000358281	0.000850382
rs13389219	C	T	C	T	0.0271	0.0034	−0.036997	0.0023726	−0.000116974	0.000411854	−0.04787	0.0032599	−0.000536492	0.00064811	−0.026814	0.0036278	0.000361418	0.000474785
rs17513135	T	C	T	C	0.022	0.0039	0.024565	0.0027687	0.000510905	0.000480194	0.026677	0.0038053	0.00083464	0.000755593	0.023434	0.0042321	0.000143022	0.000553625
rs1883025	C	T	C	T	0.0219	0.004	−0.018986	0.0026639	−0.000343792	0.000462011	−0.020669	0.0036642	0.000355303	0.000727619	−0.018101	0.0040685	−0.00114054	0.000532121
rs2068888	G	A	G	A	0.0241	0.0034	−0.030814	0.0023294	−0.00025375	0.0004042	−0.029817	0.0032021	−0.000834351	0.000636154	−0.033404	0.00356	0.000408101	0.0004659
rs2251830	C	A	C	A	0.0236	0.0036	−0.015452	0.0023336	0.000589998	0.000404861	−0.013688	0.0032093	0.0012169	0.000637593	−0.01801	0.0035647	−0.000133357	0.000466312
rs2954022	C	A	C	A	0.078	0.0033	−0.090137	0.0023214	0.000900101	0.000403401	−0.084837	0.0031927	0.00114037	0.00063514	−0.10078	0.0035455	0.000608082	0.000464755
rs3198697	C	T	C	T	0.0198	0.0034	−0.024684	0.0023557	−0.000241451	0.00040874	−0.024553	0.0032349	−0.000751999	0.00064245	−0.026186	0.0036047	0.000359952	0.000471847
rs3760627	C	T	C	T	0.0189	0.0034	0.017197	0.0023288	0.000233052	0.00040373	0.019613	0.0031986	−3.11E−05	0.000634864	0.0154	0.0035628	0.000551836	0.000465839
rs4587594	G	A	G	A	0.0694	0.0035	−0.080107	0.0024238	0.000102297	0.000421031	−0.073549	0.0033358	0.000441091	0.000663321	−0.091551	0.0036991	−0.000297538	0.000484708
rs4719841	G	A	G	A	0.0232	0.0034	0.025629	0.0025073	0.000594046	0.000435049	0.028861	0.0034524	0.000963709	0.000685656	0.023324	0.0038244	0.000169229	0.000500641
rs4804311	A	G	A	G	0.0392	0.006	−0.046466	0.0042414	−8.35E−05	0.000735884	−0.046614	0.0058369	0.000520112	0.0011595	−0.048459	0.0064737	−0.000761766	0.000847068
rs492571	C	T	C	T	0.0799	0.0088	0.073756	0.0058373	0.00165069	0.00101379	0.084051	0.0080265	0.00250382	0.00159507	0.066444	0.0089185	0.000686533	0.00116901
rs676210	G	A	G	A	0.0733	0.0039	−0.076578	0.0028741	0.00100913	0.000498922	−0.081252	0.0039517	0.00184087	0.000785546	−0.07514	0.0043912	3.36E−05	0.000574798
rs6831256	G	A	G	A	0.0258	0.0035	0.023806	0.0023498	6.48E−05	0.000407496	0.028335	0.0032282	−0.00049967	0.000640974	0.019968	0.0035935	0.000731536	0.000469998
rs6995541	G	A	G	A	0.0265	0.0037	0.025804	0.0025704	−0.000214148	0.000445768	0.02417	0.0035297	−0.000275463	0.000700783	0.028887	0.003933	−0.000144023	0.000514479
rs714052	A	G	A	G	0.1084	0.005	−0.1244	0.0035021	0.00153531	0.000608615	−0.13325	0.0048061	0.00200846	0.000956506	−0.12092	0.0053626	0.000969708	0.000702674
rs7205804	G	A	G	A	0.0367	0.0034	−0.03117	0.0023377	3.35E−06	0.000405544	−0.028914	0.0032099	−0.0004044	0.000637442	−0.035323	0.0035774	0.000483926	0.000468141
rs72555385	G	A	G	A	0.0749	0.0124	0.066648	0.0054047	1.50E−05	0.000936889	0.068328	0.0074473	0.000395581	0.0014783	0.068451	0.0082374	−0.000427318	0.00107671
rs749671	G	A	G	A	0.0211	0.0034	−0.014732	0.0024009	−0.000561806	0.000416539	−0.021209	0.0032991	−0.000570191	0.000655261	−0.0082727	0.0036709	−0.000550313	0.000480381
rs8077889	C	A	C	A	0.0252	0.0042	0.017051	0.0028315	8.93E−05	0.000491272	0.017457	0.0038934	0.000344642	0.00077296	0.017435	0.0043261	−0.000204843	0.000566464
rs9686661	T	C	T	C	0.0379	0.0044	0.044983	0.0029181	−0.000227378	0.000506298	0.054406	0.0040172	0.000319563	0.000797755	0.036792	0.004452	−0.0008637	0.000582803
rs998584	A	C	A	C	0.0293	0.0037	0.03985	0.0023261	5.98E−05	0.000403569	0.042217	0.0032007	−0.000359708	0.000635668	0.039566	0.0035507	0.000559874	0.00046473

Female: women specify participants in the UK Biobank; male: men specify participants in the UK Biobank. Beta, regression coefficient; se, standard error; TG, triglycerides; both_sex, combined sex participants in the UK Biobank; GLGC, Global Lipids Genetics Consortium; SNP, single-nucleotide polymorphism.

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Table S3 Harmonized dataset of two-sample Mendelian randomization for the effect of liver fat content on gallstone disease

SNP	Effect_allele.NAFLD	Other_allele.NAFLD	Effect_allele.cholelithiasis	Other_allele.cholelithiasis	Beta.Hep_steatosis.GOLD	se.Hep_steatosis.GOLD	Beta.NAFLD.AGES	se.NAFLD.AGES	Beta.cholelithiasis.UK	se.cholelithiasis.UK
rs2228603	T	C	T	C	0.238	0.035	0.184	0.053	0.000486059	0.000761385
rs738409	G	C	G	C	0.261	0.021	0.232	0.032	−0.00220539	0.000488266

Beta, regression coefficient; se, standard error; Hep_steatosis, hepatic steatosis; NAFLD, non-alcoholic fatty liver disease; GOLD, Genetics of Obesity-related Liver Disease; AGES, Old Order Amish, Age, Gene/Environment Susceptibility-Reykjavik study; UK, the UK Biobank cohort; SNP, single-nucleotide polymorphism.

Table S4 Harmonized dataset of two-sample Mendelian randomization for the effect of LDLC on gallstone disease

SNP	Effect_allele.LDLC	Other_allele.LDLC	Effect_allele.cholelithiasis	Other_allele.cholelithiasis	Beta.LDLC.GLGC	se.LDLC.GLGC	Beta.LDLC.UK.both_sex	se.LDLC.UK.both_sex	Beta.cholelithiasis.UK.both_sex	se.cholelithiasis.UK.both_sex	Beta.LDLC.UK.female	se.LDLC.UK.female	Beta.cholelithiasis.UK.female	se.cholelithiasis.UK.female	Beta.LDLC.UK.male	se.LDLC.UK.male	Beta.cholelithiasis.UK.male	se.cholelithiasis.UK.male
rs10195252	T	C	T	C	0.0238	0.0039	−0.013394	0.0023987	−0.000272351	0.000410046	−0.020526	0.0032665	−0.000676653	0.00064565	−0.0054446	0.0035642	0.000187234	0.000472377
rs10947332	A	G	A	G	0.0504	0.0056	0.045433	0.0036141	−0.00103338	0.000618097	0.052541	0.0049035	−0.00162052	0.000969445	0.037786	0.0053934	−0.000339619	0.000715308
rs11065987	A	G	A	G	0.0269	0.0038	−0.025275	0.0023896	0.000583678	0.000408387	−0.023866	0.0032515	0.000262719	0.000642275	−0.027153	0.0035541	0.000964345	0.000471112
rs112201728	T	C	T	C	0.0675	0.0104	0.054991	0.0046338	−0.00049049	0.000791708	0.070652	0.0062946	−0.000968118	0.00124287	0.037466	0.0069049	9.24E−05	0.000915277
rs11220462	A	G	A	G	0.059	0.0059	0.040434	0.0034608	0.000382179	0.000591849	0.034022	0.0047092	−0.000150584	0.000930674	0.048587	0.0051467	0.00100583	0.000682857
rs11563251	T	C	T	C	0.0345	0.0062	0.020104	0.0037514	−0.00221903	0.000641197	0.02591	0.0051005	−0.00226225	0.00100781	0.014109	0.0055843	−0.00214888	0.000740229
rs11591147	G	T	G	T	0.497	0.018	−0.34847	0.0088975	0.000179825	0.00152518	−0.35623	0.012134	−0.00168225	0.00240308	−0.34543	0.013199	0.00232818	0.00175572
rs117733303	G	A	G	A	0.1551	0.022	0.08793	0.0087077	−0.00290238	0.00148804	0.11606	0.01186	−0.00579976	0.0023381	0.057819	0.012936	0.000528062	0.00171848
rs12670798	C	T	C	T	0.0344	0.0043	0.027899	0.0027261	−0.000217255	0.00046577	0.033656	0.0037087	−0.000366807	0.000732217	0.021685	0.0040551	−4.48E−05	0.000537575
rs12721109	G	A	G	A	0.4462	0.0183	−0.34087	0.0073581	0.00139244	0.00126199	−0.39975	0.010015	1.42E−05	0.00198811	−0.28031	0.010936	0.00299465	0.00145294
rs12740374	G	T	G	T	0.161	0.0044	−0.1181	0.0028258	0.00050474	0.000483859	−0.11046	0.0038552	0.000855391	0.000762596	−0.1284	0.0041897	7.67E−05	0.000556804
rs12748152	T	C	T	C	0.0499	0.0066	0.011806	0.0043104	0.00032059	0.000736893	0.014833	0.0058594	0.000273497	0.00115858	0.0084685	0.0064182	0.000358281	0.000850382
rs13315871	G	A	G	A	0.0344	0.0063	−0.028708	0.0041849	0.000264737	0.000714333	−0.030069	0.0057161	0.000529921	0.00112772	−0.027495	0.0061965	−4.79E−05	0.000820422
rs1367117	A	G	A	G	0.1186	0.004	0.082043	0.002482	−0.000916447	0.00042493	0.090315	0.0033736	−0.00103018	0.00066779	0.073846	0.0036957	−0.000788718	0.00049064
rs1408272	T	G	T	G	0.052	0.0083	−0.049188	0.0043406	−0.000373132	0.000742093	−0.047485	0.0059054	−0.00111693	0.00116646	−0.051789	0.0064568	0.000485838	0.000856649
rs1535	A	G	A	G	0.0529	0.0038	−0.031219	0.0024717	0.00154735	0.000422381	−0.034077	0.0033695	0.00234594	0.000665549	−0.028335	0.0036682	0.00059189	0.000486185
rs1564348	C	T	C	T	0.0481	0.005	0.033276	0.0031276	−0.000148865	0.000534696	0.045218	0.0042561	−0.000394528	0.000840901	0.020036	0.004651	0.000142107	0.000616883
rs17508045	T	C	T	C	0.0488	0.0066	−0.034993	0.0041561	−0.000161859	0.000710633	−0.034394	0.0056778	−0.0012224	0.00112213	−0.03658	0.0061527	0.00105585	0.000815972
rs17789218	T	C	T	C	0.0241	0.0043	−0.017218	0.0027435	0.000874905	0.000468761	−0.018567	0.0037303	0.00102662	0.000736761	−0.015758	0.0040838	0.000681001	0.000541161
rs1883025	C	T	C	T	0.0296	0.0044	−0.023862	0.0027037	−0.000343792	0.000462011	−0.026426	0.003683	0.000355303	0.000727619	−0.021399	0.0040159	−0.00114054	0.000532121
rs2000999	A	G	A	G	0.065	0.0046	0.049659	0.0030082	0.000454092	0.000514194	0.05644	0.0040938	0.000161443	0.000808948	0.042614	0.0044732	0.000786531	0.000592952
rs2228603	C	T	C	T	0.104	0.0072	−0.089614	0.0044515	0.000486059	0.000761385	−0.064558	0.006073	0.00127081	0.00119989	−0.11934	0.0065997	−0.000420847	0.000876243
rs2294261	A	C	A	C	0.0333	0.0037	−0.015909	0.0023592	−1.39E−05	0.000403073	−0.018899	0.0032122	−0.000333387	0.000634297	−0.012747	0.0035061	0.000339558	0.000464675
rs247616	C	T	C	T	0.0547	0.0041	−0.033836	0.002514	−2.34E−05	0.000429705	−0.048311	0.0034232	−0.00018878	0.000676377	−0.017415	0.0037353	0.000185386	0.000495214
rs2737252	G	A	G	A	0.0314	0.0041	−0.02164	0.0026124	−0.000297307	0.000446345	−0.023404	0.0035551	−0.00125157	0.00070213	−0.01971	0.0038845	0.000802905	0.000514755
rs2738459	A	C	A	C	0.0532	0.0058	−0.022332	0.0023663	0.000186694	0.00040444	−0.024775	0.0032208	0.000628625	0.000636198	−0.019809	0.003518	−0.000321547	0.000466456
rs2965157	T	C	T	C	0.1886	0.0112	−0.21328	0.0069524	0.000127013	0.00118835	−0.24636	0.0094533	−0.000234755	0.00186807	−0.17918	0.010347	0.000541374	0.00137164
rs314253	T	C	T	C	0.0242	0.0038	−0.015604	0.0024627	0.000766988	0.000420855	−0.011216	0.0033562	0.000821382	0.00066297	−0.020912	0.0036559	0.000713611	0.000484559
rs3780181	A	G	A	G	0.0445	0.0074	−0.028533	0.0047333	0.000987286	0.000808958	−0.031248	0.0064404	0.00134956	0.00127159	−0.026345	0.00704	0.000538136	0.000933809
rs6016373	A	G	A	G	0.0349	0.0037	−0.025221	0.00244	−2.77E−06	0.00041701	−0.027803	0.0033196	0.000232035	0.000656048	−0.022765	0.0036293	−0.00028023	0.000480878

Table S4 *(continued)*

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Table S4 *(continued)*

SNP	Effect_allele.LDLC	Other_allele.LDLC	Effect_allele.cholelithiasis	Other_allele.cholelithiasis	Beta.LDLC.GLGC	se.LDLC.GLGC	Beta.LDLC.UK.both_sex	se.LDLC.UK.both_sex	Beta.cholelithiasis.UK.both_sex	se.cholelithiasis.UK.both_sex	Beta.LDLC.UK.female	se.LDLC.UK.female	Beta.cholelithiasis.UK.female	se.cholelithiasis.UK.female	Beta.LDLC.UK.male	se.LDLC.UK.male	Beta.cholelithiasis.UK.male	se.cholelithiasis.UK.male
rs6065311	C	T	C	T	0.0417	0.0036	0.025124	0.002359	0.000696426	0.000403162	0.032556	0.0032076	0.000362603	0.000633656	0.017005	0.0035111	0.00108216	0.000465439
rs6511720	G	T	G	T	0.2209	0.0061	−0.17743	0.0036249	0.000599792	0.000621574	−0.19144	0.0049372	0.000671822	0.000978832	−0.1636	0.0053846	0.00049627	0.000715964
rs7254892	G	A	G	A	0.4853	0.0119	−0.41887	0.0067697	0.00432116	0.00116263	−0.47472	0.009186	0.00459571	0.00182796	−0.36281	0.010097	0.00399961	0.00134174
rs72902576	T	G	T	G	0.0933	0.0133	−0.078918	0.0057713	0.00167103	0.000986164	−0.069228	0.0078601	0.00254732	0.00155134	−0.090445	0.0085744	0.000638709	0.00113732
rs75687619	T	G	T	G	0.1735	0.0161	0.17049	0.0073867	−0.00209175	0.00126301	0.19452	0.010078	−0.00224586	0.00198751	0.14514	0.010952	−0.00194031	0.00145597
rs7640978	C	T	C	T	0.0392	0.0069	−0.034954	0.0041269	−0.00120938	0.000705535	−0.033924	0.0056148	−0.000792659	0.00110907	−0.036144	0.0061386	−0.00169213	0.000814354
rs7703051	A	C	A	C	0.0727	0.0037	0.060545	0.0024289	0.000143863	0.000415435	0.067811	0.0033086	0.000158891	0.000654207	0.052838	0.0036078	0.000133409	0.000478544
rs7832643	T	G	T	G	0.0339	0.0038	0.014503	0.0024071	0.000220301	0.000411442	0.015922	0.0032755	0.000598461	0.000647207	0.012999	0.0035799	−0.000230316	0.000474536
rs8017377	A	G	A	G	0.0303	0.0038	0.01645	0.0023544	0.000473956	0.000402363	0.019541	0.0032063	0.00101748	0.00063331	0.013177	0.0034984	−0.000138684	0.000463735
rs868943	G	A	G	A	0.0264	0.0037	−0.01454	0.0023801	0.000358961	0.000406662	−0.014653	0.0032438	0.000502691	0.000640549	−0.01473	0.0035334	0.000181818	0.000468303
rs9875338	G	A	G	A	0.027	0.0037	−0.015745	0.0024036	−0.000307445	0.000410629	−0.015721	0.0032718	−0.00072233	0.000646093	−0.016053	0.0035732	0.000181854	0.000473454

Female: women specify participants in the UK Biobank; male: men specify participants in the UK Biobank. Beta, regression coefficient; se, standard error; LDLC, low density lipoprotein cholesterol; both_sex, combined sex participants in the UK Biobank; GLGC, Global Lipids Genetics Consortium; SNP, single-nucleotide polymorphism.

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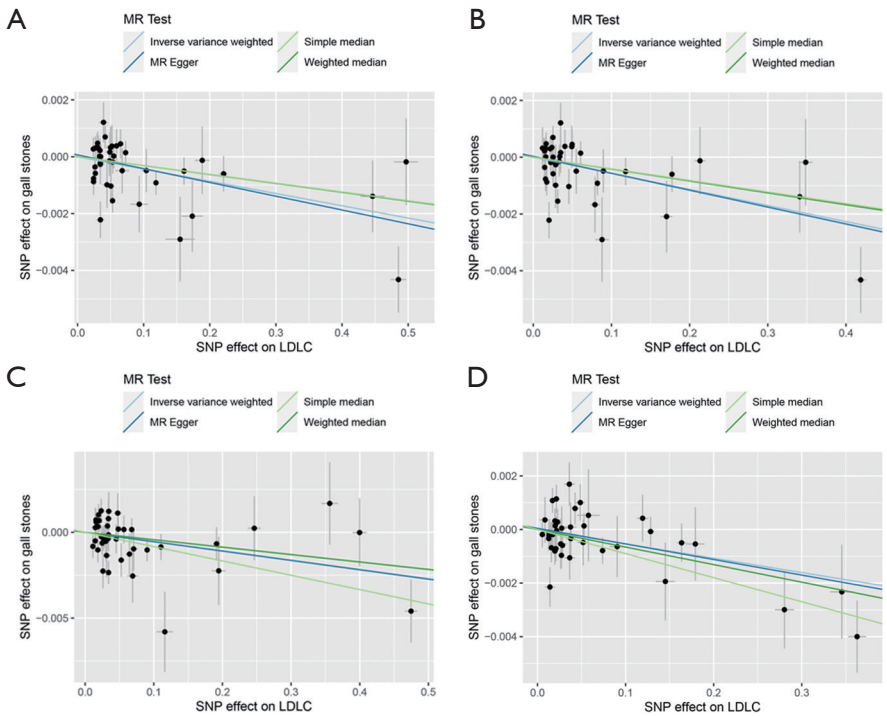

Figure S1 Comparison of the causal estimates between LDLC and gallstone disease from the various MR methods as sensitivity analysis. (A) Comparison of the two-sample MR analysis causal estimates between LDLC and gallstone disease from the Global Lipids Genetics Consortium and the UK Biobank cohort. (B) Comparison of the one-sample MR analysis causal estimates between LDLC and gallstone disease from the UK Biobank cohort. (C) Comparison of the one-sample MR analysis causal estimates between LDLC and gallstone disease from women-specify populations in the UK Biobank cohort. (D) Comparison of the one-sample MR analysis causal estimates between LDLC and gallstone disease from men-specify populations in the UK Biobank cohort. SNP, single-nucleotide polymorphism; MR, Mendelian randomization; LDLC, low-density lipoprotein cholesterol.

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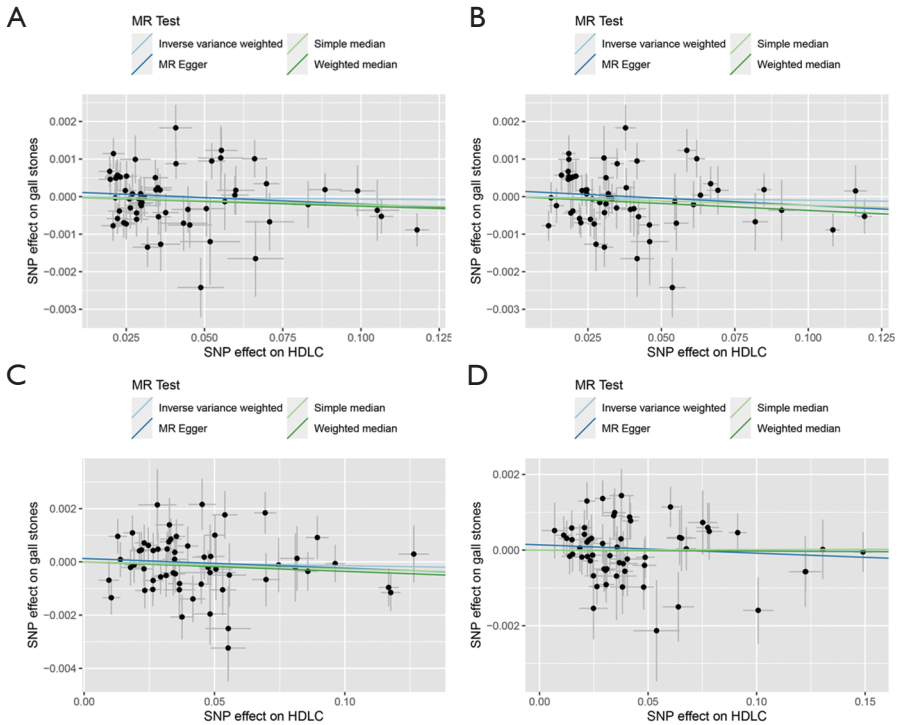

Figure S2 Comparison of the causal estimates between HDLC and gallstone disease from the various MR methods as sensitivity analysis. (A) Comparison of the two-sample MR analysis causal estimates between HDLC and gallstone disease from the Global Lipids Genetics Consortium and the UK Biobank cohort. (B) Comparison of the one-sample MR analysis causal estimates between HDLC and gallstone disease from the UK Biobank cohort. (C) Comparison of the one-sample MR analysis causal estimates between HDLC and gallstone disease from women-specify populations in the UK Biobank cohort. (D) Comparison of the one-sample MR analysis causal estimates between HDLC and gallstone disease from men-specify populations in the UK Biobank cohort. SNP, single-nucleotide polymorphism; MR, Mendelian randomization; HDLC, high-density lipoprotein cholesterol.

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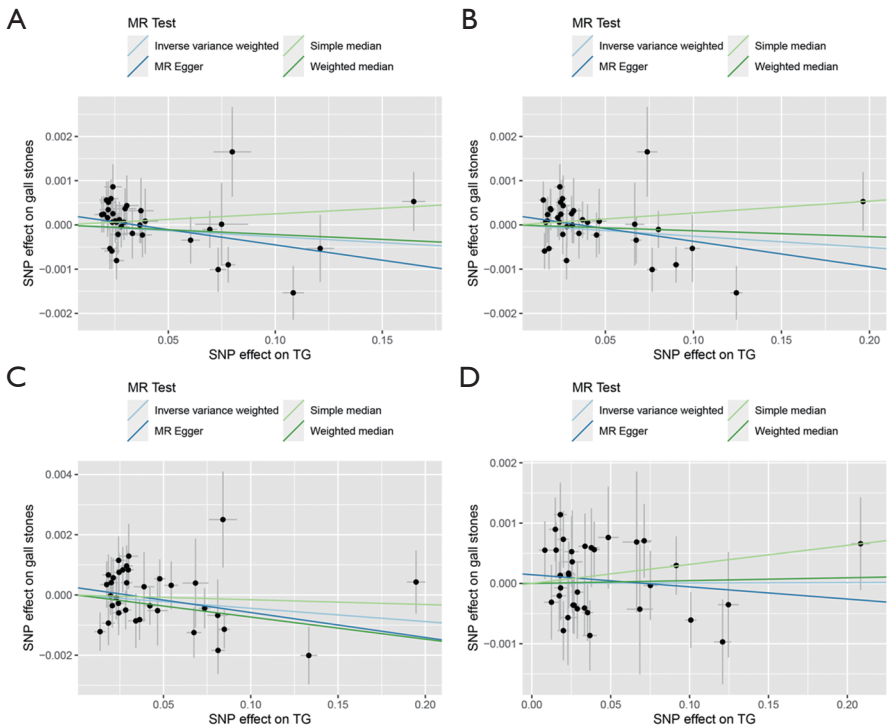

Figure S3 Comparison of the causal estimates between TGs and gallstone disease from the various MR methods as sensitivity analysis. (A) Comparison of the two-sample MR analysis causal estimates between TGs and gallstone disease from the Global Lipids Genetics Consortium and the UK Biobank cohort. (B) Comparison of the one-sample MR analysis causal estimates between TGs and gallstone disease from the UK Biobank cohort. (C) Comparison of the one-sample MR analysis causal estimates between TGs and gallstone disease from women-specify populations in the UK Biobank cohort. (D) Comparison of the one-sample MR analysis causal estimates between TGs and gallstone disease from men-specify populations in the UK Biobank cohort. SNP, single-nucleotide polymorphism; MR, Mendelian randomization; TG, triglyceride.

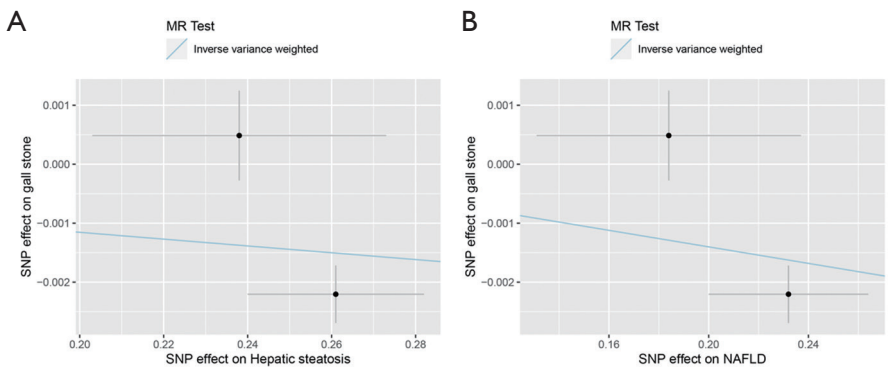

Figure S4 Comparison of the causal estimates between liver fat content and gallstone disease from the various MR methods as sensitivity analysis. (A) Comparison of the two-sample MR analysis causal estimates between hepatic steatosis and gallstone disease from the Genetics of Obesity-related Liver Disease and the UK Biobank cohort. (B) Comparison of the one-sample MR analysis causal estimates between non-alcoholic fatty liver disease and gallstone disease from the Old Order Amish, Age, Gene/Environment Susceptibility-Reykjavik study and the UK Biobank cohort. SNP, single-nucleotide polymorphism; MR, Mendelian randomization; NAFLD, non-alcoholic fatty liver disease.

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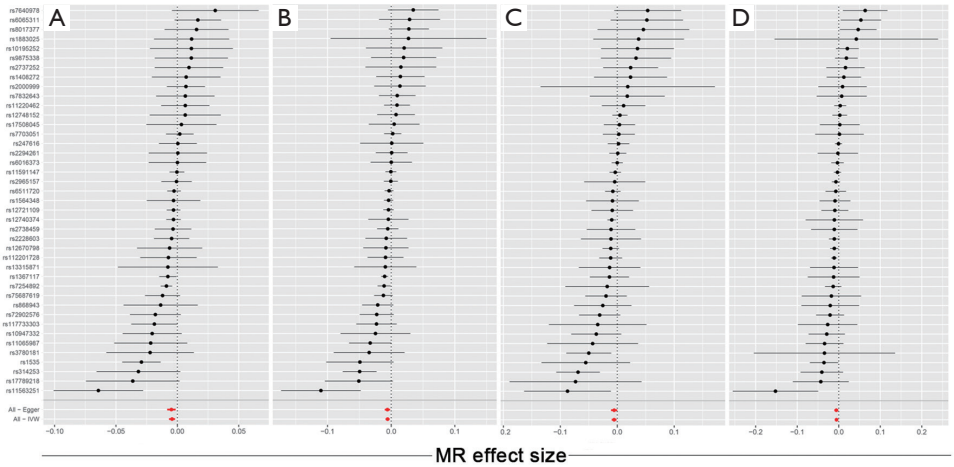

Figure S5 Forest plot of variant specific inverse variance estimates for causal association between LDLC and gallstone disease. (A) Variant specific inverse variance estimates for causal association between LDLC and gallstone disease from the Global Lipids Genetics Consortium and the UK Biobank cohort. (B) Variant specific inverse variance estimates for causal association between LDLC and gallstone disease from the UK Biobank cohort. (C) Variant specific inverse variance estimates for causal association between LDLC and gallstone disease from women-specify populations in the UK Biobank cohort. (D) Variant specific inverse variance estimates for causal association between LDLC and gallstone disease from men-specify populations in the UK Biobank cohort. IVW, inverse variance-weighting; LDLC, low-density lipoprotein cholesterol; MR, Mendelian randomization.

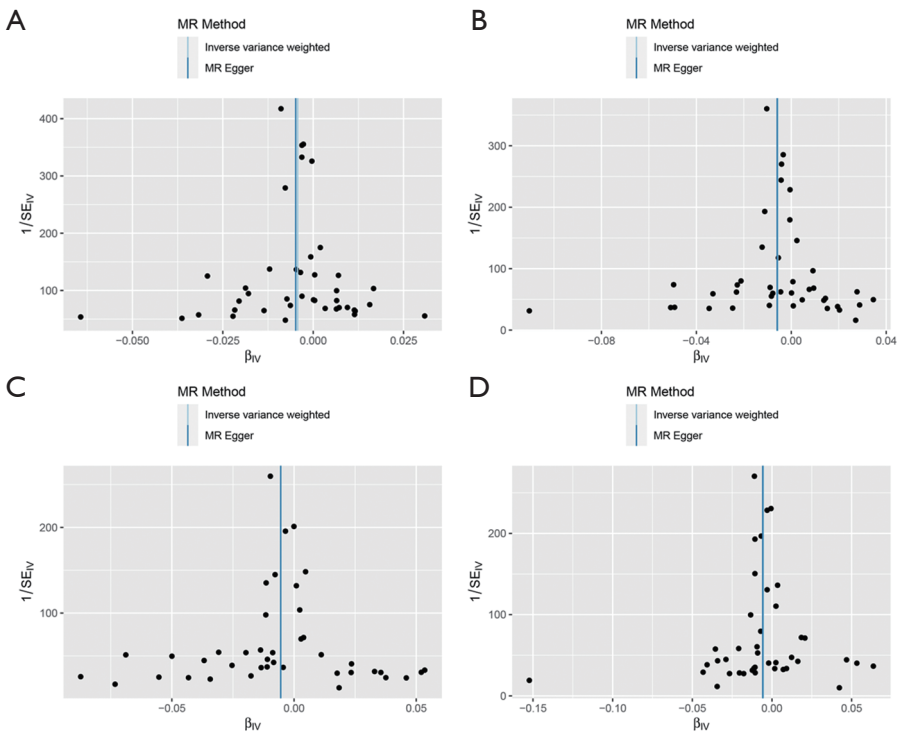

Figure S6 Funnel plot of causal association between LDLC and gallstone disease. (A) Funnel plot for causal association between LDLC and gallstone disease from the Global Lipids Genetics Consortium and the UK Biobank cohort. (B) Funnel plot for causal association between LDLC and gallstone disease from the UK Biobank cohort. (C) Funnel plot for causal association between LDLC and gallstone disease from women-specify populations in the UK Biobank cohort. (D) Funnel plot for causal association between LDLC and gallstone disease from men-specify populations in the UK Biobank cohort. LDLC, low-density lipoprotein cholesterol; MR, Mendelian randomization; SE, standard error.

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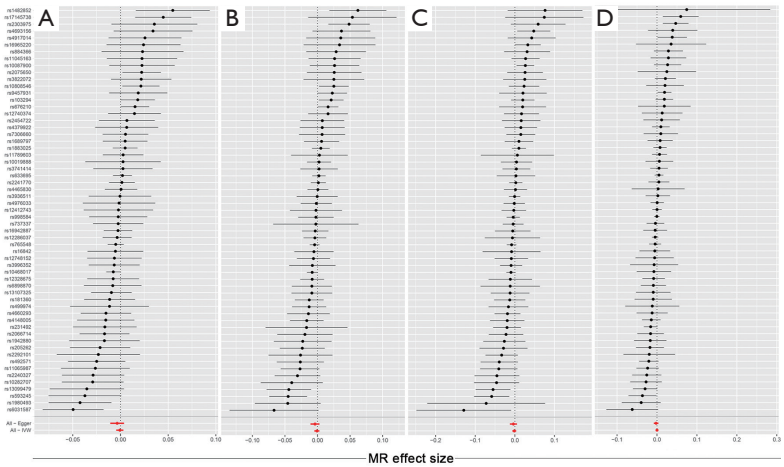

Figure S7 Forest plot of variant specific inverse variance estimates for causal association between HDLC and gallstone disease. (A) Variant specific inverse variance estimates for causal association between HDLC and gallstone disease from the Global Lipids Genetics Consortium and the UK Biobank cohort. (B) Variant specific inverse variance estimates for causal association between HDLC and gallstone disease from the UK Biobank cohort. (C) Variant specific inverse variance estimates for causal association between HDLC and gallstone disease from women-specify populations in the UK Biobank cohort. (D) Variant specific inverse variance estimates for causal association between HDLC and gallstone disease from men-specify populations in the UK Biobank cohort. HDLC, high-density lipoprotein cholesterol; IVW, inverse variance-weighting; MR, Mendelian randomization.

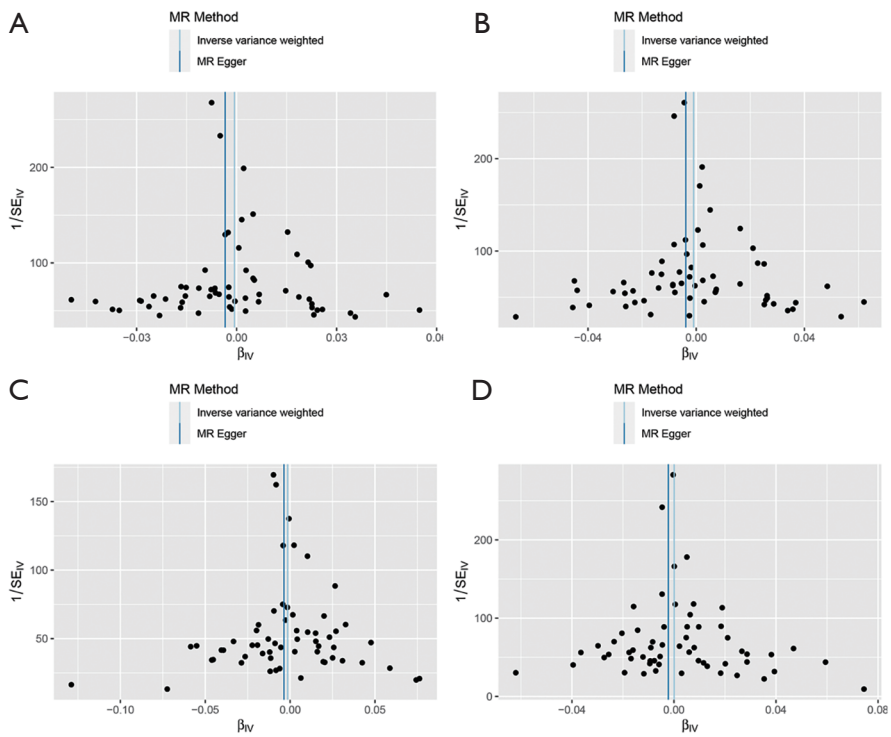

Figure S8 Funnel plot of causal association between HDLC and gallstone disease. (A) Funnel plot for causal association between HDLC and gallstone disease from the Global Lipids Genetics Consortium and the UK Biobank cohort. (B) Funnel plot for causal association between HDLC and gallstone disease from the UK Biobank cohort. (C) Funnel plot for causal association between HDLC and gallstone disease from women-specify populations in the UK Biobank cohort. (D) Funnel plot for causal association between HDLC and gallstone disease from men-specify populations in the UK Biobank cohort. HDLC, high-density lipoprotein cholesterol; MR, Mendelian randomization; SE, standard error.

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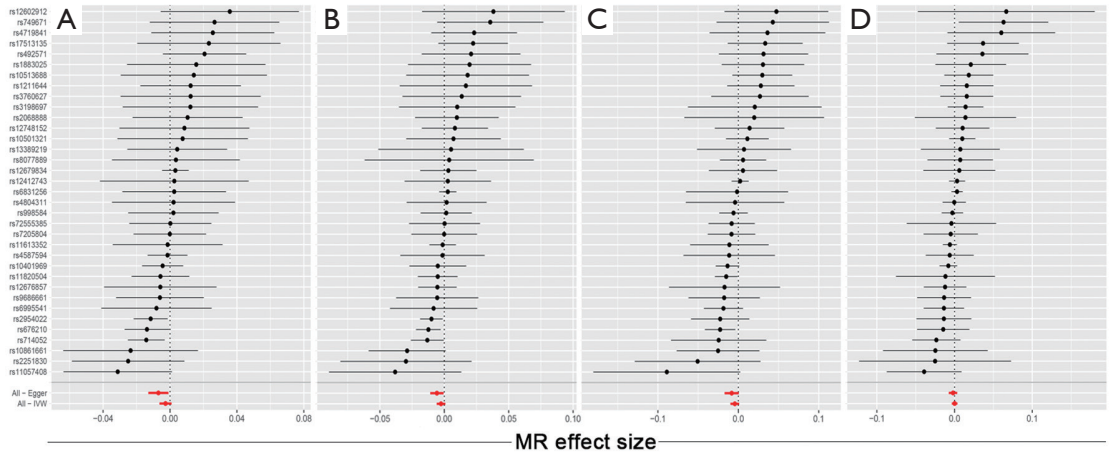

Figure S9 Forest plot of variant specific inverse variance estimates for causal association between triglycerides and gallstone disease. (A) Variant specific inverse variance estimates for causal association between triglycerides and gallstone disease from the Global Lipids Genetics Consortium and the UK Biobank cohort. (B) Variant specific inverse variance estimates for causal association between triglycerides and gallstone disease from the UK Biobank cohort. (C) Variant specific inverse variance estimates for causal association between triglycerides and gallstone disease from women-specify populations in the UK Biobank cohort. (D) Variant specific inverse variance estimates for causal association between triglycerides and gallstone disease from men-specify populations in the UK Biobank cohort. IVW, inverse variance-weighting; MR, Mendelian randomization.

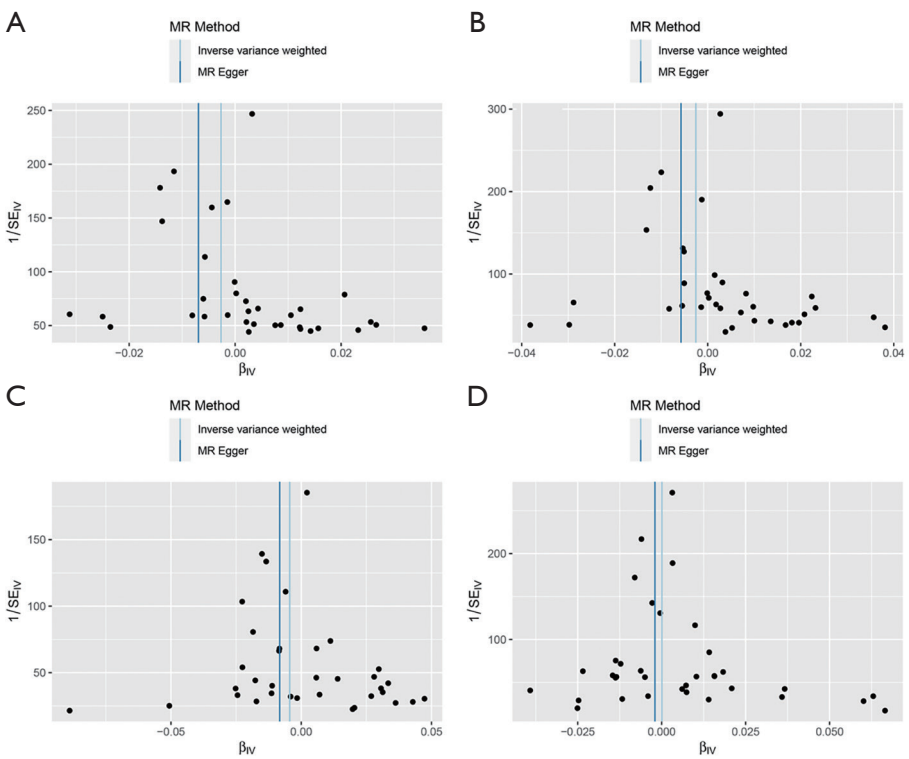

Figure S10 Funnel plot of causal association between triglycerides and gallstone disease. (A) Funnel plot for causal association between triglycerides and gallstone disease from the Global Lipids Genetics Consortium and the UK Biobank cohort. (B) Funnel plot for causal association between triglycerides and gallstone disease from the UK Biobank cohort. (C) Funnel plot for causal association between triglycerides and gallstone disease from women-specify populations in the UK Biobank cohort. (D) Funnel plot for causal association between triglycerides and gallstone disease from men-specify populations in the UK Biobank cohort. MR, Mendelian randomization; SE, standard error.

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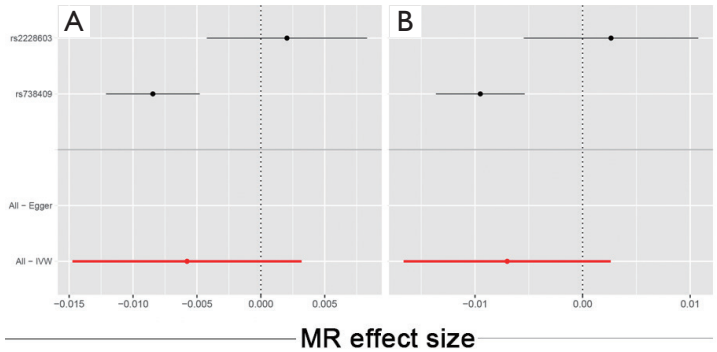

Figure S11 Forest plot of variant specific inverse variance estimates for causal association between liver fat content and gallstone disease. (A) Variant specific inverse variance estimates for causal association between hepatic steatosis and gallstone disease from the Genetics of Obesity-related Liver Disease and the UK Biobank cohort. (B) Variant specific inverse variance estimates for causal association between non-alcoholic fatty liver disease and gallstone disease from the Old Order Amish, Age, Gene/Environment Susceptibility-Reykjavik study and the UK Biobank cohort. IVW, inverse variance-weighting; MR, Mendelian randomization.

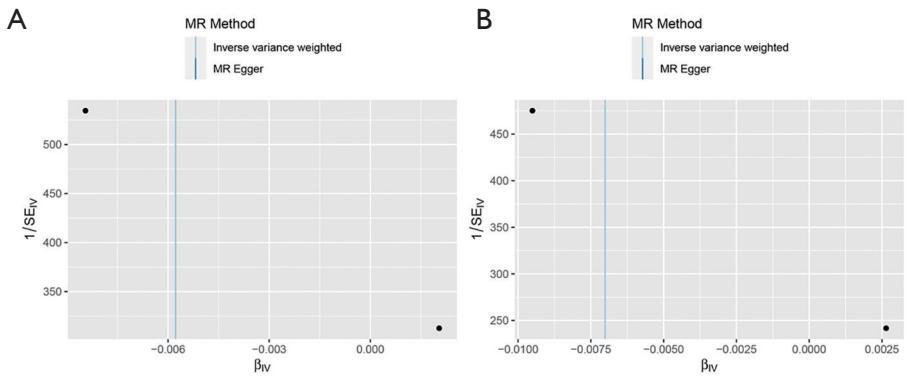

Figure S12 Funnel plot of causal association between liver fat content and gallstone disease. (A) Funnel plot for causal association between hepatic steatosis and gallstone disease from the Genetics of Obesity-related Liver Disease and the UK Biobank cohort. (B) Funnel plot for causal association between non-alcoholic fatty liver disease and gallstone disease from the Old Order Amish, Age, Gene/Environment Susceptibility-Reykjavik study and the UK Biobank cohort. MR, Mendelian randomization; SE, standard error.

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Table S5 Mendelian randomization estimations showing the effect of lipid profiles on GSD in combined sex

Exposure	Methods	Odds ratio[a]	95% CI		P value	Ph	Q-statistics
LDLC	IVW	0.994	0.991	0.997	4.15E–04	1.03E–02	63.5
	MR-Egger	0.994	0.990	0.998	7.03E–03	7.98E–03	63.4
	Weighted median	0.996	0.992	1.000	3.70E–02	–	–
	Simple median	0.996	0.991	1.001	1.02E–01	–	–
	MR-Egger intercept[b]	0.0001	–0.0002	0.0003	8.32E–01	–	–
HDLC	IVW	0.999	0.995	1.003	6.25E–01	2.91E–04	102.4
	MR-Egger	0.996	0.989	1.003	2.71E–01	3.26E–04	100.6
	Weighted median	0.996	0.992	1.001	1.21E–01	–	–
	Simple median	0.998	0.993	1.003	3.67E–01	–	–
	MR-Egger intercept[b]	0.0002	–0.0001	0.0004	3.16E–01	–	–
Triglycerides	IVW	0.997	0.994	1.001	1.30E–01	3.87E–01	35.7
	MR-Egger	0.994	0.989	0.999	3.52E–02	4.55E–01	33.2
	Weighted median	0.999	0.993	1.004	6.36E–01	–	–
	Simple median	1.003	0.996	1.009	4.29E–01	–	–
	MR-Egger intercept[b]	0.0001	–0.0001	0.0005	1.25E–01	–	–

[a], odds ratio per 1 SD increase; [b], regression coefficient (95% CI). CI, confidence interval; GSD, gallstone disease; IVW, inverse variance-weighting; LDLC, low-density lipoprotein cholesterol; HDLC, high-density lipoprotein cholesterol; MR, Mendelian randomization; Ph, P value for heterogeneity; SD, standard deviation.

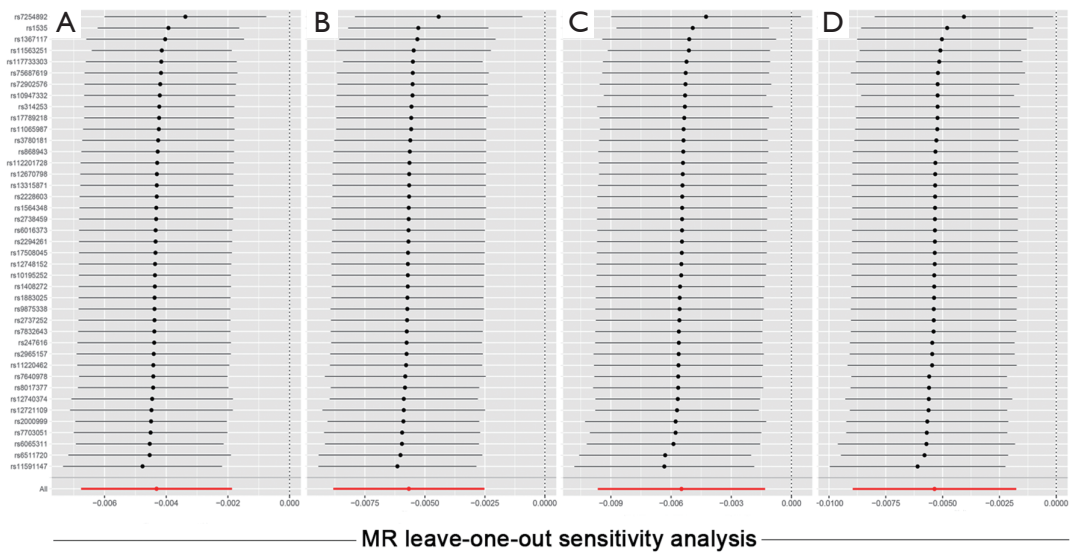

Figure S13 Leave-one-out plot to assess if a single variant is driving the association between LDLC and gallstone disease. (A) Leave-one-out plot to assess the two-sample MR causal estimation between LDLC and gallstone disease from the Global Lipids Genetics Consortium and the UK Biobank cohort. (B) Leave-one-out plot to assess the one-sample MR analysis causal estimation between LDLC and gallstone disease from the UK Biobank cohort. (C) Leave-one-out plot to assess the one-sample MR analysis causal estimation between LDLC and gallstone disease from women-specify populations in the UK Biobank cohort. (D) Leave-one-out plot to assess the one-sample MR analysis causal estimation between LDLC and gallstone disease from men-specify populations in the UK Biobank cohort. MR, Mendelian randomization; LDLC, low-density lipoprotein cholesterol.

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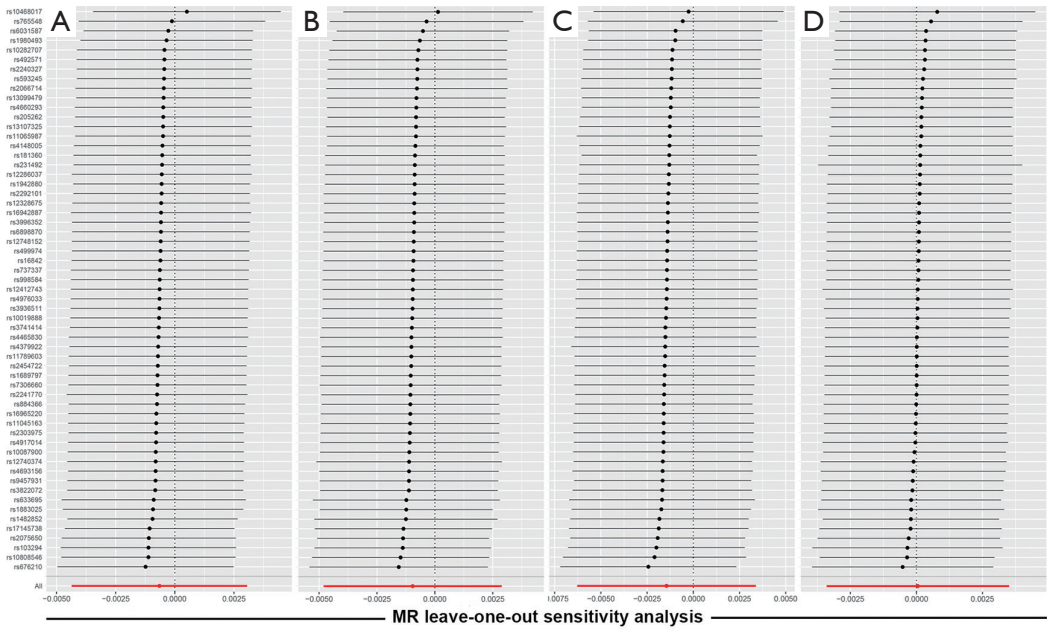

Figure S14 Leave-one-out plot to assess if a single variant is driving the association between HDLC and gallstone disease. (A) Leave-one-out plot to assess the two-sample MR causal estimation between HDLC and gallstone disease from the Global Lipids Genetics Consortium and the UK Biobank cohort. (B) Leave-one-out plot to assess the one-sample MR analysis causal estimation between HDLC and gallstone disease from the UK Biobank cohort. (C) Leave-one-out plot to assess the one-sample MR analysis causal estimation between HDLC and gallstone disease from women-specify populations in the UK Biobank cohort. (D) Leave-one-out plot to assess the one-sample MR analysis causal estimation between HDLC and gallstone disease from men-specify populations in the UK Biobank cohort. MR, Mendelian randomization; HDLC, high-density lipoprotein cholesterol.

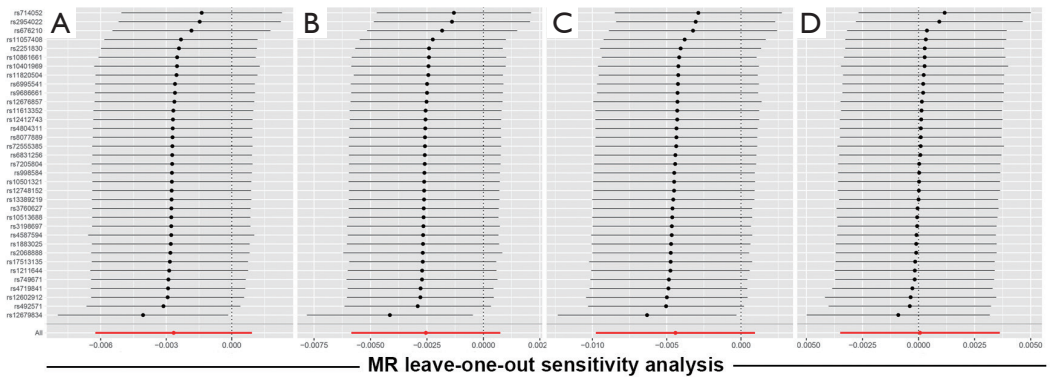

Figure S15 Leave-one-out plot to assess if a single variant is driving the association between triglycerides and gallstone disease. (A) Leave-one-out plot to assess the two-sample MR causal estimation between triglycerides and gallstone disease from the Global Lipids Genetics Consortium and the UK Biobank cohort. (B) Leave-one-out plot to assess the one-sample MR analysis causal estimation between triglycerides and gallstone disease from the UK Biobank cohort. (C) Leave-one-out plot to assess the one-sample MR analysis causal estimation between triglycerides and gallstone disease from women-specify populations in the UK Biobank cohort. (D) Leave-one-out plot to assess the one-sample MR analysis causal estimation between triglycerides and gallstone disease from men-specify populations in the UK Biobank cohort. MR, Mendelian randomization.

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Table S6 Multivariable mendelian randomization estimations showing the effect of plasma lipid profiles on GSD

Exposure	Odds ratio[a]	95% CI		P value
LDL-cholesterol				
Two-sample MR[b]	1.001	1.000	1.003	1.18E−01
Combined[c]	0.993	0.990	0.996	0.00E+00
Men[c]	0.995	0.991	0.998	1.00E−03
Women[c]	0.992	0.989	0.996	0.00E+00
HDL-cholesterol				
Two-sample MR[b]	0.998	0.995	1.001	2.18E−01
Combined[c]	0.998	0.996	1.001	1.30E−01
Men[c]	1.001	0.999	1.004	3.36E−01
Women[c]	0.996	0.993	0.999	1.30E−02
Triglycerides				
Two-sample MR[b]	1.005	1.001	1.008	1.20E−02
Combined[c]	0.999	0.996	1.002	6.28E−01
Men[c]	1.002	0.999	1.005	2.60E−01
Women[c]	0.998	0.993	1.002	2.88E−01

[a], odds ratio per 1 SD increase; [b], two-sample MR between GLGC and UK Biobank; [c], one-sample MR in UK Biobank. CI, confidence interval; GLGC, Global Lipids Genetics Consortium; GSD, gallstone disease; LDL, low-density lipoprotein; HDL, high-density lipoprotein; MR, Mendelian randomization; SD, standard deviation.

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