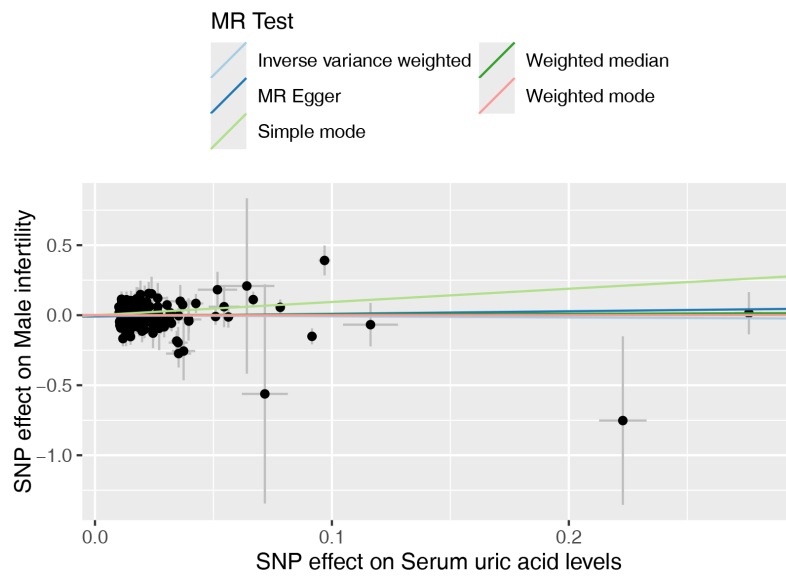




**Table S2** Associations of SNPs with male infertility on serum uric acid levels

SNP	chr	pos	EA	OA	R <sup>2</sup>	F	Exposure			Outcome		
							Beta	SE	P	Beta	SE	P
rs113678355	17	13164105	T	C	0.000329081	24.18785	0.3246	0.066	8.76294E-07	-0.0011	0.0022	0.6030
rs114146352	5	149836896	A	G	0.000388708	28.57223	0.7104	0.1329	8.931E-08	0.0005	0.0047	0.9173
rs12803569	11	130828219	T	C	0.000310912	22.85201	1.2955	0.271	1.75198E-06	-0.0032	0.0061	0.5965
rs12967471	18	11578128	A	G	0.000310542	22.82482	0.2943	0.0616	0.000001737	-0.0012	0.0022	0.5917
rs1334881	1	65822517	C	G	0.000295542	21.72196	-0.2624	0.0563	3.13199E-06	0.0038	0.0019	0.0457
rs144301968	9	89387012	A	G	0.000287297	21.11577	2.265	0.4929	4.31698E-06	0.0124	0.0099	0.2085
rs35240977	2	17329729	A	G	0.000297273	21.84924	-0.2828	0.0605	2.95202E-06	0.002	0.0025	0.4279
rs4943344	13	36433036	C	T	0.000310002	22.78509	0.3055	0.064	1.79602E-06	0.0026	0.0021	0.2206
rs75935512	6	17321367	A	G	0.000318570	23.41504	1.5296	0.3161	0.000001309	-0.0014	0.0041	0.7419
rs78211661	18	1071840	C	T	0.000319633	23.49319	2.5161	0.5191	1.25101E-06	0.0058	0.0079	0.4675

R<sup>2</sup> indicates the proportion of variance explained by each of the SNPs:  $R^2 = [2 \times \text{Beta}^2 \times (1 - \text{EAF}) \times \text{EAF}] / [2 \times \text{Beta}^2 \times (1 - \text{EAF}) \times \text{EAF} + 2 \times \text{SE}^2 \times N \times (1 - \text{EAF}) \times \text{EAF}]$ ; F-statistic for each of SNPs was calculated using the formula:  $R^2 \times (N - 2) / (1 - R^2)$ . SNP, single nucleotide polymorphism; EA, effect allele; OA, other allele; Beta, genetic effects of SNP on prescription opioid use; SE, standard error; EAF, effect allele frequency.



**Figure S1** The scatter plot of the effect of serum uric acid levels on male infertility. MR, Mendelian randomization; SNP, single nucleotide polymorphism.

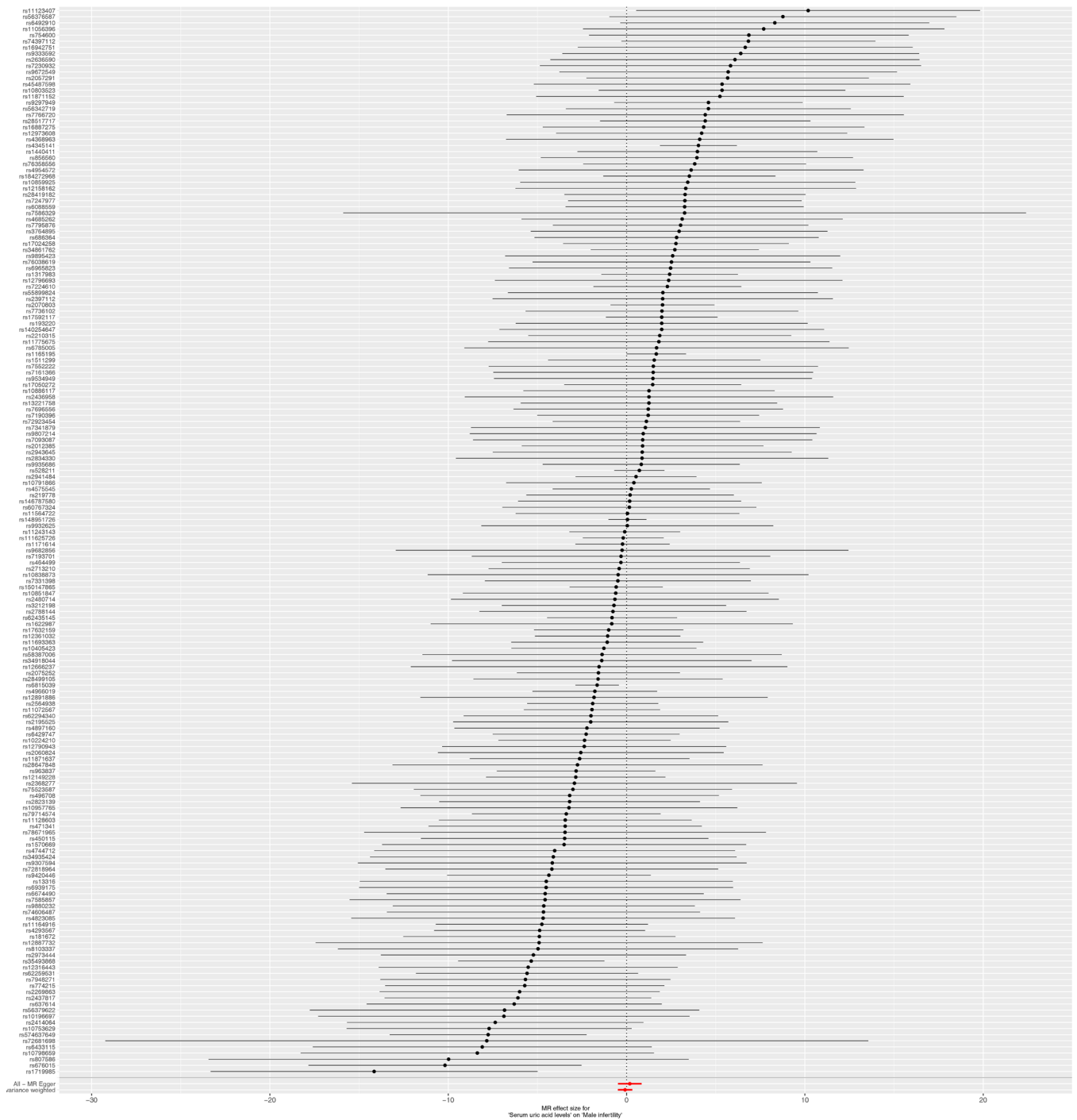


Figure S2 The forest plot of the effect of serum uric acid levels on male infertility. MR, Mendelian randomization.

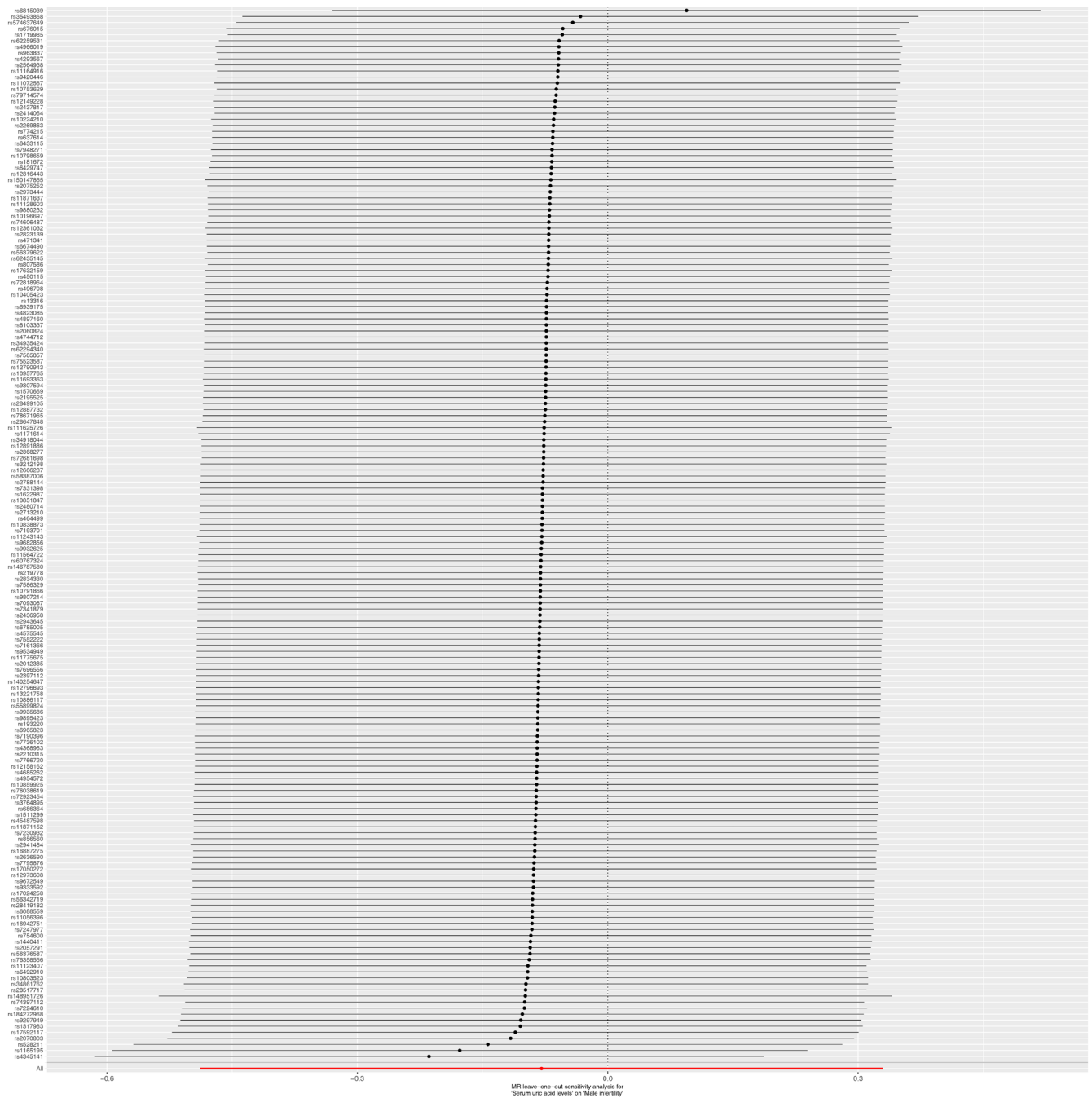
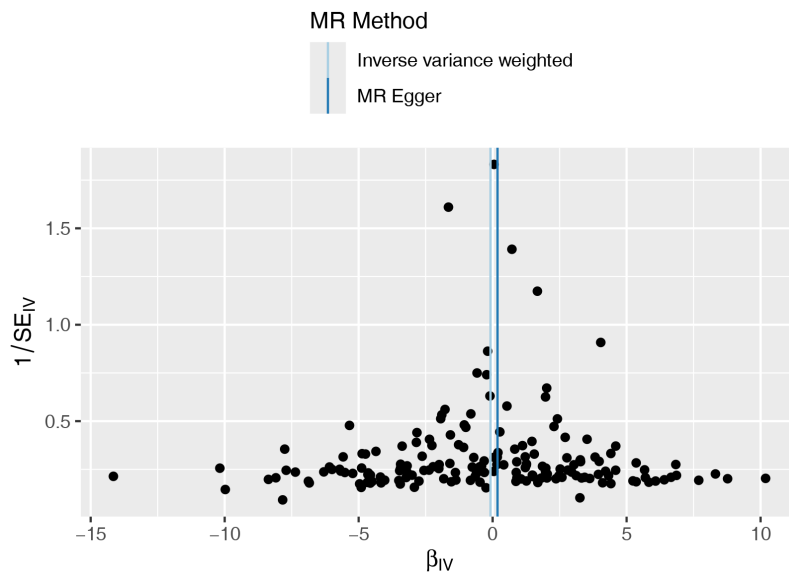
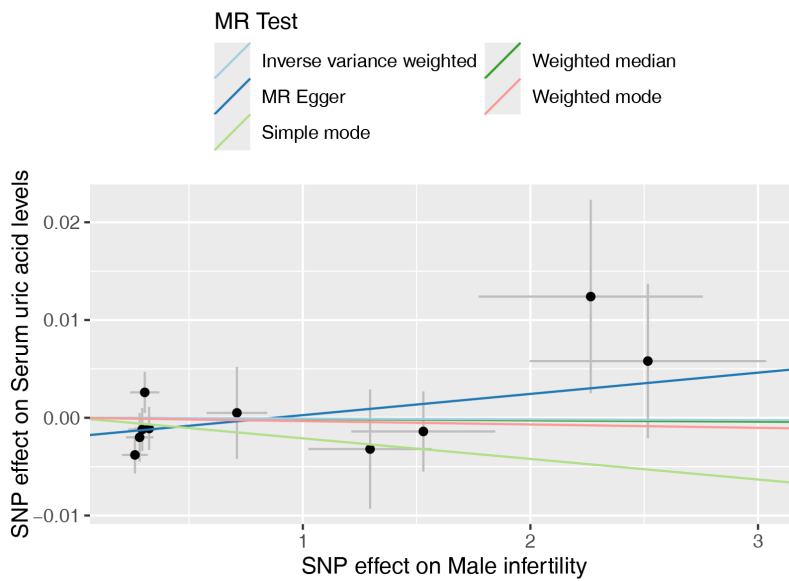


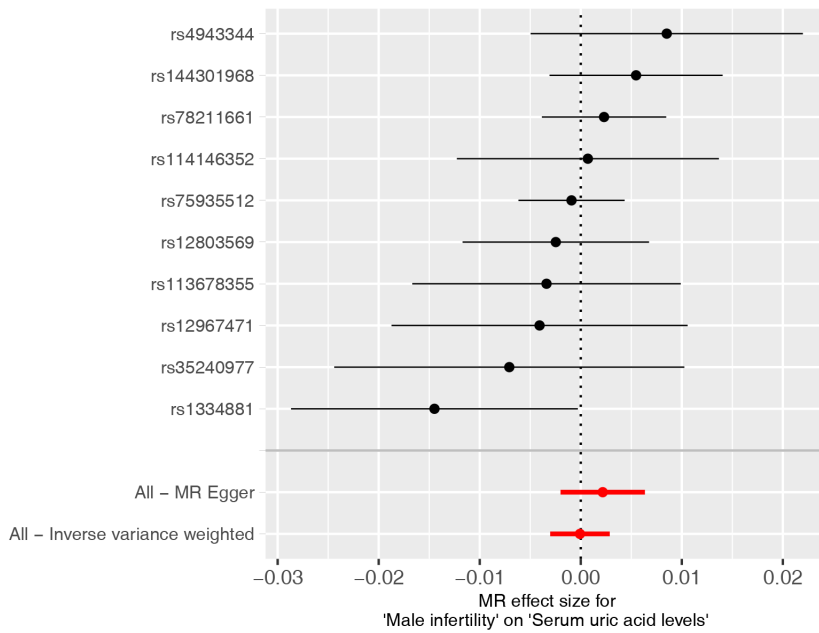
Figure S3 The leave-one-out plot of the effect of serum uric acid levels on male infertility. MR, Mendelian randomization.



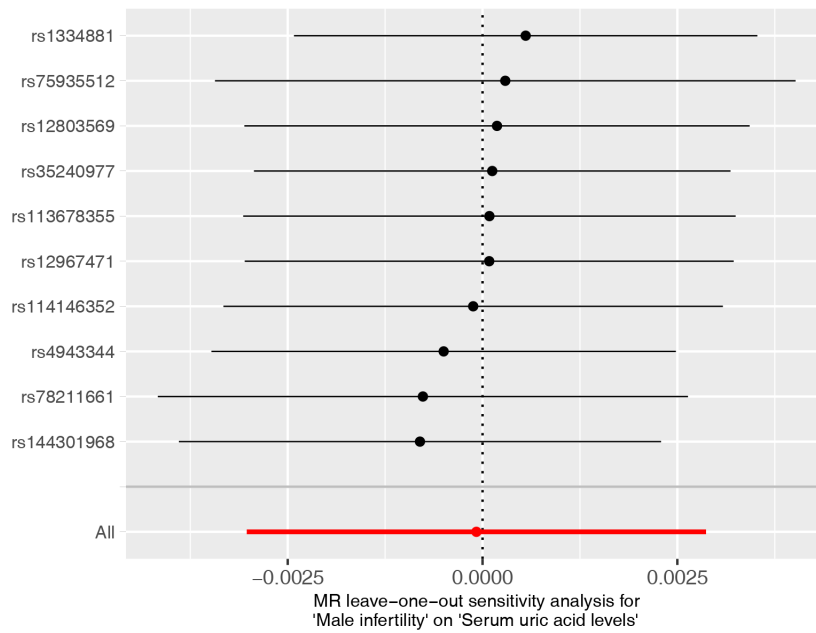
**Figure S4** The funnel plot of the effect of serum uric acid levels on male infertility. MR, Mendelian randomization; SE, standard error.



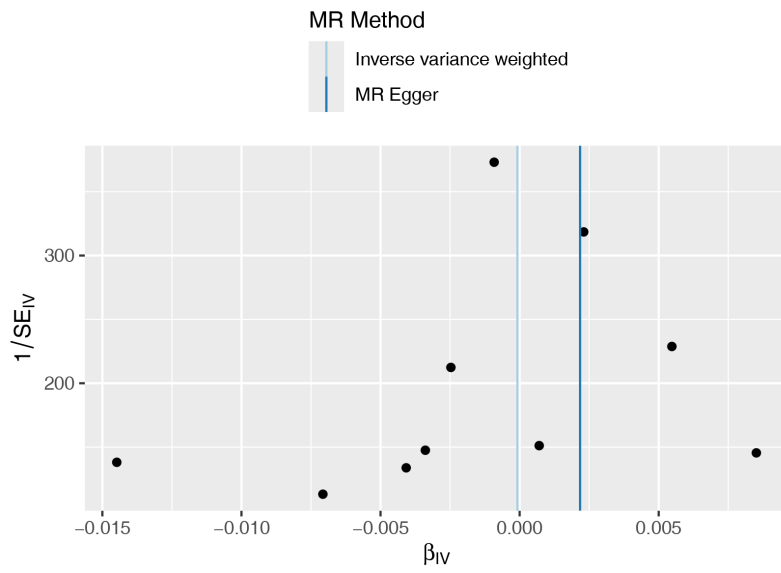
**Figure S5** The scatter plot of the effect of male infertility on serum uric acid levels. MR, Mendelian randomization; SNP, single nucleotide polymorphism.



**Figure S6** The forest plot of the effect of male infertility on serum uric acid levels. MR, Mendelian randomization.



**Figure S7** The leave-one-out plot of the effect of male infertility on serum uric acid levels. MR, Mendelian randomization.



**Figure S8** The funnel plot of the effect of male infertility on serum uric acid levels. MR, Mendelian randomization; SE, standard error.