

Table S4. h^2_g genetic correlation matrix estimates, standard errors, and models used.

Trait 1	Trait 2	Genetic Correlation	Standard Error	GCTA model
PC1	PC2	-0.36	0.17	Joint
PC1	PC3	-0.02	0.26	Joint
PC1	PC4	-0.38	0.15	Joint
PC1	PC5	-0.14	0.31	Joint
PC1	PC6	0.00	-	See Note
PC1	PC7	0.00	-	See Note
PC1	PC9	-0.09	0.20	Joint
PC1	PC10	0.19	0.55	Single Unrelateds
PC1	MidfaceModPC1	0.61	0.13	Joint
PC1	Allometry	-0.08	0.17	Joint
PC1	Centroid Size	0.16	0.27	Joint
PC1	T_R_T_L	0.46	0.17	Joint
PC1	N_T	0.00	-	See Note
PC1	SN_T	0.75	0.41	Single Unrelateds
PC1	GN_T	0.55	0.15	Joint
PC1	N_GN	0.00	-	See Note
PC1	N_STO	0.00	-	See Note
PC1	SN_GN	-0.52	0.38	Single Unrelateds
PC1	EN_R_EN_L	-0.18	0.84	Single Unrelateds
PC1	EX_R_EX_L	0.58	0.17	Joint
PC1	EN_EX	1.00	0.36	Joint
PC1	AL_R_AL_L	0.10	0.18	Joint
PC1	SBAL_R_SBAL_L	0.18	0.22	Joint
PC1	SN_PRN	-0.93	0.26	Joint
PC1	AC_PRN	-0.12	0.27	Joint
PC1	N_SN	0.00	-	See Note
PC1	N_PRN	-0.38	0.19	Joint
PC1	CH_R_CH_L	0.43	0.18	Joint
PC1	CPH_R_CPH_L	0.16	0.22	Joint
PC1	SN_LS	-0.56	0.13	Joint
PC1	SN_STO	-0.86	0.09	Joint
PC1	STO_SL	-1.00	0.12	Joint
PC1	STO_LI	-0.68	0.13	Joint
PC1	LI_SLI	-0.93	0.38	Joint
PC1	N_MEN	-0.09	0.29	Joint
PC2	PC3	1.00	1.35	Single Unrelateds
PC2	PC4	-0.02	0.17	Joint

PC2	PC5	0.15	0.29	Joint
PC2	PC6	0.54	0.28	Joint
PC2	PC7	0.07	0.14	Joint
PC2	PC9	-0.11	0.19	Joint
PC2	PC10	0.06	0.22	Joint
PC2	MidfaceModPC1	-0.54	0.10	Joint
PC2	Allometry	0.81	0.04	Joint
PC2	Centroid Size	0.02	0.24	Joint
PC2	T_R_T_L	-0.72	0.15	Joint
PC2	N_T	-0.63	0.14	Joint
PC2	SN_T	0.04	0.19	Joint
PC2	GN_T	0.39	0.16	Joint
PC2	N_GN	0.30	0.36	Joint
PC2	N_STO	1.00	0.68	Single Unrelateds
PC2	SN_GN	-0.24	0.26	Single Unrelateds
PC2	EN_R_EN_L	-1.00	0.08	Joint
PC2	EX_R_EX_L	0.00	-	<i>See Note</i>
PC2	EN_EX	-0.66	0.31	Joint
PC2	AL_R_AL_L	-0.41	0.13	Joint
PC2	SBAL_R_SBAL_L	-0.39	0.13	Joint
PC2	SN_PRN	0.10	0.29	Joint
PC2	AC_PRN	-0.51	0.22	Joint
PC2	N_SN	0.58	0.24	Joint
PC2	N_PRN	0.56	0.17	Joint
PC2	CH_R_CH_L	-0.41	0.13	Joint
PC2	CPH_R_CPH_L	-0.19	0.19	Joint
PC2	SN_LS	0.46	0.11	Joint
PC2	SN_STO	0.75	0.64	Single Unrelateds
PC2	STO_SL	-0.11	0.23	Joint
PC2	STO_LI	-0.28	0.18	Joint
PC2	LI_SLI	-0.04	0.30	Joint
PC2	N_MEN	-0.28	0.25	Joint
PC3	PC4	-0.21	0.22	Joint
PC3	PC5	0.09	0.40	Joint
PC3	PC6	0.03	0.42	Joint
PC3	PC7	1.00	6.56	Single Unrelateds
PC3	PC9	-0.29	0.28	Joint
PC3	PC10	0.31	0.34	Joint
PC3	MidfaceModPC1	-0.48	0.23	Joint
PC3	Allometry	1.00	1.05	Single Unrelateds
PC3	Centroid Size	0.21	0.33	Joint

PC3	T_R_T_L	-0.70	0.16	Joint
PC3	N_T	-0.02	0.34	Joint
PC3	SN_T	0.38	0.24	Joint
PC3	GN_T	1.00	1.25	Single Unrelateds
PC3	N_GN	-0.18	0.42	Joint
PC3	N_STO	0.26	0.28	Joint
PC3	SN_GN	-0.31	0.36	Joint
PC3	EN_R_EN_L	-0.76	0.26	Joint
PC3	EX_R_EX_L	-0.62	0.20	Joint
PC3	EN_EX	-0.24	0.36	Joint
PC3	AL_R_AL_L	-0.45	0.87	Single Unrelateds
PC3	SBAL_R_SBAL_L	-0.51	0.19	Joint
PC3	SN_PRN	-0.42	0.39	Joint
PC3	AC_PRN	-1.00	1.14	Single Unrelateds
PC3	N_SN	0.24	0.38	Joint
PC3	N_PRN	0.27	0.28	Joint
PC3	CH_R_CH_L	-0.48	0.20	Joint
PC3	CPH_R_CPH_L	-0.46	0.20	Joint
PC3	SN_LS	0.00	-	See Note
PC3	SN_STO	1.00	1.75	Single Unrelateds
PC3	STO_SL	0.64	3.20	Single Unrelateds
PC3	STO_LI	0.39	1.61	Single Unrelateds
PC3	LI_SLI	-0.09	0.43	Joint
PC3	N_MEN	-0.45	0.42	Joint
PC4	PC5	0.07	0.38	Single Unrelateds
PC4	PC6	-0.18	0.23	Joint
PC4	PC7	-0.04	0.20	Single Unrelateds
PC4	PC9	-1.00	0.62	Single Unrelateds
PC4	PC10	0.45	0.33	Single Unrelateds
PC4	MidfaceModPC1	0.14	0.18	Joint
PC4	Allometry	0.16	0.15	Joint
PC4	Centroid Size	1.00	0.84	Single Unrelateds
PC4	T_R_T_L	0.33	0.26	Single Unrelateds
PC4	N_T	0.00	-	See Note
PC4	SN_T	-0.08	0.41	Single Unrelateds
PC4	GN_T	-0.57	0.29	Single Unrelateds
PC4	N_GN	-1.00	0.82	Single Unrelateds
PC4	N_STO	0.46	0.45	Single Unrelateds
PC4	SN_GN	-0.68	0.21	Joint
PC4	EN_R_EN_L	0.27	0.31	Single Unrelateds
PC4	EX_R_EX_L	0.00	-	See Note

PC4	EN_EX	0.00	-	See Note
PC4	AL_R_AL_L	0.37	0.19	Single Unrelateds
PC4	SBAL_R_SBAL_L	0.67	0.26	Single Unrelateds
PC4	SN_PRN	0.16	0.24	Joint
PC4	AC_PRN	0.44	0.19	Joint
PC4	N_SN	0.00	-	See Note
PC4	N_PRN	0.49	0.27	Single Unrelateds
PC4	CH_R_CH_L	0.61	0.09	Joint
PC4	CPH_R_CPH_L	0.59	0.14	Joint
PC4	SN_LS	0.33	0.15	Joint
PC4	SN_STO	0.57	0.17	Joint
PC4	STO_SL	0.26	0.23	Joint
PC4	STO_LI	-0.18	0.16	Joint
PC4	LI_SLI	0.32	0.30	Single Unrelateds
PC4	N_MEN	0.00	-	See Note
PC5	PC6	0.52	0.60	Joint
PC5	PC7	0.36	0.31	Joint
PC5	PC9	-0.11	0.31	Joint
PC5	PC10	-0.37	0.39	Joint
PC5	MidfaceModPC1	0.26	0.28	Joint
PC5	Allometry	0.20	0.25	Joint
PC5	Centroid Size	-0.21	0.40	Joint
PC5	T_R_T_L	-0.32	0.26	Joint
PC5	N_T	-0.39	0.34	Joint
PC5	SN_T	-0.25	0.34	Joint
PC5	GN_T	-1.00	1.00	Single Unrelateds
PC5	N_GN	0.02	0.57	Joint
PC5	N_STO	0.03	0.33	Joint
PC5	SN_GN	0.23	0.41	Joint
PC5	EN_R_EN_L	-0.33	0.71	Single Unrelateds
PC5	EX_R_EX_L	-0.50	0.28	Joint
PC5	EN_EX	-0.76	0.34	Joint
PC5	AL_R_AL_L	0.37	0.34	Single Unrelateds
PC5	SBAL_R_SBAL_L	0.22	0.27	Joint
PC5	SN_PRN	0.34	0.39	Joint
PC5	AC_PRN	0.49	0.27	Joint
PC5	N_SN	-0.15	0.44	Joint
PC5	N_PRN	-0.18	0.36	Joint
PC5	CH_R_CH_L	0.25	0.37	Single Unrelateds
PC5	CPH_R_CPH_L	0.30	0.48	Single Unrelateds
PC5	SN_LS	0.08	0.57	Single Unrelateds

PC5	SN_STO	1.00	1.43	Single Unrelateds
PC5	STO_SL	0.05	0.53	Single Unrelateds
PC5	STO_LI	-0.16	0.44	Single Unrelateds
PC5	LI_SLI	-0.65	0.41	Joint
PC5	N_MEN	0.16	0.40	Joint
PC6	PC7	0.49	0.30	Joint
PC6	PC9	-0.22	0.38	Joint
PC6	PC10	0.35	0.43	Joint
PC6	MidfaceModPC1	-0.75	0.36	Joint
PC6	Allometry	0.57	0.33	Joint
PC6	Centroid Size	-0.13	0.43	Joint
PC6	T_R_T_L	-0.28	0.39	Joint
PC6	N_T	-0.45	0.43	Joint
PC6	SN_T	-0.59	1.00	Single Unrelateds
PC6	GN_T	0.24	0.32	Joint
PC6	N_GN	0.60	0.84	Single Unrelateds
PC6	N_STO	0.00	-	<i>See Note</i>
PC6	SN_GN	0.42	0.42	Joint
PC6	EN_R_EN_L	-0.40	0.69	Single Unrelateds
PC6	EX_R_EX_L	-0.94	0.69	Single Unrelateds
PC6	EN_EX	-1.00	0.68	Joint
PC6	AL_R_AL_L	-0.06	0.29	Joint
PC6	SBAL_R_SBAL_L	-0.24	0.33	Joint
PC6	SN_PRN	0.00	-	<i>See Note</i>
PC6	AC_PRN	-0.42	0.51	Single Unrelateds
PC6	N_SN	0.00	-	<i>See Note</i>
PC6	N_PRN	-0.22	0.56	Single Unrelateds
PC6	CH_R_CH_L	-0.43	0.31	Joint
PC6	CPH_R_CPH_L	-0.33	0.33	Joint
PC6	SN_LS	0.60	0.26	Joint
PC6	SN_STO	1.00	0.32	Joint
PC6	STO_SL	0.20	0.39	Joint
PC6	STO_LI	0.07	0.40	Joint
PC6	LI_SLI	0.07	0.54	Joint
PC6	N_MEN	-0.06	0.45	Joint
PC7	PC9	-0.17	0.17	Joint
PC7	PC10	0.11	0.21	Joint
PC7	MidfaceModPC1	-0.21	0.16	Joint
PC7	Allometry	0.12	0.14	Joint
PC7	Centroid Size	0.00	-	<i>See Note</i>
PC7	T_R_T_L	0.00	-	<i>See Note</i>

PC7	N_T	-0.30	1.06	Single Unrelateds
PC7	SN_T	-0.35	0.45	Single Unrelateds
PC7	GN_T	-0.19	0.18	Joint
PC7	N_GN	0.23	0.29	Joint
PC7	N_STO	0.00	-	See Note
PC7	SN_GN	0.01	0.24	Joint
PC7	EN_R_EN_L	0.00	-	See Note
PC7	EX_R_EX_L	0.00	-	See Note
PC7	EN_EX	-0.45	0.29	Joint
PC7	AL_R_AL_L	0.49	0.13	Joint
PC7	SBAL_R_SBAL_L	0.17	0.19	Joint
PC7	SN_PRN	0.00	-	See Note
PC7	AC_PRN	0.08	0.27	Single Unrelateds
PC7	N_SN	0.00	-	See Note
PC7	N_PRN	0.05	0.18	Joint
PC7	CH_R_CH_L	-0.37	0.14	Joint
PC7	CPH_R_CPH_L	-0.39	0.15	Joint
PC7	SN_LS	0.32	0.15	Joint
PC7	SN_STO	0.60	0.16	Joint
PC7	STO_SL	0.28	0.21	Joint
PC7	STO_LI	0.21	0.20	Joint
PC7	LI_SLI	0.00	-	See Note
PC7	N_MEN	-0.18	0.24	Joint
PC9	PC10	-0.23	0.26	Joint
PC9	MidfaceModPC1	-0.22	0.20	Joint
PC9	Allometry	-0.38	0.17	Joint
PC9	Centroid Size	-0.61	0.39	Joint
PC9	T_R_T_L	-0.07	0.20	Joint
PC9	N_T	0.28	1.05	Single Unrelateds
PC9	SN_T	-0.49	0.67	Single Unrelateds
PC9	GN_T	0.24	0.20	Joint
PC9	N_GN	0.96	0.69	Joint
PC9	N_STO	-0.13	0.22	Joint
PC9	SN_GN	0.32	0.40	Single Unrelateds
PC9	EN_R_EN_L	-0.10	0.50	Single Unrelateds
PC9	EX_R_EX_L	-0.04	0.24	Joint
PC9	EN_EX	0.30	1.04	Single Unrelateds
PC9	AL_R_AL_L	-0.34	0.15	Joint
PC9	SBAL_R_SBAL_L	-0.11	0.21	Joint
PC9	SN_PRN	0.12	0.28	Joint
PC9	AC_PRN	-0.43	0.61	Single Unrelateds

PC9	N_SN	-0.04	0.28	Joint
PC9	N_PRN	0.05	0.21	Joint
PC9	CH_R_CH_L	-0.34	0.19	Joint
PC9	CPH_R_CPH_L	-0.50	0.20	Joint
PC9	SN_LS	-0.43	0.18	Joint
PC9	SN_STO	-0.25	0.24	Joint
PC9	STO_SL	0.13	0.25	Joint
PC9	STO_LI	0.25	0.22	Joint
PC9	LI_SLI	-0.03	0.35	Joint
PC9	N_MEN	-0.28	1.61	Single Unrelateds
PC10	MidfaceModPC1	0.32	0.29	Joint
PC10	Allometry	0.27	0.21	Joint
PC10	Centroid Size	0.91	0.63	Single Unrelateds
PC10	T_R_T_L	-0.01	0.26	Joint
PC10	N_T	0.02	0.28	Joint
PC10	SN_T	0.52	0.62	Single Unrelateds
PC10	GN_T	0.04	0.26	Joint
PC10	N_GN	-1.00	1.07	Single Unrelateds
PC10	N_STO	-0.35	0.32	Joint
PC10	SN_GN	-0.38	0.37	Single Unrelateds
PC10	EN_R_EN_L	-0.43	0.35	Single Unrelateds
PC10	EX_R_EX_L	0.42	0.46	Single Unrelateds
PC10	EN_EX	1.00	0.55	Joint
PC10	AL_R_AL_L	0.25	0.24	Joint
PC10	SBAL_R_SBAL_L	0.12	0.30	Joint
PC10	SN_PRN	-0.72	0.79	Single Unrelateds
PC10	AC_PRN	-0.03	0.36	Joint
PC10	N_SN	-0.67	0.45	Joint
PC10	N_PRN	-0.42	0.48	Single Unrelateds
PC10	CH_R_CH_L	0.29	0.27	Joint
PC10	CPH_R_CPH_L	0.39	0.27	Joint
PC10	SN_LS	0.36	0.23	Joint
PC10	SN_STO	0.07	0.31	Joint
PC10	STO_SL	-0.07	0.33	Joint
PC10	STO_LI	0.58	0.26	Joint
PC10	LI_SLI	0.64	0.55	Single Unrelateds
PC10	N_MEN	0.00	-	See Note
MidfaceModPC1	Allometry	-0.43	0.13	Joint
MidfaceModPC1	Centroid Size	0.21	0.29	Joint
MidfaceModPC1	T_R_T_L	0.64	0.29	Single Unrelateds
MidfaceModPC1	N_T	0.48	0.19	Joint

MidfaceModPC1	SN_T	-0.39	0.72	Single Unrelateds
MidfaceModPC1	GN_T	-0.19	0.21	Joint
MidfaceModPC1	N_GN	-0.53	0.29	Joint
MidfaceModPC1	N_STO	-0.56	0.29	Single Unrelateds
MidfaceModPC1	SN_GN	-0.13	0.31	Joint
MidfaceModPC1	EN_R_EN_L	0.53	0.28	Single Unrelateds
MidfaceModPC1	EX_R_EX_L	0.83	0.26	Single Unrelateds
MidfaceModPC1	EN_EX	1.00	1.19	Single Unrelateds
MidfaceModPC1	AL_R_AL_L	0.68	0.08	Joint
MidfaceModPC1	SBAL_R_SBAL_L	0.92	0.16	Single Unrelateds
MidfaceModPC1	SN_PRN	-0.46	0.33	Joint
MidfaceModPC1	AC_PRN	0.57	0.17	Joint
MidfaceModPC1	N_SN	0.00	-	See Note
MidfaceModPC1	N_PRN	-0.51	0.30	Single Unrelateds
MidfaceModPC1	CH_R_CH_L	1.00	0.02	Joint
MidfaceModPC1	CPH_R_CPH_L	0.57	0.15	Joint
MidfaceModPC1	SN_LS	-0.44	0.14	Joint
MidfaceModPC1	SN_STO	-0.64	0.14	Joint
MidfaceModPC1	STO_SL	-0.54	0.24	Joint
MidfaceModPC1	STO_LI	-0.31	0.22	Joint
MidfaceModPC1	LI_SLI	-0.68	0.34	Joint
MidfaceModPC1	N_MEN	0.63	1.14	Single Unrelateds
Allometry	Centroid Size	0.40	0.19	Joint
Allometry	T_R_T_L	-0.57	0.14	Joint
Allometry	N_T	-0.56	0.18	Joint
Allometry	SN_T	0.22	0.17	Joint
Allometry	GN_T	0.33	0.15	Joint
Allometry	N_GN	-0.25	0.33	Joint
Allometry	N_STO	0.00	-	See Note
Allometry	SN_GN	-0.46	0.23	Single Unrelateds
Allometry	EN_R_EN_L	-0.89	0.48	Single Unrelateds
Allometry	EX_R_EX_L	0.00	-	See Note
Allometry	EN_EX	-0.42	0.24	Joint
Allometry	AL_R_AL_L	-0.16	0.14	Joint
Allometry	SBAL_R_SBAL_L	-0.38	0.16	Joint
Allometry	SN_PRN	-0.20	0.24	Joint
Allometry	AC_PRN	0.00	-	See Note
Allometry	N_SN	0.30	0.24	Joint
Allometry	N_PRN	0.60	0.27	Single Unrelateds
Allometry	CH_R_CH_L	-0.39	0.15	Joint
Allometry	CPH_R_CPH_L	0.00	0.19	Joint

Allometry	SN_LS	0.34	0.11	Joint
Allometry	SN_STO	0.15	0.14	Joint
Allometry	STO_SL	-0.11	0.21	Joint
Allometry	STO_LI	-0.08	0.20	Joint
Allometry	LI_SLI	-0.07	0.28	Joint
Allometry	N_MEN	0.00	-	See Note
Centroid Size	T_R_T_L	0.07	0.25	Joint
Centroid Size	N_T	-0.17	0.30	Joint
Centroid Size	SN_T	0.13	0.27	Joint
Centroid Size	GN_T	-0.19	0.28	Joint
Centroid Size	N_GN	-0.72	0.63	Joint
Centroid Size	N_STO	-0.06	0.28	Joint
Centroid Size	SN_GN	-0.58	0.44	Joint
Centroid Size	EN_R_EN_L	0.11	0.30	Joint
Centroid Size	EX_R_EX_L	0.26	0.30	Joint
Centroid Size	EN_EX	0.56	0.47	Joint
Centroid Size	AL_R_AL_L	1.00	0.86	Single Unrelateds
Centroid Size	SBAL_R_SBAL_L	0.84	0.67	Single Unrelateds
Centroid Size	SN_PRN	-0.58	0.42	Joint
Centroid Size	AC_PRN	-0.28	0.34	Joint
Centroid Size	N_SN	0.03	0.36	Joint
Centroid Size	N_PRN	0.08	0.28	Joint
Centroid Size	CH_R_CH_L	0.27	0.30	Joint
Centroid Size	CPH_R_CPH_L	0.66	0.66	Single Unrelateds
Centroid Size	SN_LS	-0.08	0.25	Joint
Centroid Size	SN_STO	-0.23	0.31	Joint
Centroid Size	STO_SL	0.08	0.34	Joint
Centroid Size	STO_LI	0.03	0.42	Single Unrelateds
Centroid Size	LI_SLI	0.10	0.44	Joint
Centroid Size	N_MEN	-1.00	0.52	Joint
T_R_T_L	N_T	0.52	0.20	Joint
T_R_T_L	SN_T	0.24	0.20	Joint
T_R_T_L	GN_T	-0.07	0.20	Joint
T_R_T_L	N_GN	-0.44	0.31	Joint
T_R_T_L	N_STO	-0.57	0.17	Joint
T_R_T_L	SN_GN	-0.24	0.27	Joint
T_R_T_L	EN_R_EN_L	0.66	0.19	Joint
T_R_T_L	EX_R_EX_L	0.90	0.14	Joint
T_R_T_L	EN_EX	0.90	0.28	Joint
T_R_T_L	AL_R_AL_L	0.26	0.29	Single Unrelateds
T_R_T_L	SBAL_R_SBAL_L	0.61	0.40	Single Unrelateds

T_R_T_L	SN_PRN	-0.19	0.27	Joint
T_R_T_L	AC_PRN	0.30	0.25	Joint
T_R_T_L	N_SN	-0.32	0.25	Joint
T_R_T_L	N_PRN	-0.26	0.19	Joint
T_R_T_L	CH_R_CH_L	0.46	0.19	Joint
T_R_T_L	CPH_R_CPH_L	0.56	0.39	Single Unrelateds
T_R_T_L	SN_LS	-0.55	0.18	Joint
T_R_T_L	SN_STO	-0.68	0.22	Joint
T_R_T_L	STO_SL	-0.18	0.37	Single Unrelateds
T_R_T_L	STO_LI	-0.52	0.34	Single Unrelateds
T_R_T_L	LI_SLI	0.05	0.33	Joint
T_R_T_L	N_MEN	0.07	0.27	Joint
N_T	SN_T	0.63	0.13	Joint
N_T	GN_T	1.00	2.28	Single Unrelateds
N_T	N_GN	-0.32	0.33	Joint
N_T	N_STO	-0.96	0.12	Joint
N_T	SN_GN	0.08	0.33	Joint
N_T	EN_R_EN_L	0.32	0.23	Joint
N_T	EX_R_EX_L	1.00	1.57	Single Unrelateds
N_T	EN_EX	0.00	-	See Note
N_T	AL_R_AL_L	-0.10	0.19	Joint
N_T	SBAL_R_SBAL_L	0.01	0.24	Joint
N_T	SN_PRN	-0.77	0.32	Joint
N_T	AC_PRN	-0.39	0.28	Joint
N_T	N_SN	-0.75	0.21	Joint
N_T	N_PRN	-0.62	0.16	Joint
N_T	CH_R_CH_L	0.03	0.23	Joint
N_T	CPH_R_CPH_L	-0.37	0.25	Joint
N_T	SN_LS	-0.41	0.11	Joint
N_T	SN_STO	-1.00	0.10	Joint
N_T	STO_SL	-0.49	0.26	Joint
N_T	STO_LI	0.23	1.06	Single Unrelateds
N_T	LI_SLI	-0.50	0.40	Joint
N_T	N_MEN	0.18	0.26	Joint
SN_T	GN_T	0.69	0.14	Joint
SN_T	N_GN	-0.64	0.20	Joint
SN_T	N_STO	-0.58	0.15	Joint
SN_T	SN_GN	-0.45	0.24	Joint
SN_T	EN_R_EN_L	-0.28	0.22	Joint
SN_T	EX_R_EX_L	0.15	0.22	Joint
SN_T	EN_EX	1.00	1.57	Single Unrelateds

SN_T	AL_R_AL_L	-0.30	0.17	Joint
SN_T	SBAL_R_SBAL_L	-0.24	0.21	Joint
SN_T	SN_PRN	-0.82	0.21	Joint
SN_T	AC_PRN	-0.47	0.21	Joint
SN_T	N_SN	-0.24	0.27	Joint
SN_T	N_PRN	-0.01	0.22	Joint
SN_T	CH_R_CH_L	-0.19	0.22	Joint
SN_T	CPH_R_CPH_L	-0.40	0.22	Joint
SN_T	SN_LS	-0.64	0.14	Joint
SN_T	SN_STO	-0.80	0.14	Joint
SN_T	STO_SL	-0.90	0.16	Joint
SN_T	STO_LI	-0.34	0.13	Joint
SN_T	LI_SLI	-0.78	0.40	Joint
SN_T	N_MEN	-0.19	0.25	Joint
GN_T	N_GN	0.06	0.37	Joint
GN_T	N_STO	-0.46	0.18	Joint
GN_T	SN_GN	0.15	0.47	Single Unrelateds
GN_T	EN_R_EN_L	-0.36	0.20	Joint
GN_T	EX_R_EX_L	-0.32	0.21	Joint
GN_T	EN_EX	-0.09	0.29	Joint
GN_T	AL_R_AL_L	-0.44	0.14	Joint
GN_T	SBAL_R_SBAL_L	0.00	-	See Note
GN_T	SN_PRN	-0.36	0.25	Joint
GN_T	AC_PRN	0.00	-	See Note
GN_T	N_SN	-0.41	0.26	Joint
GN_T	N_PRN	-0.31	0.19	Joint
GN_T	CH_R_CH_L	-0.45	0.15	Joint
GN_T	CPH_R_CPH_L	-0.35	0.16	Joint
GN_T	SN_LS	-0.13	0.19	Joint
GN_T	SN_STO	-0.41	0.24	Joint
GN_T	STO_SL	-1.00	0.16	Joint
GN_T	STO_LI	-0.46	0.15	Joint
GN_T	LI_SLI	-0.73	0.29	Joint
GN_T	N_MEN	0.15	0.27	Joint
N_GN	N_STO	0.15	0.37	Joint
N_GN	SN_GN	0.89	0.17	Joint
N_GN	EN_R_EN_L	0.36	0.51	Joint
N_GN	EX_R_EX_L	-0.56	0.33	Joint
N_GN	EN_EX	-1.00	0.59	Joint
N_GN	AL_R_AL_L	-0.50	0.39	Joint
N_GN	SBAL_R_SBAL_L	-0.47	0.40	Joint

N_GN	SN_PRN	1.00	0.45	Joint
N_GN	AC_PRN	0.14	0.45	Joint
N_GN	N_SN	-0.08	0.58	Joint
N_GN	N_PRN	-0.31	0.46	Joint
N_GN	CH_R_CH_L	-0.62	0.41	Joint
N_GN	CPH_R_CPH_L	-0.40	0.43	Joint
N_GN	SN_LS	0.17	0.32	Joint
N_GN	SN_STO	0.31	0.36	Joint
N_GN	STO_SL	0.65	0.36	Joint
N_GN	STO_LI	0.64	0.56	Single Unrelateds
N_GN	LI_SLI	0.56	0.58	Joint
N_GN	N_MEN	1.00	0.79	Joint
N_STO	SN_GN	-0.34	0.37	Joint
N_STO	EN_R_EN_L	-0.25	0.22	Joint
N_STO	EX_R_EX_L	-0.56	0.18	Joint
N_STO	EN_EX	-0.75	0.32	Joint
N_STO	AL_R_AL_L	-0.14	0.18	Joint
N_STO	SBAL_R_SBAL_L	-0.15	0.55	Single Unrelateds
N_STO	SN_PRN	0.81	0.27	Joint
N_STO	AC_PRN	0.10	0.28	Joint
N_STO	N_SN	0.85	0.10	Joint
N_STO	N_PRN	0.64	0.13	Joint
N_STO	CH_R_CH_L	-0.37	0.20	Joint
N_STO	CPH_R_CPH_L	-0.55	0.51	Single Unrelateds
N_STO	SN_LS	0.46	0.11	Joint
N_STO	SN_STO	0.96	0.06	Joint
N_STO	STO_SL	0.68	0.26	Joint
N_STO	STO_LI	0.36	0.25	Joint
N_STO	LI_SLI	0.75	0.39	Joint
N_STO	N_MEN	-0.06	0.28	Joint
SN_GN	EN_R_EN_L	0.38	0.37	Joint
SN_GN	EX_R_EX_L	-0.34	0.30	Joint
SN_GN	EN_EX	-0.89	0.48	Joint
SN_GN	AL_R_AL_L	-0.26	0.24	Joint
SN_GN	SBAL_R_SBAL_L	-0.29	0.32	Joint
SN_GN	SN_PRN	0.66	0.43	Joint
SN_GN	AC_PRN	-0.09	0.37	Joint
SN_GN	N_SN	-0.52	0.44	Joint
SN_GN	N_PRN	-0.74	0.34	Joint
SN_GN	CH_R_CH_L	-0.30	0.30	Joint
SN_GN	CPH_R_CPH_L	-0.30	0.33	Joint

SN_GN	SN_LS	-0.08	0.31	Joint
SN_GN	SN_STO	0.18	0.51	Single Unrelateds
SN_GN	STO_SL	0.47	0.31	Joint
SN_GN	STO_LI	0.06	0.20	Joint
SN_GN	LI_SLI	0.40	0.47	Joint
SN_GN	N_MEN	0.89	0.54	Joint
EN_R_EN_L	EX_R_EX_L	0.81	0.16	Joint
EN_R_EN_L	EN_EX	0.41	0.36	Joint
EN_R_EN_L	AL_R_AL_L	0.30	0.17	Joint
EN_R_EN_L	SBAL_R_SBAL_L	0.45	0.19	Joint
EN_R_EN_L	SN_PRN	-0.09	0.32	Joint
EN_R_EN_L	AC_PRN	0.36	0.25	Joint
EN_R_EN_L	N_SN	-0.24	0.30	Joint
EN_R_EN_L	N_PRN	-0.25	0.22	Joint
EN_R_EN_L	CH_R_CH_L	0.41	0.15	Joint
EN_R_EN_L	CPH_R_CPH_L	0.25	0.24	Joint
EN_R_EN_L	SN_LS	-0.29	0.19	Joint
EN_R_EN_L	SN_STO	-0.24	0.25	Joint
EN_R_EN_L	STO_SL	-0.04	0.29	Joint
EN_R_EN_L	STO_LI	-0.27	0.24	Joint
EN_R_EN_L	LI_SLI	-0.09	0.37	Joint
EN_R_EN_L	N_MEN	0.23	0.29	Joint
EX_R_EX_L	EN_EX	0.87	0.11	Joint
EX_R_EX_L	AL_R_AL_L	0.41	0.14	Joint
EX_R_EX_L	SBAL_R_SBAL_L	0.61	0.19	Joint
EX_R_EX_L	SN_PRN	-0.25	0.30	Joint
EX_R_EX_L	AC_PRN	0.49	0.28	Joint
EX_R_EX_L	N_SN	-0.42	0.27	Joint
EX_R_EX_L	N_PRN	-0.42	0.20	Joint
EX_R_EX_L	CH_R_CH_L	0.75	0.11	Joint
EX_R_EX_L	CPH_R_CPH_L	0.93	0.33	Single Unrelateds
EX_R_EX_L	SN_LS	-0.36	0.19	Joint
EX_R_EX_L	SN_STO	-0.61	0.20	Joint
EX_R_EX_L	STO_SL	-0.36	0.27	Joint
EX_R_EX_L	STO_LI	0.07	0.27	Joint
EX_R_EX_L	LI_SLI	-0.02	0.35	Joint
EX_R_EX_L	N_MEN	0.00	0.30	Joint
EN_EX	AL_R_AL_L	0.00	-	See Note
EN_EX	SBAL_R_SBAL_L	1.00	1.12	Single Unrelateds
EN_EX	SN_PRN	-0.47	0.42	Joint
EN_EX	AC_PRN	0.48	0.45	Joint

EN_EX	N_SN	-0.53	0.42	Joint
EN_EX	N_PRN	-0.48	0.31	Joint
EN_EX	CH_R_CH_L	0.51	0.66	Single Unrelateds
EN_EX	CPH_R_CPH_L	1.00	1.05	Single Unrelateds
EN_EX	SN_LS	-0.36	0.25	Joint
EN_EX	SN_STO	-0.81	0.24	Joint
EN_EX	STO_SL	-0.68	0.38	Joint
EN_EX	STO_LI	0.18	0.38	Joint
EN_EX	LI_SLI	-0.06	0.48	Joint
EN_EX	N_MEN	-0.17	0.39	Joint
AL_R_AL_L	SBAL_R_SBAL_L	0.89	0.15	Single Unrelateds
AL_R_AL_L	SN_PRN	0.00	0.22	Joint
AL_R_AL_L	AC_PRN	0.60	0.13	Joint
AL_R_AL_L	N_SN	-0.30	0.23	Joint
AL_R_AL_L	N_PRN	-0.27	0.17	Joint
AL_R_AL_L	CH_R_CH_L	0.48	0.11	Joint
AL_R_AL_L	CPH_R_CPH_L	0.34	0.12	Joint
AL_R_AL_L	SN_LS	0.04	0.18	Joint
AL_R_AL_L	SN_STO	0.05	0.22	Joint
AL_R_AL_L	STO_SL	-0.08	0.21	Joint
AL_R_AL_L	STO_LI	0.15	0.20	Joint
AL_R_AL_L	LI_SLI	-0.29	0.24	Joint
AL_R_AL_L	N_MEN	-0.26	0.21	Joint
SBAL_R_SBAL_L	SN_PRN	0.04	0.30	Joint
SBAL_R_SBAL_L	AC_PRN	0.81	0.24	Single Unrelateds
SBAL_R_SBAL_L	N_SN	-1.00	16.05	Single Unrelateds
SBAL_R_SBAL_L	N_PRN	-0.21	0.45	Single Unrelateds
SBAL_R_SBAL_L	CH_R_CH_L	1.00	0.06	Joint
SBAL_R_SBAL_L	CPH_R_CPH_L	0.42	0.15	Joint
SBAL_R_SBAL_L	SN_LS	-0.17	0.18	Joint
SBAL_R_SBAL_L	SN_STO	-0.19	0.25	Joint
SBAL_R_SBAL_L	STO_SL	-0.08	0.28	Joint
SBAL_R_SBAL_L	STO_LI	-0.03	0.24	Joint
SBAL_R_SBAL_L	LI_SLI	-0.38	0.31	Joint
SBAL_R_SBAL_L	N_MEN	0.09	0.29	Joint
SN_PRN	AC_PRN	0.49	0.28	Joint
SN_PRN	N_SN	0.67	0.31	Joint
SN_PRN	N_PRN	0.65	0.30	Joint
SN_PRN	CH_R_CH_L	-0.31	0.33	Joint
SN_PRN	CPH_R_CPH_L	-0.34	0.32	Joint
SN_PRN	SN_LS	0.26	0.29	Joint

SN_PRN	SN_STO	0.00	-	See Note
SN_PRN	STO_SL	0.36	0.36	Joint
SN_PRN	STO_LI	0.61	0.26	Joint
SN_PRN	LI_SLI	-0.14	0.48	Joint
SN_PRN	N_MEN	-0.23	0.41	Joint
AC_PRN	N_SN	0.41	0.39	Joint
AC_PRN	N_PRN	0.37	0.26	Joint
AC_PRN	CH_R_CH_L	0.45	0.18	Joint
AC_PRN	CPH_R_CPH_L	0.46	0.23	Joint
AC_PRN	SN_LS	-0.51	0.17	Joint
AC_PRN	SN_STO	-0.27	0.27	Joint
AC_PRN	STO_SL	-0.11	0.32	Joint
AC_PRN	STO_LI	-0.10	0.29	Joint
AC_PRN	LI_SLI	-0.42	0.42	Joint
AC_PRN	N_MEN	-0.26	0.40	Joint
N_SN	N_PRN	1.00	0.09	Joint
N_SN	CH_R_CH_L	0.00	-	See Note
N_SN	CPH_R_CPH_L	-0.09	0.31	Joint
N_SN	SN_LS	0.26	0.28	Joint
N_SN	SN_STO	0.53	0.35	Joint
N_SN	STO_SL	0.36	0.35	Joint
N_SN	STO_LI	0.27	0.35	Joint
N_SN	LI_SLI	0.29	0.45	Joint
N_SN	N_MEN	-0.09	0.37	Joint
N_PRN	CH_R_CH_L	-0.46	0.33	Single Unrelateds
N_PRN	CPH_R_CPH_L	-0.30	0.41	Single Unrelateds
N_PRN	SN_LS	0.27	0.42	Single Unrelateds
N_PRN	SN_STO	0.40	0.62	Single Unrelateds
N_PRN	STO_SL	0.10	0.27	Joint
N_PRN	STO_LI	-0.13	0.25	Joint
N_PRN	LI_SLI	0.31	0.35	Joint
N_PRN	N_MEN	-0.17	0.28	Joint
CH_R_CH_L	CPH_R_CPH_L	1.00	0.20	Single Unrelateds
CH_R_CH_L	SN_LS	-0.05	0.19	Joint
CH_R_CH_L	SN_STO	-0.15	0.20	Joint
CH_R_CH_L	STO_SL	-0.31	0.24	Joint
CH_R_CH_L	STO_LI	-0.01	0.17	Joint
CH_R_CH_L	LI_SLI	0.33	0.40	Single Unrelateds
CH_R_CH_L	N_MEN	-0.02	0.24	Joint
CPH_R_CPH_L	SN_LS	0.26	0.25	Joint
CPH_R_CPH_L	SN_STO	0.10	0.29	Joint

CPH_R_CPH_L	STO_SL	0.05	0.29	Joint
CPH_R_CPH_L	STO_LI	-0.12	0.25	Joint
CPH_R_CPH_L	LI_SLI	-0.23	0.35	Joint
CPH_R_CPH_L	N_MEN	-0.47	0.38	Joint
SN_LS	SN_STO	0.92	0.25	Single Unrelateds
SN_LS	STO_SL	0.56	0.25	Joint
SN_LS	STO_LI	0.43	0.18	Joint
SN_LS	LI_SLI	0.50	0.31	Joint
SN_LS	N_MEN	-0.41	0.25	Joint
SN_STO	STO_SL	1.00	0.27	Joint
SN_STO	STO_LI	0.35	0.26	Joint
SN_STO	LI_SLI	1.00	0.89	Single Unrelateds
SN_STO	N_MEN	-1.00	3.17	Single Unrelateds
STO_SL	STO_LI	0.50	0.22	Joint
STO_SL	LI_SLI	0.99	0.19	Joint
STO_SL	N_MEN	-0.25	0.34	Joint
STO_LI	LI_SLI	0.05	0.39	Joint
STO_LI	N_MEN	-0.22	0.31	Joint
LI_SLI	N_MEN	-0.65	0.53	Joint

Note: We estimated these 36 values based on both univariate and bivariate models of the traits affected. See Materials and Methods for details.