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Table S5.1. Unadjusted model showing the total, direct, and indirect effects of baseline sitting time (X) on 3-year changes in global cognition (Y) among **females** and the influence of each baseline cardiometabolic component (M) as a mediator in the relationship; data (unweighted analysis) derived from CLSA.

M	Effects, X (sitting) → M (CM) → Y (cog)		beta	SE	t	p	LL	UL
WC	Total		0.0077	0.0046	1.6705	0.0949	-0.0013	0.0167
	Direct		0.0084	0.0046	1.8227	0.0684	-0.0006	0.0175
	Indirect*		-0.0007	0.0004			-0.0001	0.0004
	Standardized Indirect*		-0.0016	0.0009			-0.0035	-0.0000
SBP	Total		0.0075	0.0046	1.6119	0.1070	-0.0016	0.0165
	Direct		0.0074	0.0046	1.5922	0.1114	-0.0017	0.0164
	Indirect*		0.0001	0.0001			-0.0000	0.0000
	Standardized Indirect*		0.0002	0.0003			-0.0002	0.0009
DBP	Total		0.0075	0.0046	1.6119	0.1070	-0.0016	0.0165
	Direct		0.0075	0.0046	1.6251	0.1042	-0.0016	0.0166
	Indirect*		-0.0001	0.0002			-0.0005	0.0003
	Standardized Indirect*		-0.0002	0.0005			-0.0011	0.0008
HDL	Total		0.0074	0.0049	1.5091	0.1313	-0.0022	0.0169
	Direct		0.0079	0.0049	1.6214	0.1050	-0.0017	0.0175
	Indirect*		-0.0006	0.0003			-0.0012	-0.0001
	Standardized Indirect*		-0.0012	0.0006			-0.0026	-0.0002
TG	Total		0.0074	0.0049	1.5091	0.1313	-0.0022	0.0169
	Direct		0.0074	0.0049	1.5117	0.1307	-0.0022	0.0169
	Indirect*		-0.0000	0.0001			-0.0002	0.0002
	Standardized Indirect*		-0.0000	0.0002			-0.0005	0.0004
HbA1c	Total		0.0072	0.0049	1.4683	0.1421	-0.0024	0.0168
	Direct		0.0072	0.0049	1.4671	0.1424	-0.0024	0.0168
	Indirect*		0.0000	0.0002			-0.0005	0.0005
	Standardized Indirect*		0.0000	0.0005			-0.0010	0.0011
cIMT	Total		0.0068	0.0049	1.3868	0.1656	-0.0028	0.0163
	Direct		0.0066	0.0049	1.3588	0.1742	-0.0029	0.0162
	Indirect*		0.0001	0.0001			-0.0001	0.0005
	Standardized Indirect*		0.0003	0.0003			-0.0002	0.0012

Global cognition (z-score) data were age- and education- standardized. Covariates included baseline global cognition (z-score). * 95% CI based on 1000 bootstrap samples. Abbreviations: M, mediator variable; CM, cardiometabolic or metabolic syndrome components; SE, standard error; t, t-test; p, p-value; LL, lower limit of 95% CI; UL, upper limit of 95% CI; WC, waist circumference; SBP, systolic blood pressure; HDL, high density lipoproteins; TG, triglycerides; HbA1C, glycosylated haemoglobin; cIMT, carotid intima-media thickness.

Table S5.2. Adjusted model showing the total, direct, and indirect effects of baseline sitting time (X) on 3-year changes in global cognition (Y) among **females** and the influence of each baseline cardiometabolic component (M) as a mediator in the relationship; data (unweighted analysis) derived from CLSA.

M	Effects, X (sitting) → M (CM) → Y (cog)	beta	SE	t	p	LL	UL
WC	Total	0.0080	0.0046	1.7364	0.0825	-0.0010	0.0171
	Direct	0.0087	0.0046	1.8844	0.0595	-0.0004	0.0178
	Indirect*	-0.0007	0.0004			-0.0015	-0.0000
	Standardized Indirect*	-0.0016	0.0009			-0.0033	-0.0000
SBP	Total	0.0078	0.0046	1.6751	0.0939	-0.0013	0.0169
	Direct	0.0077	0.0046	1.6573	0.0975	-0.0014	0.0168
	Indirect*	0.0001	0.0001			-0.0001	0.0004
	Standardized Indirect*	0.0002	0.0002			-0.0002	0.0008
DBP	Total	0.0078	0.0046	1.6751	0.0939	-0.0013	0.0169
	Direct	0.0079	0.0046	1.6913	0.0908	-0.0012	0.0170
	Indirect*	-0.0001	0.0002			-0.0005	0.0003
	Standardized Indirect*	-0.0002	0.0005			-0.0012	0.0007
HDL	Total	0.0076	0.0049	1.5464	0.1221	-0.0020	0.0171
	Direct	0.0081	0.0049	1.6628	0.0964	-0.0015	0.0177
	Indirect*	-0.0006	0.0003			-0.0012	-0.0001
	Standardized Indirect*	-0.0013	0.0006			-0.0026	-0.0003
TG	Total	0.0076	0.0049	1.5464	0.1221	-0.0020	0.0171
	Direct	0.0076	0.0049	1.5485	0.1215	-0.0020	0.0171
	Indirect*	-0.0000	0.0001			-0.0002	0.0002
	Standardized Indirect*	-0.0000	0.0002			-0.0005	0.0004
HbA1c	Total	0.0075	0.0049	1.5242	0.1275	-0.0021	0.0171
	Direct	0.0074	0.0049	1.5172	0.1293	-0.0022	0.0171
	Indirect*	0.0000	0.0002			-0.0004	0.0005
	Standardized Indirect*	0.0001	0.0005			-0.0009	0.0011
cIMT	Total	0.0070	0.0049	1.4212	0.1553	-0.0026	0.0165
	Direct	0.0069	0.0049	1.4011	0.1612	-0.0027	0.0164
	Indirect*	0.0001	0.0001			-0.0001	0.0004
	Standardized Indirect*	0.0002	0.0003			-0.0003	0.0009

Global cognition (z-score) data were age- and education- standardized. Covariates included baseline global cognition (z-score) and social support. * 95% CI based on 1000 bootstrap samples. Abbreviations: M, mediator variable; CM, cardiometabolic or metabolic syndrome components; SE, standard error; t, t-test; p, p-value; LL, lower limit of 95% CI; UL, upper limit of 95% CI; WC, waist circumference; SBP, systolic blood pressure; HDL, high density lipoproteins; TG, triglycerides; HbA1C, glycosylated haemoglobin; cIMT, carotid intima-media thickness.

Table S5.3. Unadjusted model showing the total, direct, and indirect effects of baseline sitting time (X) on 3-year changes in global cognition (Y) among **males** and the influence of each baseline cardiometabolic component (M) as a mediator in the relationship; data (unweighted analysis) derived from CLSA.

M	Effects, X (sitting) → M (CM) → Y (cog)		beta	SE	t	p	LL	UL
WC	Total		0.0133	0.0041	3.2846	0.0010	0.0054	0.0213
	Direct		0.0138	0.0041	3.4023	0.0007	0.0059	0.0218
	Indirect*		-0.0005	0.0002			-0.0010	-0.0001
	Standardized Indirect*		-0.0012	0.0006			-0.0025	-0.0002
SBP	Total		0.0135	0.0041	3.3182	0.0009	0.0055	0.0214
	Direct		0.0134	0.0041	3.3061	0.0010	0.0055	0.0214
	Indirect*		0.0000	0.0001			-0.0002	0.0003
	Standardized Indirect*		0.0001	0.0003			-0.0006	0.0009
DBP	Total		0.0135	0.0041	3.3182	0.0009	0.0055	0.0214
	Direct		0.0134	0.0041	3.3059	0.0010	0.0055	0.0214
	Indirect*		0.0000	0.0002			-0.0004	0.0005
	Standardized Indirect*		0.0001	0.0006			-0.0011	0.0013
HDL	Total		0.0124	0.0042	2.9383	0.0033	0.0041	0.0207
	Direct		0.0127	0.0042	3.0179	0.0026	0.0045	0.0210
	Indirect*		-0.0003	0.0002			-0.0008	-0.0000
	Standardized Indirect*		-0.0008	0.0005			-0.0020	-0.0001
TG	Total		0.0124	0.0042	2.9383	0.0033	0.0041	0.0207
	Direct		0.0125	0.0042	2.9607	0.0031	0.0042	0.0208
	Indirect*		-0.0001	0.0002			-0.0005	0.0002
	Standardized Indirect*		-0.0003	0.0004			-0.0012	0.0006
HbA1c	Total		0.0133	0.0042	3.1650	0.0016	0.0051	0.0216
	Direct		0.0126	0.0042	2.9859	0.0028	0.0043	0.0208
	Indirect*		0.0008	0.0003			0.0003	0.0014
	Standardized Indirect*		0.0019	0.0006			0.0008	0.0034
cIMT	Total		0.0143	0.0043	3.3654	0.0008	0.0060	0.0227
	Direct		0.0143	0.0043	3.3487	0.0008	0.0059	0.0226
	Indirect*		0.0000	0.0003			-0.0006	0.0006
	Standardized Indirect*		0.0001	0.0008			-0.0015	0.0016

Global cognition (z-score) data were age- and education- standardized. Covariates included baseline global cognition (z-score). * 95% CI based on 1000 bootstrap samples. Abbreviations: M, mediator variable; CM, cardiometabolic or metabolic syndrome components; SE, standard error; t, t-test; p, p-value; LL, lower limit of 95% CI; UL, upper limit of 95% CI; WC, waist circumference; SBP, systolic blood pressure; HDL, high density lipoproteins; TG, triglycerides; HbA1C, glycosylated haemoglobin; cIMT, carotid intima-media thickness.

Table S5.4. Adjusted model showing the total, direct, and indirect effects of baseline sitting time (X) on 3-year changes in global cognition (Y) among **males** and the influence of each baseline cardiometabolic component (M) as a mediator in the relationship; data (unweighted analysis) derived from CLSA.

M	Effects, X (sitting) → M (CM) → Y (cog)	beta	SE	t	p	LL	UL
WC	Total	0.0141	0.0041	3.4602	0.0005	0.0061	0.0220
	Direct	0.0145	0.0041	3.5744	0.0004	0.0066	0.0225
	Indirect*	-0.0005	0.0002			-0.0010	-0.0001
	Standardized Indirect*	-0.0012	0.0006			-0.0026	-0.0002
SBP	Total	0.0142	0.0041	3.4964	0.0005	0.0062	0.0222
	Direct	0.0142	0.0041	3.4851	0.0005	0.0062	0.0222
	Indirect*	0.0000	0.0002			-0.0003	0.0003
	Standardized Indirect*	0.0001	0.0004			-0.0007	0.0009
DBP	Total	0.0142	0.0041	3.4964	0.0005	0.0062	0.0222
	Direct	0.0142	0.0041	3.4877	0.0005	0.0062	0.0222
	Indirect*	0.0000	0.0002			-0.0004	0.0005
	Standardized Indirect*	0.0000	0.0006			-0.0011	0.0012
HDL	Total	0.0125	0.0042	2.9687	0.0030	0.0043	0.0208
	Direct	0.0129	0.0042	3.0484	0.0023	0.0046	0.0212
	Indirect*	-0.0003	0.0002			-0.0007	-0.0001
	Standardized Indirect*	-0.0009	0.0005			-0.0018	-0.0002
TG	Total	0.0125	0.0042	2.9687	0.0030	0.0043	0.0208
	Direct	0.0126	0.0042	2.9865	0.0028	0.0043	0.0209
	Indirect*	-0.0001	0.0002			-0.0005	0.0002
	Standardized Indirect*	-0.0002	0.0004			-0.0012	0.0006
HbA1c	Total	0.0135	0.0042	3.1964	0.0014	0.0052	0.0217
	Direct	0.0127	0.0042	3.0156	0.0026	0.0045	0.0210
	Indirect*	0.0008	0.0003			0.0003	0.0013
	Standardized Indirect*	0.0019	0.0007			0.0007	0.0033
cIMT	Total	0.0145	0.0043	3.4055	0.0007	0.0062	0.0229
	Direct	0.0145	0.0043	3.3989	0.0007	0.0061	0.0229
	Indirect*	-0.0000	0.0003			-0.0006	0.0006
	Standardized Indirect*	-0.0000	0.0008			-0.0015	0.0015

Global cognition (z-score) data were age- and education- standardized. Covariates included baseline global cognition (z-score) and social support. * 95% CI based on 1000 bootstrap samples. Abbreviations: M, mediator variable; CM, cardiometabolic or metabolic syndrome components; SE, standard error; t, t-test; p, p-value; LL, lower limit of 95% CI; UL, upper limit of 95% CI; WC, waist circumference; SBP, systolic blood pressure; HDL, high density lipoproteins; TG, triglycerides; HbA1C, glycosylated haemoglobin; cIMT, carotid intima-media thickness.