Supplementary Table 1 Clinical trials of cinnamon for CVDs and Diabetes.

Species	Materials	Design	Sample size (T/C) M/F	Age (years)	Diagnosis	Duration	Dose	Main results	Ref.
NR	cinnamon	R, PC	60 (30/30) M/F: 30/30	T: 52.0 ± 6.87 C: 52.0 ± 5.85	T2DM	40 days	1, 3, or 6 g, qd	Reduced mean fasting serum glucose, triglyceride, LDL cholesterol, and total cholesterol levels, no significant changes were noted in the placebo groups. Changes in HDL cholesterol were not significant.	15
C. cassia	aqueous extract of cinnamon (Cinnulin PF)	R, DB, PC	21 (11/10) M/F: NR	T: 45.8 ± 3.6 C: 45.6 ± 2.7	impaired fasting blood glucose with BMI ranging from 25 to 45	12 weeks	250 mg, bid	Increased FRAP and SH group oxidation, decreased plasma MDA levels. Effects were larger after 12 than 6 weeks.	16
C. zeylanicum	refined cinnamon	phase I clinical trial	28 M/F: 14/14	38.8 ± 10.4 (T/C: NR)	healthy adults	3 months	increased at monthly intervals (85 mg, 250 mg and 500 mg)	Both SBP and DBP reduced significantly. Full blood count, renal function tests, liver function tests, FBG, HDL-c, VLDL-c and triglycerides remained within the normal range without any significant alteration during the 3 months. A significant reduction in the TC and LDL-c. No serious adverse effects (including hypersensitivity) noted.	46

NR	cinnamon powder capsules	R, TB, PC	109 (55/54) M/F: 64/45	T: 60.5 ± 10.7 C: 59.9 ± 9.2	T2DM	3 months	1g, qd	Lowering serum HbA1C in type 2 diabetics with HbA1C >7.0	60
C. verum	raw, dried powder from cinnamon sticks (inner bark of tree)	R, PC, Pa	204 (40/39) M/F: 31/48	T: 54.15 ± 1.0 C: 53.64 ± 1.3	T2DM	8 weeks	3g, qd	Significant reduced TC, LDL, and HDL levels.	82
NR	cinnamon powder	R, DB, Pa	116 (58/58) M/F: 64/52	T: 44.3 ± 7.2 C: 45.1 ± 8.4	metabolic syndrome	16 weeks	3g, qd	Significantly greater decrease in FBG, glycosylated haemoglobin, waist circumference and BMI; significantly greater improveded waist-hip ratio, BP, TC, LDL-C, TG, and HDL-C; significantly reduced prevalence of defined metabolic syndrome.	83
NR	cinnamon capsules	R, DB, PC, Pa	45 (23/22) M/F: NR	20-65 (T/C: NR)	nonalcoholic fatty liver disease patients	12 weeks	1.5g, qd	Significant decreases in HOMA index, FBG, TC, TG, ALT, AST, GGT, and hs-CRP were seen, but there was no significant change in serum HDL levels. In both groups, LDL decreased significantly.	84
C. zeylanicum	cinnamon powdered spice	R, PC, SB, CO	9 (9/9) M/F: 3/6	26.2 ± 3	healthy subjects	1 day	3g, qd	No change in gastric emptying parameters, postprandial triacylglycerol or glucose concentrations, oxidative stress, arterial function or appetite.	85

C. cassia	cinnamon capsules	R, DB, PC	57 (29/28) M/F: 28/29	T: 63.6 C: 58.0	T2DM	3 months	500 mg, bid	No significant change in fasting glucose, lipid, A1C, or insulin levels.	86
C. burmannii	cinnamon powder capsules	R, DB, PC, Pa	36 (18/18) M/F: 0/36	T: 44.66 ± 11.22 C: 49.11 ± 7.45	Rheumatoid arthritis	8 weeks	500 mg, qd	Significant decrease of serum levels of CRP and TNF-α; significantly lower DBP. No significant changes in FBG, lipid profile, liver enzymes, or ESR.	118
NR	cinnamon extract capsules	R, DB, PC, Pa	39 (20/19) M/F: 15/24	T: 58.90 ± 7.93 C: 56.26 ± 9.46	T2DM	8 weeks	3g, qd	No beneficial impacts on plasma levels of NF-kB, SIRT1 and systemic inflammation factors including hs-CRP, IL-6 and TNF-α.	119
NR	cinnamon extract capsules	R, DB, PC, Pa	39 (20/19) M/F: 15/24	T: 58.90 ± 7.93 C: 56.26 ± 9.46	T2DM	8 weeks	3g, qd	No significant difference in ICAM-1 and VCAM-1 between the groups.	120
NR	water-soluble cinnamon extract	R, PC, DB, Pa	22 (12/10) M/F: 11/11	T: 46.3 ± 8.8 C: 45.6 ± 11.1	prediabetes and the metabolic syndrome	12 weeks	250 mg, bid	Significant decreases in FBG , SBP, increases in lean mass, and statistically significant decreases in body fat. No significant changes in clinical blood chemistries.	151
C. cassia	cinnamon powder	R, PC, Pa	58 (30/28) M/F: 26/32	T: 54.90 ± 10.14 C: 54.43 ± 12.53	T2DM	12 weeks	2g, qd	Significantly decrease in HbA1c, mean SBP and DBP, FPG, waist circumference and BMI. No significant differences in serum lipid profiles of total cholesterol, triglycerides, HDL and LDL cholesterols neither between nor within the groups.	152

C. cassia	cinnamon capsules contained 400 mg of freshly ground cinnamon of broken cassia with zinc gluconate (21 mg) and tri-calcium phosphate	R, PC	59 (29/30) M/F: 35/24	T: 61.7 ± 6.3 C: 64.4 ± 15.4	T2DM	12 weeks	1.2 g, qd	SBP declined from baseline values in the cinnamon group. However, the by-treatment difference in change-from-baseline SBP was a function of regression to the mean rather than a treatment-associated change.	153
NR	cinnamon bark powder	R, TB, PC, Pa	138 (69/69) M/F: 75/63	T: 52.1 ± 9.7 C: 53.2 ± 8.5	T2DM	3 months	500 mg, bid	Improvement of all anthropometric (BMI, body fat, and visceral fat), glycemic (FPG, 2hpp, HbA1C, Fasting Insulin, and Insulin Resistance), and lipids (TC, LDL-c and HDL-c) outcomes (except for TG level). All observed changes (except for TC and LDL-c) were significantly more prominent in patients with higher baseline BMI (BMI≥27).	250

NR	One cinnamon capsule contained 112 mg of the aqueous cinnamon extract TC112 prepared by Finzelberg	R, DB, PC	65 (33/32) M/F: 44/21	T: 62.8 ± 8.37 C: 63.7 ± 7.17	T2DM	4 months	1g, tid	A significantly reduction of FPG in the cinnamon group than in the control group. No significant differences of HbA1c, lipid profiles were observed.	251
Chinese C. aromaticum	Each cinnamon tablet contains 60 mg of cinnamon extract isolated from 2.4 g of cinnamon	R, DB, PC	66 (20/46) M/F: 25/41	T1: 62.4 ± 7.9 (120 mg/d) T2: 58.9 ± 6.4 (360 mg/d) C: 60 ± 5.9	T2DM	3 months	low-dose and high-dose supplemen-tation with cinnamon extract at 120 and 360 mg/d	Both HbA1c and FBG levels were significantly reduced in patients in the low-dose and high-dose groups. The blood TG levels were also significantly reduced in the low-dose group. The blood levels of TC, HDL-C, LDL-L, and liver transaminase remained unchanged.	252
C. verum	capsule contained cinnamon powder	R, TB, PC, Pa	140 (71/69) M/F: 43/97	T: 61.7 ± 11.7 C: 60.8 ± 10.8	T2DM	3 months	1.5g, bid	Statistically significant reductions of HbA1c and fasting venous glucose.	253

NR	cinnamon pills	R, DB, PC	57 (28/29) M/F: 26/29	T: 14.7 ± 1.4 C: 15.2 ± 1.7	T1DM	90 days	1g, qd	No significant differences in final A1C, change in A1C, total daily insulin intake, or number of hypoglycemic episodes between the cinnamon and placebo arms.	255
NR	capsule of cinnamon	R, TB, PC, Pa	39 (20/19) M/F: 15/24	T: 58.90 ± 7.93 C: 56.26 ± 9.46	T2DM	8 weeks	1g, tid	No significant changes were observed in in the level of FBG, insulin, HbA1c, HOMA-IR, carboxymethyl lysine, total antioxidant capacity, and MDA.	256

ALT, alanine aminotransferase; AST, aspartate aminotransferase; bid, twice a day; BMI, body mass index; C, control group; CO, cross-over; DB, double-blind; DBP, diastolic blood pressure; ESR, erythrocyte sedimentation rate; FBG, fasting blood glucose; F, female; FPG, fasting plasma glucose; FRAP, ferric reducing antioxidant power; GGT, gamma glutamine transpeptidase; HbA1c, Hemoglobin A1c; HDL-c, high-density lipoprotein cholesterol; HOMA-IR, homeostatic model assessment for insulin resistance; hs-CRP, high-sensitivity C-reactive protein; LDL-c, low density lipoprotein cholesterol; M, male; MDA, malondialdehyde; NR, not reported; Pa, parallel; PC, placebo-controlled; qd, once a day; R, randomized; SB, single-blind; SBP, systolic blood pressure; SH, plasma thiol; T, treatment group; TB, triple-blind; TC, total cholesterol; TG, triglyceride; tid, three times a day; T1DM, diabetes mellitus type 1; T2DM, diabetes mellitus type 2; VLDL, very low-density lipoprotein.