SUPPLEMENTARY DATA

Supplementary Table 1. Parameters related to glycaemic variables of 19 subjects who developed type 2 diabetes

Glycemic and parameters related to glycemic variables	Baseline		3 Months		6 Months		9 Months	
	Mean (S.E.)	Min-Max	Mean (S.E.)	Min-Max	Mean (S.E.)	Min-Max	Mean (S.E.)	Min-Max
Fasting plasma glucose (mg/dL)	116.33 (1.81)	102-125	121.39 (1.6)	105-129	128.22 (1.24)	124-138	129.72 (1.10)	118-138
Oral glucose tolerance at 2h (mg/dL)	181.78 (5.15)	128-199	217.33 (5.6)	180-250	233.44 (6.38)	190-290	239.39 (5.77)	210-290
HbA1C (%)	6.27 (0.03)	5.9-6.4	6.46 (0.06)	6.0-7.1	6.97 (0.10)	6.2-7.4	7.17 (0.08)	6.5-7.5
Body weight (mg)	73.89 (1.83)	66-95	75.17 (1.85)	67-95	76.5 (1.97)	66-98	78 (1.97)	67-98
Body mass index (kg/sqr.M)	28.64 (0.66)	24.8-35.25	29.13 (0.66)	26.06-35.65	29.62 (0.63)	25.78-36.05	30.20 (0.63)	26.17-36.85
Waist circumference (cm.)	96.22 (1.43)	86-106	97.89 (1.68)	86-108	98.89 (1.86)	89-110	100.17 (2.06)	89-112

Supplementary Table 2. Parameters (creatinine, AST, ALT, bone mass density of lumbar spine) of adverse effects in curcumin-treated group and placebo-treated group at each follow up visit

Variables	Visits	Placebo		Curcumin		p-value
		Mean(S.E.)	Min-Max	Mean(S.E.)	Min-Max	
Creatinine (mg/dL)	Baseline	1.15(0.06)	0.6-7	1.07(0.04)	0-4.3	0.27
	3 Months	1.02(0.04)	0.3-3.8	1.07(0.06)	0.6-7.4	0.49
	6 Months	2.08(1.06)	0.5-124	1.04(0.06)	0-7.4	0.32
	9 Months	0.95(0.04)	0.5-4.1	0.98(0.06)	0.5-7.4	0.6
Aspartate aminotransferase-AST (U/L)	Baseline	27.21(1.53)	0-120	26.5(1.65)	0-151	0.75
	3 Months	27.34(1.56)	0-156	28.46(1.85)	0-117	0.64
	6 Months	25.42(1.53)	0-105	24.15(1.46)	0-101	0.55
	9 Months	33.07(9.79)	0-1141	24.64(1.48)	0-105	0.39
Alanine aminotransferase-ALT (U/L)	Baseline	43.42(1.85)	19-169	44.04(1.94)	0-185	0.82
	3 Months	48.55(1.5)	25-121	51.03(3.04)	23-242	0.46
	6 Months	49.55(1.8)	0-136	46.08(1.96)	0-154	0.19
	9 Months	50.47(7.83)	0-929	45.59(2.12)	10-155	0.55
Bone mineral density of lumbar spine (g/cm^2)	Baseline	0.81(0.03)	0-1.376	0.83(0.03)	0-1.569	0.6
	9 Months	0.86(0.02)	0-1.361	0.96(0.04)	0-1.623	0.14

SUPPLEMENTARY DATA

Supplementary Table 3. Numbers of capsule consumed by subjects per 3 months and per day, counted at the 3-, 6-, and 9-month visits

		Placebo		Curcumin		*p-value*
		Number of subject who showed up	Number of capsules taken [Mean (S.E.)]	Number of subject who showed up	Number of capsules taken [Mean (S.E.)]	
Consumption per 3 months	3-month visit	114	447.7 (8.6)	107	457.3 (7.9)	0.41
	6-month visit	113	380.7 (9.4)	98	381.4 (9.6)	0.95
	9-month visit	112	372.4 (9.0)	97	374.2 (9.2)	0.90
Consumption per day	3-month visit	114	5.2 (0.08)	107	5.3 (0.08)	0.30
	6-mount visit	113	4.9 (0.1)	98	5 (0.1)	0.71
	9-month visit	112	4.6 (0.09)	97	4.7 (0.09)	0.68

Supplementary Table 4. Estimated overall incidence rate and standardized incidence rate of the present study when comparing to the Electric Generating Authority of Thailand Study (30)

Diabetic risk score	Electric Generating Authority of Thailand Study (30)			The present study			Standardized incidence rate per 100*
	Distribution of diabetic risk score (%)	Score-specific Incidence rate per 100	Estimated overall incidence rate per 100	Distribution of diabetic risk score (%)	Score-specific Incidence rate per 100	Estimated overall incidence rate per 100	
	A	B	C=A*B	D	E	F=D*E	G=A*E
0	7.8	4	31.2	0	0	0	0
1	1	0	0	0	0	0	0
2	19	5	95	0.9	0	0	0
3	6.9	5	34.5	0	0	0	0
4	8.4	6	50.4	1.7	0	0	0
5	10.9	6	65.4	1.7	0	0	0
6	11.8	11	129.8	3.4	0	0	0
7	8.3	11	91.3	4.3	26.7	114.81	221.61
8	3.9	18	70.2	8.6	13.3	114.38	51.87
9	8.4	19	159.6	5.2	0	0	0
10	2.8	32	89.6	9.5	0	0	0
11	4.5	33	148.5	7.8	14.8	115.44	66.6
12	1.4	50	70	4.3	53.3	229.19	74.62

13	2.5	43	107.5	27.6	20.8	574.08	52
14	1	58	58	0.9	0	0	0
15	1	48	48	15.5	51.9	804.45	51.9
16	0.2	68	13.6	0.9	0	0	0
17	0.2	100	20	6.9	33.3	229.77	6.66
			12.8			**21.8**	**5.3**

**Calculated by multiplying distribution of diabetic risk score from the Electric Generating Authority of Thailand Study (30) by Score- specific Incidence rates of the present study: Diabetes risk score using by the reference in the Electric Generating Authority of Thailand Study (34) and including these parameters (age, sex, body mass index, waist circumference, hypertension and history of diabetes in parent or sibling)* From the Table 4, estimated overall incidence rate per 100 for the Electric Generating Authority of Thailand Study and the present study are 12.8 and 21.8 respectively. Notably, the risk score in the present study are overall higher than the Electric Generating Authority of Thailand Study, we therefore calculated the standardized incidence rate (per 100) for the present study by using distribution of the risk score of the previous study and the standardized incidence rate was 5.3 per 100.

Supplementary Table 5. Distribution of diabetic risk score and incidence rate of diabetes for each score among placebo group in the present study when using diabetic risk score reference from Electric Generating Authority of Thailand Study (30)

Diabetic risk score	Number	Frequency (%)	9 month following up Incidence rate	95%(CI)	Estimated annual Incidence rate	95%(CI)
0	-	-	-	-	-	-
1	-	-	-	-	-	-
2	1	0.9	-	-	-	-
3						
4	2	1.7	-	-	-	-
5	2	1.7	-	-	-	-
6	4	3.4	-	-	-	-
7	5	4.3	20	-15.1-55.1	26.7	-20.1-73.5
8	10	8.6	10	-8.6-28.6	13.3	-11.5-38.1
9	6	5.2	-	-	-	-
10	11	9.5	-	-	-	-
11	9	7.8	11.1	-9.4-31.6	14.8	-12.5-42.1
12	5	4.3	40.0	-2.9-82.9	53.3	-3.9-110.5
13	32	27.6	15.6	3-28.2	20.8	4-37.6
14	1	0.9	-	-	-	-
15	18	15.5	38.9	16.4-61.4	51.9	21.9-81.9
16	1	0.9	-	-	-	-
17	8	6.9	25.0	-5-55	33.3	-6.7-73.3

SUPPLEMENTARY DATA

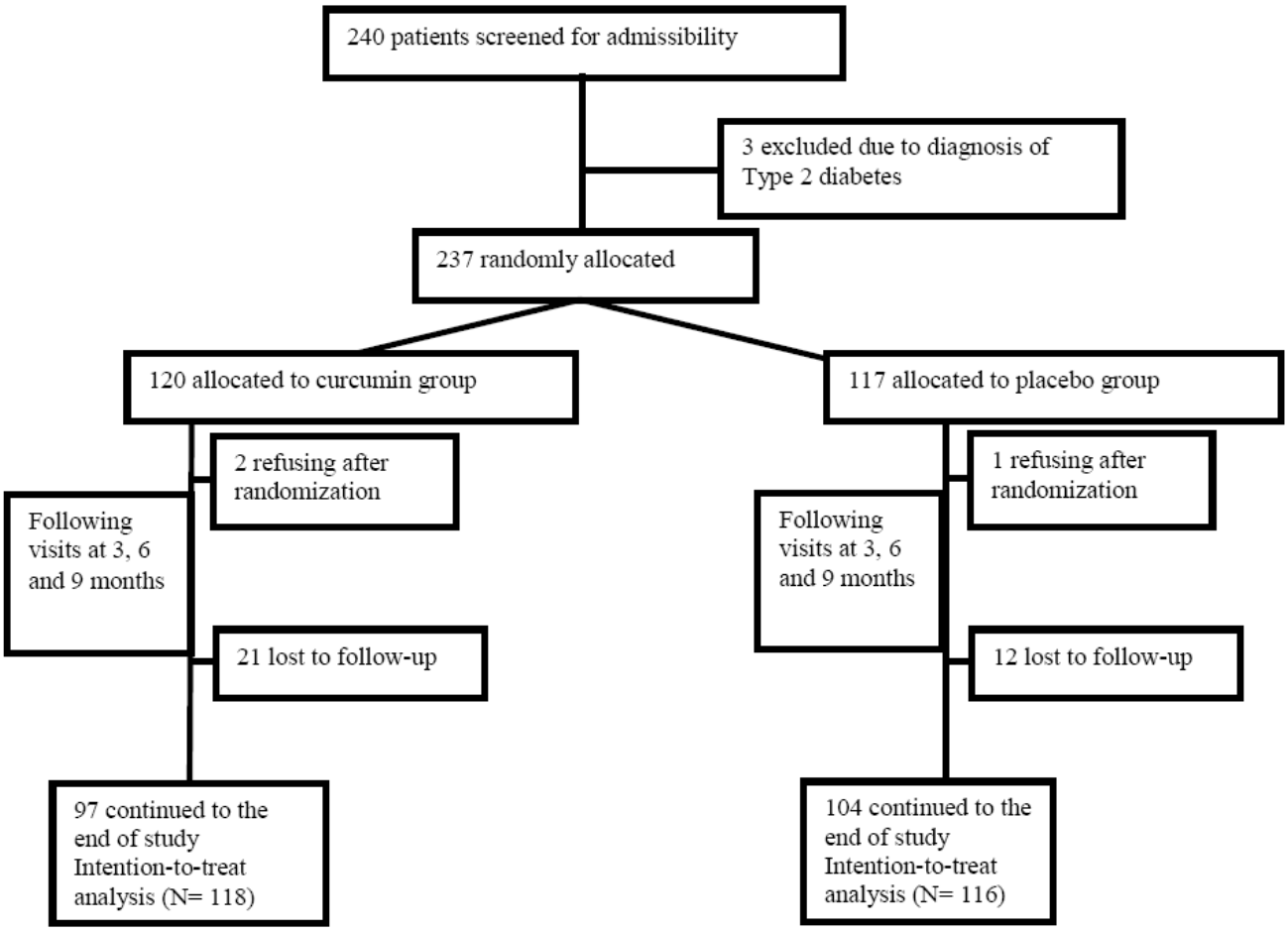
Supplementary Table 6. Distribution of frequency of diabetic risk score among curcumin and placebo group in the present study when using diabetic risk score reference from Electric Generating Authority of Thailand Study (30)

Score	Placebo group*	Curcumin group	Total
0	0	3	3
	0%	2.5%	1.3%
1	0	0	0
	0%	0%	0%
2	1	1	2
	.9%	.8%	.9%
3	0	2	2
	0%	1.7%	.9%
4	2	4	6
	1.7%	3.4%	2.6%
5	2	4	6
	1.7%	3.4%	2.6%
6	4	2	6
	3.5%	1.7%	2.6%
7	5	9	14
	4.3%	7.6%	6.0%
8	10	6	16
	8.7%	5.1%	6.9%
9	6	11	17
	5.2%	9.3%	7.3%
10	11	9	20
	9.6%	7.6%	8.6%
11	9	8	17
	7.8%	6.8%	7.3%
12	5	3	8
	4.3%	2.5%	3.4%
13	32	26	58
	27.8%	22.0%	24.9%
14	1	2	3
	.9%	1.7%	1.3%
15	18	20	38
	15.7%	16.9%	16.3%
16	1	0	1
	.9%	0%	.4%
17	8	8	16
	7.0%	6.8%	6.9%
	115	118	233
	100.0%	100.0%	100.0%

* One subject missing

SUPPLEMENTARY DATA

Supplementary Figure 1. Trial profile (CONSORT information)
Two hundred and forty subjects were screened using eligibility criteria. After excluding non-eligible subjects , a total of 237 trial participants were enrolled and randomly allocated to curcumin (120 subjects) and placebo group (117 subjects). After randomization, 2 subjects in the curcumin group and 1 subject from placebo group refused to participate in the trial. At the end of the study, 21 subjects from curcumin-treated group and 12 subjects from placebo group failed to follow up. At the end of study, 97 and 104 subjects remained in the curcumin-treated and the placebo-treated groups; however, the study included 118 in the curcumin group and 116 in the placebo group in the intention-to-treat analyses.



SUPPLEMENTARY DATA

Supplementary Figure 2. Fingerprints of curcuminoids extracts

The High Performance Thin Layer Chromatography (HPTLC) chromatogram of GPO curcuminoids extract is shown in *fig2*, compared with HPTLC chromatogram of standard across curcumin (curcuminoids) in *fig1*. In every batch of GPO curcuminoids extract, the peak ratio of curcumin : demethoxycurcumin: bisdemethoxycurcumin is controlled to be 1 : not more than 0.6 : not more than 0.4.