Aortic maximal plaque thickness and plaque/wall volume of rabbits (6gp) fed atherogenic diet ± 0.5 g/d CLA for 22 weeks*

	Group	
	Control	CLA
Plaque thickness (mm)		
Thoracic	0.33 ± 0.03	0.33 ± 0.09
Abdominal	0.22 ± 0.05	0.16 ± 0.03
Plaque to wall volume ratio		
Thoracic	0.547 ± 0.155	0.483 ± 0.170
Abdominal	0.345 ± 0.107	0.113 ± 0.030

*After Lee et al, 1994

Histological evaluation of connective tissue development in rabbits (6gp) fed 0.1% cholesterol ± 0.5% CLA for 22 weeks*

	Connective tissue development	
	Mild (< 25%)	Severe (> 25%)
Thoracic aorta		
Control	2	4
CLA	5	1 a
Abdominal aorta		
Control	3	5
CLA	3	1 b

*After Lee et al, 1994

a) p = 0.01; b) p = 0.07

Histological evaluation of lipid deposition in rabbits (6gp) fed 0.1% cholesterol ± 0.5% CLA for 22 weeks*

	Lipid deposition	
	Mild (< 25%)	Severe (> 25%)
Thoracic aorta		
Control	1	5
CLA	3	3 a
Abdominal aorta		
Control	2	4
CLA	4	2 b

*After Lee et al, 1994

a) p = 0.07; b) p = 0.10

Influence of CLA on experimental atherosclerosis in rabbits – necropsy data

	X	A	B	C
No.	8/8	8/8	7/8	7/8
% CLA	—	0.1	0.5	1.0
Wt. change (g)	104 ± 146	3 ± 108	67 ± 43	50 ± 79
Liver wt. (g)	68 ± 5	77 ± 6	66 ± 4	78 ± 6
Liver % body wt.	2.73 ± 0.16	3.22 ± 0.35	2.63 ± 0.12	3.35 ± 0.32

Semipurified diet containing 0.2% cholesterol fed for 90 days.

Influence of CLA on experimental atherosclerosis in rabbits – serum lipids

	X	A	B	C
No.	8/8	8/8	7/8	7/8
% CLA	—	0.1	0.5	1.0
mg/dl				
Total chol.	983 ± 118	1281 ± 116	1263 ± 104	1103 ± 134
% HDL – C	5.0 ± 0.90	3.3 ± 0.54	3.3 ± 0.58	5.0 ± 1.14
Triglycerides	190 ± 32	246 ± 47	205 ± 48	216 ± 38

Semipurified diet containing 0.2% cholesterol fed for 90 days.

Influence of CLA on experimental atherosclerosis in rabbits – liver lipids

	X	A	B	C
No.	8/8	8/8	7/8	7/8
% CLA	—	0.1	0.5	1.0
g/100 g				
Total chol.	1.30 ± 0.97	1.02 ± 0.069	0.99 ± 0.057	1.06 ± 0.078
% Ester – C	53.9 ± 1.1	73.7 ± 3.4	72.5 ± 3.0	72.6 ± 3.3
Triglycerides	1.37 ± 0.21	1.19 ± 0.18	1.28 ± 0.25	1.23 ± 0.23

Semipurified diet containing 0.2% cholesterol fed for 90 days.

Influence of CLA on experimental atherosclerosis in rabbits – aorta data

	X	A	B	C	
No.	8/8	8/8	7/8	7/8	
% CLA	—	0.1	0.5	1.0	*p<
Severity (0 – 4 scale)					
Aortic arch	2.36 ± 0.39	1.69 ± 0.23	0.88 ± 0.20	1.00 ± 0.28	0.003
Thoracic aorta	2.21 ± 0.42	1.31 ± 0.28	0.75 ± 0.2	0.94 ± 0.27	0.011
Area %	44 ± 11.9	32 ± 7.4	11 ± 4.2	18 ± 6.3	0.03
% Ester chol.	74.7	52.0	34.1	44.3	

*ANOVA

Semipurified diet containing 0.2% cholesterol fed for 90 days.

Influence of CLA on progression of atherosclerosis in rabbits — serum lipids

	C	X	Y	Z
No.	7/8	6/8	7/8	6/8
% CLA	—	0.1	0.5	1.0
mg/dl				
Total C	128 ± 38 ab	140 ± 19 cd	295 ± 48 ac	309 ± 46 bd
Tri-glycerides	47 ± 7 ef	61 ± 8	124 ± 28 e	105 ± 20 f

Fed cholesterol-free diet for 90 days.

Values bearing same letter are significantly different.

Liver lipids of rabbits fed CLA during regression phase

	Group			
	Control	0.1% CLA	0.5% CLA	1.0% CLA
Cholesterol (g/100g)				
Total	1.01 ± 0.10	1.24 ± 0.14	1.17 ± 0.10	1.05 ± 0.07
Free	0.35 ± 0.05	0.32 ± 0.04	0.32 ± 0.06	0.30 ± 0.03
% ester	67.8 ± 2.7	72.4 ± 4.8	73.3 ± 3.1	71.2 ± 2.9
Triglycerides (g/100g)				
	0.63 ± 0.11	0.72 ± 0.13	0.66 ± 0.11	0.65 ± 0.10

Influence of CLA on pre-established atheromata in rabbits - Aorta data

	Control	X	Y	Z
NO.	7/7	6/7	7/7	6/7
% CLA	—	0.1	0.5	1.0
Severity 0 – 4 scale				
Aortic arch	2.64 ± 0.28	2.25 ± 0.28	2.50 ± 0.29	1.92 ± 0.40
Thoracic aorta	2.29 ± 0.36	2.33 ± 0.44	2.00 ± 0.15	1.25 ± 0.17
Area %	53 ± 7	53 ± 10	49 ± 5	30 ± 10

Influence of CLA on pre–established atherosclerosis in rabbits. (% difference from C1)

Group	Aortic arch	Δ
Control 1	2.36 ± 0.39	—
Control 2	2.64 ± 0.28	+ 10.6%
0.1% CLA	2.25 ± 0.28	– 4.7%
0.5% CLA	2.50 ± 0.29	+ 5.4%
1.0% CLA	1.92 ± 0.40	– 27.3%

Influence of CLA on pre–established atherosclerosis in rabbits. (% difference from C1)

Group	Thoracic aorta	Δ
Control 1	2.21 ± 0.42	—
Control 2	2.29 ± 0.36	+ 3.6%
0.1% CLA	2.33 ± 0.44	+ 5.4%
0.5% CLA	2.00 ± 0.15	– 12.7%
1.0% CLA	1.25 ± 0.17	– 43.4%

Influence of CLA on pre–established atherosclerosis in rabbits. (% difference from C1)

Group	Sudanophilic area	Δ
Control 1	44 ± 12	—
Control 2	53 ± 7	+ 20.5%
0.1% CLA	53 ± 10	+ 20.5%
0.5% CLA	49 ± 5	+ 11.4%
1.0% CLA	30 ± 10	– 31.8%

Necropsy data: Rabbits fed 0.2% cholesterol and 0.5% CLA for 90 days (data ± SEM)

	No.	Wt. gain (g)	Liver wt (g)	Liver % body wt.
Control	9	-2 ± 27	70.6 ± 5.04	2.90 ± 0.22a
Mixed isomers	10	-10 ± 10	69.8 ± 3.61 a	2.77 ± 0.15b
c9,t11	9	-3 ± 12	59.8 ± 2.71 ab	2.29 ± 0.10 abc
t10,c12	10	-16 ± 12	69.1 ± 1.90 ab	2.67 ±0.06c

a - Values in columns bearing same letter are significantly different (p≤ 0.05).

Necropsy data: rabbits fed 0.2% cholesterol and 0.5% CLA for 90 days (data ± SEM)

		Serum lipids (mg/dl)	
	No.	Cholesterol	Triglyceride
Control	9	1293 ± 14 a	198 ± 27
Mixed Isomers	10	1113 ± 21a	191 ± 24
c9,t11	9	1144 ± 119	222 ± 38
t10,c12	10	1163 ± 92	186 ± 25

a - Values in columns bearing same letter are significantly different ($p \leq 0.05$).

Necropsy data: Rabbits fed 0.2% cholesterol and 0.5% CLA for 90 days (data ± SEM)

		Atherosclerosis[x]	
	No.	Aortic arch[y]	Thoracic aorta[z]
Control	9	2.39 ± 0.26 abc	1.17 ± 0.33 ab
Mixed Isomers	10	1.10 ± 0.29 a	0.25 ± 0.15 a
c9,t11	9	1.56 ± 0.27 b	0.28 ± 0.09 b
t10,c12	10	1.10 ± 0.36 c	0.50 ± 0.17

a - Values in columns bearing same letter are significantly different (p≤ 0.05).

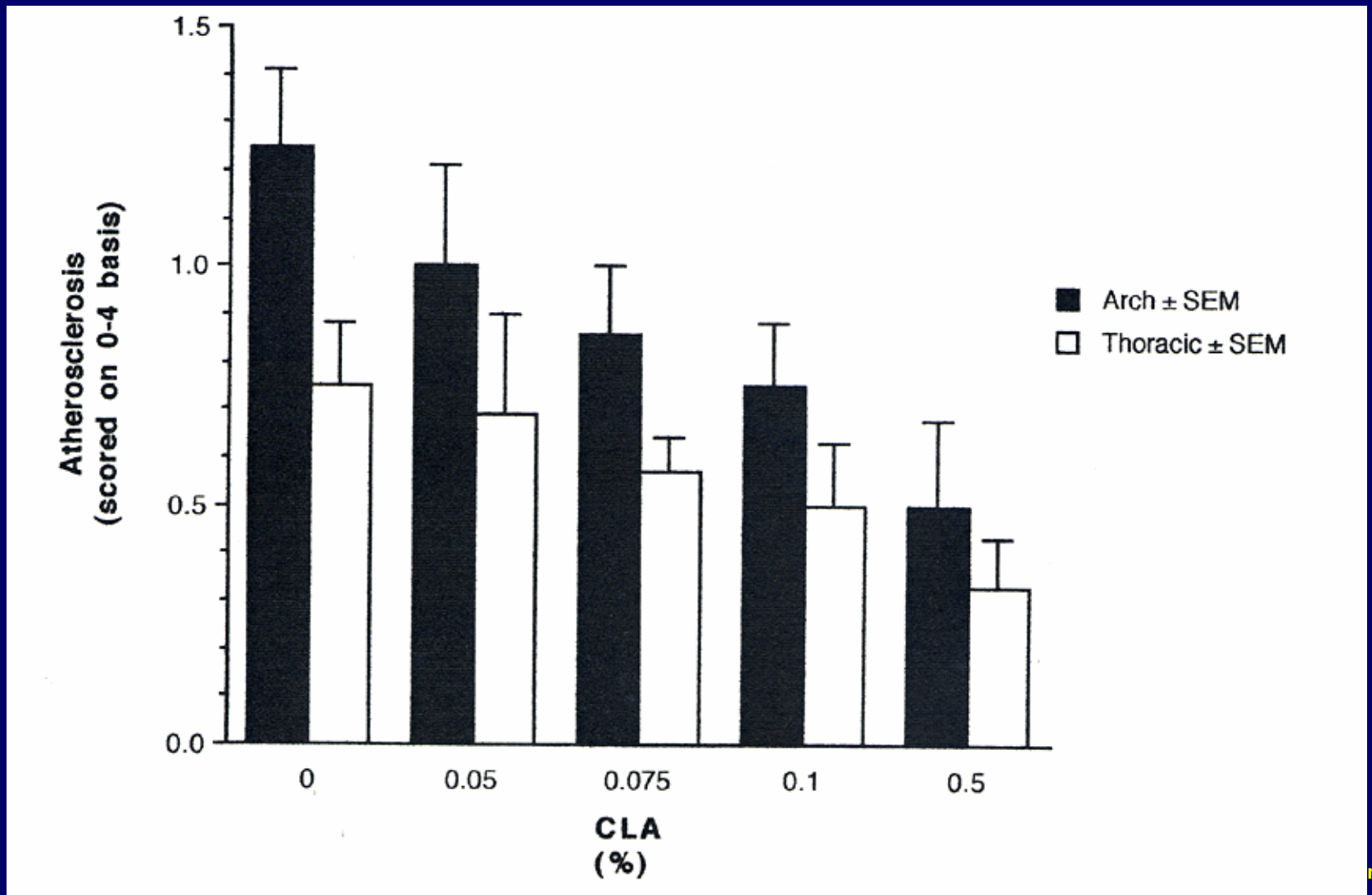
x - Graded visually on a 0–4 scale

y – by ANOVA p = 0.017; z – by ANOVA p = 0.011

Influence of CLA (1%) on pre-established aortic lesions in rabbits

		Atherosclerosis	
Group	No.	Arch	Thoracic
C1	10	2.39 ± 0.26	1.17 ± 0.33
C2	7	3.93 ± 0.07	2.36 ± 0.36
CLA mix	9	3.17 ± 0.22	1.61 ± 0.20
c9,t11 CLA	7	2.29 ± 0.18	1.21 ± 0.21
t10,c12 CLA	6	3.17 ± 0.42	1.42 ± 0.58

Rabbits Fed 0.2% Cholesterol & Varying Levels of CLA for 90 Days



Hamster Diet

Ingredient	%
Chow powder	88.9
Coconut oil	10.0
Safflower oil	1.0
Cholesterol	0.12

CLA and LA added at the expense of chow

Plasma lipids (mg/dl)

Group	Cholesterol (C)	Non-HDL C	Triglycerides
Control	690 ± 24	638 ± 23	1099 ± 212
% CLA			
0.025	510 ± 99	467 ± 92 ab	794 ± 208
0.050	546 ± 41	492 ± 44 ab	702 ± 177
0.50	530 ± 60	479 ± 60 ab	1003 ± 158
0.50 % LA	590 ± 42	538 ± 42	791 ± 199

a) vs Control $p < 0.05$

b) vs LA $p < 0.05$

Fatty Streak Area (m^2/mm^2 x 100)

Group	Area
Control	53 ± 14
0.025 % CLA	43 ± 18
0.050 % CLA	39 ± 11
0.50 % CLA	37 ± 11
0.50 % LA	40 ± 18

Plasma lipids (mg/dl ± SEM) in hamsters after 12 wks on atherogenic diet ± 1% CLA or 1% linoleic acid

Gp	Total C	HDL-C	Non HDL-C	Triglycerides
C	327 ± 16[a]	106 ± 2	221 ± 15[a]	246 ± 20[a]
CLA	285 ± 11[b]	102 ± 4	183 ± 11[b]	260 ± 22[a]
LA	264 ± 8[b]	107 ± 3	157± 7[b]	161 ± 10[b]

N = 12 C = Cholesterol

Values not sharing superscript significantly different; p< .05

Aorta fatty streak area (AFSA) in hamsters after 12 wks on atherogenic diet ± 1% CLA or 1% linoleic acid

Group	AFSA ($\mu m^2/mm^2$ x 100)
C	19.4 ± 2.25^a
CLA	10.3 ± 1.55^b
LA	17.1 ± 2.62^a

C = Cholesterol N = 12

Values not sharing superscript significantly different; $p < .05$

Atherosclerosis in mice*
(area of lesions μm^2)

	Area
C57BL/6 (f)	0.66 ± 0.14
C57BL/6 (m)	0.29 ± 0.06
BALB /C (f)	0.47 ± 0.12
BALB /C (m)	0.16 ± 0.06
C3H (f)	0.02 ± 0.02
C3H (m)	0

*After Paigen et al (1987)
Fed 15% fat, 1.25% cholesterol, 0.5% cholic acid, 14 wks

Effect of CLA on atherosclerosis in C57BL/6 female mice*

	GROUP	% CLA	
	Control	0.25	0.5
Serum (mg/dl)			
Cholesterol (C)	161 ± 29	138 ± 28	151 ± 45
HDL–C	54 ± 8	54 ± 13	62 ± 12
Triglycerides	50 ± 12	45 ± 7	42 ± 9
Fatty streaks mm^2	0.13 ± 0.13	0.33 ± 0.27	0.25 ± 0.22

*After Munday et al (1999)

Fed 9.5% fat, 1% cholesterol, 0.5% cholic acid, 15 weeks