Table 1. Composition of the Experimental Diet

Ingredients	FO	SO
	(%; w/w)	
Fish oil	10	
Safflower oil		10
Corn starch	62	62
Casein	20	20
Cholesterol	0.1	0.1
Salt mixture*	3.5	3.5
Vitamin mixture#	1	1
Methyl cellulose	3	3
Choline chloride	0.1	0.1
DL-methionine	0.3	0.3

FO: fish oil group, SO: safflower oil group.

* Salt mixture contains the following (mg/g): calcium phosphate dibasic 500, sodium chloride 74, potassium sulfate 52, potassium citrate monohydrate 220, magnesium oxide 24, manganous carbonate 3.5, ferric citrate 6, zinc carbonate 1.6, cupric carbonate 0.3, potassium iodate 0.01, sodium selenite 0.01, and chromium potasssium sulfate 0.55.

\# Vitamin mix contains the following (mg/g): thiamin hydrochloride 0.6, riboflavin 0.6, pyridoxine hydrochloride 0.7, nicotinic acid 3, calcium pantothenate 1.6, D-biotin 0.02, cyanocobalamin 0.001, retinyl palmitate 1.6, DL-ătocopherol acetate 20, cholecalciferol 0.25, and menaquinone 0.005.

weights between groups as similar as possible. Sepsis was induced by cecal ligation and puncture (CLP) according to the method of Wichterman et al.[24] Rats were lightly anesthetized with ether. The abdomen was opened through a midline incision, and the cecum was punctured twice with an 18-gauge needle, and then placed back into the abdomen. The abdominal wound was closed in layers. Sham operation with manipulation of the cecum but without ligation or puncture of the cecum was performed on non-septic control rats. Four groups were classified as follows: fish oil sepsis group (FOS, $n = 10$), safflower oil sepsis group (SOS, $n = 10$), fish oil control group (FOC, $n = 10$), and safflower oil control group (SOC, $n = 10$).

Table 2. Fatty Acid Profiles of the Lipid Emulsions Tested(%)

Fatty acid	Safflower oil	Fish oil
14:0		7.8
16:0	7.0	15.3
16:1 n-7		9.8
18:0	3.6	1.9
18:1 n-9	17.4	11.7
18:2 n-6	71.3	4.6
18:3 n-3	0.6	1.6
20:4 n-6		2.6
20:5 n-3		31.2
22:6 n-3		13.1

Measurements and Analytical Procedures

Twenty-four hours after surgery, all rats were anesthetized and sacrificed by drawing arterial blood from the aorta of the abdomen. Blood samples were collected in tubes containing EDTA-Na_2 and immediately centrifuged at 750 g for 10 min to separate the plasma. All plasma samples were stored at -70 °C until the assay. Plasma glucose, triglyceride (TG), total cholesterol, and nonesterified fatty acids (NEFAs) were determined by an enzymatic kit (Randox, Antrim, Ireland). Liver lipids were extracted with a 2:1 chloroform-methanol mixture according to Folch et al.[25] Total lipids were gravimetrically measured after drying in an evaporator to constant weight.[26] TG was determined by the method of Soloni.[27] Cholesterol was measured according to the method of Carlson and Goldfard.[28] Amino acids were analyzed by the standard ninhydrin technology (Beckman Instrument, model 6300, Palo Alto, CA), after deproteinization of the plasma with 50% salicylic acid.[29] The packed erythrocytes were washed twice with isotonic saline. Washed erythrocytes were stored at 0 °C until the analysis of the activities of the 2 antioxidant enzymes, superoxide dismultase (SOD) and glutathione peroxidase (GSHPx) (Randox). Enzyme concentrations were expressed in U/mg of hemoglobin (Hb). Hemoglobin was determined by the cyanmethemoglobin method (Sysmex F-500 San Tung Instrument, Taipei, Taiwan). The plasma total antioxidant status was measured by a colorimetric method (Randox).[30]

Statistics

Data are expressed as the mean ± SD. Data were analyzed as a 2-way experiment with testing of the in-