## A Calorie Is a Calorie When it Comes to Weight Loss

## BY BRUCE JANCIN Denver Bureau

NEW ORLEANS — Calorie restriction, rather than the carbohydrate or fat content or the glycemic index of the diet, is of paramount importance in losing weight, Ernst J. Schaefer, M.D., said at the annual scientific sessions of the American Heart Association.

There's a lot of controversy out there about the kind of diet that one should eat

## BRIEF SUMMARY: For full Prescribing Information, see package insert. INDICATIONS AND USAGE CRESTOR is indicated: 1. as an adjunct to diet to

reduce elevated total-C, LD-C, ApoB, nonHD-C, and TG levels and autoritation to use to the patients with primary hypercholesterolemia (heterozygous familial and nonfamilial) and mixed dyslipidemia (Fredrickson Type II and IIb); 2. as an adjunct to diet for the treat-ment of patients with elevated serum TG levels (Fredrickson Type IV); 3. to reduce LDL-C, total-C, and ApoB in patients with homozygous familial hypercholesterolemia as an adjunct to other lipid-lowering treatments (e.g., LDL apheresis) or if such treatments are

CONTRAINDICATIONS CRESTOR is contraindicated in patients with a known CONTRAINDICATIONS CHESTOR is contraindicated in patients with a known hypersensitivity to any component of this product. Resuvastatin is contraindicated in patients with active liver disease or with unexplained persistent elevations of serum transaminases (see WARNINGS, Liver Enzymes). **Pregnoncy and Lactation** Atherosclerosis is a chronic process and discontinuation of lipid-lowering drugs during pregnancy should have little impact on the outcome of long-term therapy of primary hypercholesterolemia. Cholesterol and other products of cholesterol biosynthesis are essential components for fetal development (including synthesis of steroids and cell membranes). Since HMG-CoA reductase inhibitors decrease cholesterol synthesis and pessibly the synthesis of dreb biolonically active substance derived from cholesterol possibly the synthesis of other biologically active substances derived from cholesterol they may cause fetal harm when administered to pregnant women. Therefore, HMG-Co/ they may cause tean harm when administered to pregnant women. Theretore, HIW-CAO reductase inhibitors are contraindicated during pregnancy and in nursing mothers. ROSI/UASTATIN SHOULD BE ADMINISTERED TO WOMEN OF CHILDBEARING AGE ONLY WHEN SUCH PATIENTS ARE HIGHLY UNLIKELY TO CONCEIVE AND HAVE BEEN INFORMED OF THE POTENTIAL HAZARDS. If the patient becomes pregnant while taking this drug, therapy should be discontinued immediately and the patient apprised of the calculate the follow. NFORMED . this drug, therapy shows the hazard to the feture

potential hazard to the fetus. WARNINGS Liver Enzymes HMG-CoA reductase inhibitors, like some other lipid-lowering therapies, have been associated with biochemical abnormalities of liver function. The incidence of persistent elevations (>3 times the upper limit of normal [ULN] occurring on 2 or more consecutive occasions) in serum transaminases in fixed dose studies was 0.4 0, 0, and 0.1% in patients who received rosuvastatin 5, 10, 20, and 40 mg, respectively. In most cases, the elevations were transient and resolved or improved on continued therapy or after a brief interruption in therapy. There were two cases of jaundice, for which a relationship to rosuvastatin therapy could not be deter-mined, which resolved after discontinuation of therapy. There were no cases of liver failure or irreversible liver discase in these trials. It is recommended that liver function these heneformal hofeen and 4.12 weeks followings hot the initiation of therapy and table of interestate over usease in these tables. It is recommended that were function tests be performed before and at 12 weeks following both the initiation of therapy and any elevation of dose, and periodically (e.g., semiannually) thereafter. Liver enzyme changes generally occur in the first 3 months of treatment with rosuvastatin. Patients changes generally occur in the first 3 months of treatment with rosuvastatin. Patients who develop increased transaminase levels should be monitored until the abnormalities have resolved. Should an increase in ALT or AST or 35 times ULN persist; reduction of dose or withdrawal of rosuvastatin is recommended. Rosuvastatin should be used with caution in patients who consume substantial quantities of alcohol and/or have a history of liver disease (see CLINCAL PHARMACOLGOK, Special Populations, Hepatic Insufficiency). Active liver disease or unexplained persistent transaminase elevations are contraindications to the use of rosuvastatin (see CONTRAINDICATIONS). **Myoperthy/RholdComyolysis** Rare cases of habdomyolysis with acute real failure secondary to myoliobinuria have been reported with rosuvastatin and with other drugs in this class. Uncomplicated myalgia has been reported in rosuvastatin at doses of up to 40 mg in clinical studies. Treatment-related myopathy, defined as muscle aches or muscle weakness in conjunction with increases in CK values >10 times upper limit of normal, was reported in up to 0.1% of patients taking rosuvastatin doses of up to 40 mg in clinical studies. Rare cases of thabdomyolysis were seen in the resonant of the use of the seen with higher than recom-mended doses (80 mg) of rosuvastatin in clinical trials. Factors that may predispose in clinical studies. Rare cases of rhabdomyolysis were seen with higher than recom-mended doss (80 mg) of rosuvastain in clinical trials. Factors that may predispose patients to myopathy with HMG-CoA reductase inhibitors include advanced age (265 years), hypothyroidism, and renal insufficiency. The incidence of myopathy increased at doses of rosuvastain above the recommended dosage range. Consequently: 1. Rosuvastatin should be prescribed with caution in patients with predisposing factors for myopathy, such as, renal impairment (see DOSAGE AND ADMINISTRATION), advanced age, and hypothyroidism. 2. Patients Should be advised to promptly report unexplained muscle pain, tenderness, or weakness, particularly if accompanied the preline of mercled to the remove the diverse that the discontinued if mercledut elevated K unexplained muscle pain, tendemess, or weakness, particularly if accompanied by malaise or fever. Rosuvastatin therapy should be discontinued if markedly elevated CK levels occur or myopathy is diagnosed or suspected. 3. The risk of myopathy during treat-ment with rosuvastatin may be increased with concurrent administration of other lipid-lowering therapies or cyclosporine, (see CLINICAL PHARMACOLOGY, Drug Interactions, PRECAUTIONS, Drug Interactions, and DOSAGE AND ADMINISTRATION). The benefit of further alterations in lipid levels by the combined use of rosuvastatin with fibrates or niacin should be carefully weighed against the potential risks of this combination. Combination therapy with rosuvastatin and gemtibrozil should generally be avoided. (See DOSAGE AND ADMINISTRATION and PRECAUTIONS, Drug Interactions). 4. The risk of myonathy during treatment with mayusatatin may he increased in circum-(see UUSAGE AND ADMINISTRATION and PRECAUTIONS, Drug Interactions). 4. The risk of myopathy during treatment with rosuvastalin may be increased in circum-stances which increase rosuvastalin drug levels (see CLINICAL PHARMACOLOGY, Special Populations, Race and Renal Insufficiency, and PRECAUTIONS, General). 5. Rosuvastalin therapy should also be temporarily withheld in any patient with an acute, serious condition suggestive of myopathy or predisposing to the development of renal failure secondary to rhabdomyolysis (e.g., sepsis, hypotension, major surgery, frauma, severe metabolic, endocrine, and electrolyte disorders, or uncontrolled seizures).

uncontrolled seizures). **PRECAUTIONS General** Before instituting therapy with rosuvastatin, an attempt should be made to control hypercholesterolemia with appropriate diet and exer-cise, weight reduction in obese patients, and treatment of underlying medical problems (see INDICATIONS AND USAGE). Administration of rosuvastatin 20 mg to patients with severe renal impairment ( $CL_{\rm er}$  <30 mL/min/1/3 m<sup>2</sup>) resulted in a 3-fold increase in gharm concentrations of rosuvastatin compared with healthy volunteers (see WARNINGS, Myopathy/Rhabdomyolysis and DOSAGE AND ADMINISTRATION). Pharmacokinetic studies show an approximate 2-fold elevation in median exposure in Japanese subjects residing in North America and Europe. The contribution of environmental and genetic factors to the difference observed has not been determined. However, these increases should be considered when making rosvastatin dosino deci-Compared with Caucasians residing in North America and Europe. Ine Contribution of environmental and genetic factors to the difference observed has not been determined. However, these increases should be considered when making rosuvastatin dosing deci-sions for patients of Japanese and Chinese ancestry. (See WARNINGS, Myopathy/ Rhabdomyojsis; CLINICAL PHARMACOLOGY, Special Populations, Race.) **Information for Patients** Patients should be advised to report promptly unex-plained muscle pain, tenderness, or weakness, particularly if accompanied by malaise or tever. When taking rosuvastatin with an aluminum and magnesium hydroxide combina-tion antacid, the antacid should be taken at least 2 hours after rosuvastatin administration (see CLINICAL PHARMACOLOGY, Drug Interactions). **LabCortory Tess** In the rosuvastatin clinical trial program, dipstick-positive proteinuria and microscopic hematuria were observed among rosuvastatin-freated patients, predominantly in patients dosed above the recommended dose rang (etc., 80 mg). However, this finding was more freguent in patients taking rosuvastatin 40 mg, when compared to lower doses of rosuvastatin or comparator statins, though the clinical significance of this finding is unknown, a dose reduction should be considered for patients on rosuvastatin 40 mg Interactions **Cyclosporine**: When rosuvastatin 10 mg was coadministered with cyclosporine in cardiac transplant patients, rosuvastatin mean G<sub>max</sub> and mean AUC were increased 11-fold an 7-fold, respectively, compared with healthy volunteers. These

for weight loss and whether calories from one food are different than calories from another food. Everybody's always looking for some sort of a magic bullet. But our controlled feeding study clearly indicates that a fat calorie and a carbohydrate calorie and a protein calorie are equivalent when it comes to weight loss-or weight gain," said Dr. Schaefer, professor of nutrition science and policy at Tufts University, Boston.

He presented a National Institutes of

increases are considered to be clinically significant and require special consideration in the dosing of rosuvastatin to patients taking concomitant cyclosporine (see WARNINGS, Myopathy/Rhabdomyolysis, and DOSAGE AND ADMINISTRATION). Warfarin: Coad-ministration of rosuvastatin to patients on stable warfarin therapy resulted in clinically significant rises in INR (-4, baseline 2-3). In patients taking coumarin anticoag-ulants and rosuvastatin concomitantly, INR should be determined before starting rosuvastatin and frequently enough during early therapy to ensure that no significant alteration of INR occurs. Once a stable INR time has been documented, INR can be moni-tored at the intervals usually recommended for materist an commarin anticoagulants.

aiteration of INK occurs. Unce a state INK time has been occumented, INK can be moni-tored at the intervals usually recommended for patients on coumarin anticoagulants. If the dose of rosuvastatin is changed, the same procedure should be repeated. Rosuvastatin therapy has not been associated with bleeding or with changes in INR in patients not taking anticoagulants. **Gemlibrozi** (600 mg twice daily) resulted in a 2.2- and 0.6es to healthy volunteers on gemlibrozi (600 mg twice daily) resulted in a 2.2-hold, respectively, increase in mean C<sub>max</sub> and mean AUC of rosuvastatin (see DOSAGE AND ADMINISTRATION). **Endocrine Function** Although clinical studies was shown that rosuvastatin and does ont adduce bead latema cortical comparentation

DOSAGE AND ADMINISTRATION). Endocrine Function Attrough clinical studies have shown that rosuvastain alone does not reduce basal plasma ordisol concentration or impair adrenal reserve, caution should be exercised if any HMG-CoA reductase inhibitor or other agent used to lower cholesterol levels is administered concomitantly with drugs that may decrease the levels or activity of endogenous steroid hormones such as ketoconazole, spironolactone, and cimetidine. CNS Toxicity CNS vascular lesions, characterized by pervascular hemorrhages, edema, and imnonuclear cell infiltration of this drug class. A chemically similar drug in this class produced dose-dependent opti-new despacetion. Multerian despacetion for disconsistential to the members of this drug class. A chemically similar drug in this class produced dose-dependent optic prove despacetion. Multerian despacetion of citemosnipule theory. In dose, ta dose despacetion. Multerian despacetion of constraints of the start of the service of the start of the service of the

nerve degeneration (Wallerian degeneration of retinogeniculate fibers) in dogs, at a dose that produced plasma drug levels about 30 times higher than the mean drug level in humans taking the highest recommended dose. Edema, hemorrhage, and partial necrosis

In the interstitution of the choorind piexus was observed in a female dog sacrificed mori-bund at day 24 at 90 mg/kg/day by oral gavage (systemic exposures 100 times the huma exposure at 40 mg/day based on AUC comparisons). Correal opacity was seen in dog treated for 52 weeks at 6 mg/kg/day by oral gavage (systemic exposures 20 times the

CRESTOR

rosuvastatin calcium

human exposure at 40 mg/day based on AUC comparisons). Cataracts were seen in dogs treated for 12 weeks by oral gavage at 30 mg/kg/day (systemic exposures 60 times the human exposure at 40 mg/day based on AUC comparisons). Retinal dysplasia and retinal loss were seen in dogs treated for 4 weeks by oral gavage at 90 mg/kg/day (systemic exposures 100 times the human exposure at 40 mg/day based on AUC. Doses ≤30 mg/kg/day (systemic exposures ≤60 times the human exposure at 40 mg/day based on AUC comparisons) following treatment up to one year, did not reveal retinal findings.

The sposure is 100 times the human exposure at 40 mg/day based on AUC. Doese s30 mg/kg/day (systemic exposures ≤60 times the human exposure at 40 mg/day based on AUC comparisons) following treatment up to one year, did not reveal retinal findings. **Carcinogenesis, Mutagenesis, Impairment of Fertility** In a 104-week carcinogenicity study in rats at dose levels of 2, 20, 60, or 80 mg/kg/day by oral gavage, the incidence of uterine stroma polyse was significantly lincerased in termales at 80 mg/kg/day at systemic exposure 20 times the human exposure at 40 mg/day based on AUC. Increased incidence of polyse was not seen at lower doses. In a 107-week carcino-genicity study in mice given on 10, 60, 200 mg/kg/day by oral gavage, an increased incidence of hepatocellular adenoma/carcinoma was observed at 200 mg/kg/day at systemic exposures 20 times human exposure at 40 mg/day based on AUC. An increased incidence of hepatocellular tumors was not seen at lower doses. Rosuvastatin was not mutagenic or clastogenic with or without metabolic activation in the Ames test with *Salmonella bybitmurium* and *Escherichia coli*, the mouse lymphoma assay, and the chro-mosomal aberration assay in Chinese hamster lung cells. Rosuvastatin was negative in the *in* vivo mouse micronucleus test. In rat fertility studies with oral gavage doses of 5, 50 mg/kg/day, males were treated for 9 weeks prior to and throughout mating and temales were treated 2 weeks prior to mating and throughout mating until gestation day 7. No adverse effect on tertility was observed at 200 mg/kg/day (systemic exposures up to 10 times huma exposure at 40 mg/day lased on AUC comparisons). In testicies of dogs treated with rosuvastatin at 30 mg/kg/day for one month, spermatidic giant cells were seen. Spermatidic giant cells were observed in monkeys after 6-month treatment at 30 mg/kg/day in addition to vacuolation of seminiferous tubular epithelium. Exposures in the dog were 20 times and in the monkey 10 times human exposure at 40 mg/day based

studies of rosuvastatin in pregnant women. Rosuvastatin crosses the placenta and is found in fetal tissue and amniotic fluid at 3% and 20%, respectively, of the maternal

exposures equivalent to numan exposure at 40 mg/aay based on body surface areas comparisons, decreased fetal viaility and maternal mortality was observed. Rossuvastatin was not teratogenic in rats at ≤25 mg/kg/day or in rabbits ≤3 mg/kg/day (systemic expo-sures equivalent to human exposure at 40 mg/day based on AUC or body surface comparison, respectively). Mursing Morthers It is not known whether rossuvastatin is excreted in human milk. Studies in lactating rats have demonstrated that rosuvastatin is excreted into breast milk at levels 3 times higher than that obtained in the plasma following oral gavage dosing. Because many drugs are excreted in human milk and because of the potential for serious adverse reactions in nursing infants from rosuva-statin, a decision should be made whether to discontinue nursing or administration of rosuvastatin taking into account the importance of the drug to the lactating woman. **Pedictric Use** The safety and effectiveness in pediatric patients have not been estab-lished. Treatment experience with rosuvastatin in a pediatric population is limited to 9 patients with homozyous FH. None of these patients was below 8 years of age. **Gerictric Use** Of the 10.275 patients in clinical studies with rosuvastatin, 3,159 (31%) were 65 years and older, and 698 (6.8%) were 75 years and older. The efficacy of rosuvastatin in the geriatric population (≥65 years of age) was comparable to the efficacy of osverved in the non-elderly.

Health-sponsored study designed to test the hypothesis that a low-fat and/or low-glycemic-index diet would have more favorable effects on weight loss, cardiovascular risk profile, and glucose metabolism than a moderate-fat and/or high-glycemic-index diet.

For the most part, the hypothesis was not borne out, said Dr. Schaefer, also chief of the lipid metabolism laboratory and senior scientist at the Jean Mayer USDA Human Nutrition Research Center on Aging.

ADVERSE REACTIONS Rosuvastatin is generally well tolerated. Adverse reac-tions have usually been mild and transient. In clinical studies of 10,275 patients, 3.7% were discontinued due to adverse experiences attributable to rosuvastatin. The most frequent adverse events thought to be related to rosuvastatin were myajai, consti-pation, asthenia, adbominal pain, and nausea. Clinical Adverse Experiences Adverse experiences, regardless of causality assessment, reported in 22% of patients in placebo-controlled clinical studies of rosuvastatin are shown in Table 1; discontinuations us to adverse earble in these studies of un to 12 week direction occurred in 3% of due to adverse events in these studies of up to 12 weeks duration occurred in 3% of

patients on rosuvastatin and 5% on placebo. Table 1. Adverse Events in Placebo-Controlled Studies

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Adverse event	N=744	N=382
Pharyngitis	9.0	7.6
Headache	5.5	5.0
Diarrhea	3.4	2.9
Dyspepsia	3.4	3.1
Nausea	3.4	3.1
Myalgia	2.8	1.3
Asthenia	2.7	2.6
Back pain	2.6	2.4
Flu syndrome	2.3	1.8
Urinary tract infection	2.3	1.6
Rhinitis	2.2	2.1
Sinusitis	2.0	1.8
In addition, the following adve	erse events were reported, rea	ardless of causality as

Sinusitis 2.0 1.8 June 2.0 ening renal function. (See PRECAUTIONS, Laboratory Tests.) Other abnormal laboratory values reported were elevated creatinine phosphokinase, transaminases, hyperglycemia, glutamyl transpetidase, alkaline phosphatase, biirrubin, and thyroid function abnormali-ties. Other adverse events reported less frequently than 1% in the rosuvastatin clinical study program, regardless of causality assessment, included arrhythmia, hepatitis, hypersensitivity reactions (i.e., tace edema, thrombocytopenia, leukopenia, evisculobul-lous rash, urticaria, and angioedema), kidney failure, syncope, myasthenia, myositis, pancreatitis, photosensitivity reaction, myopathy, and rhabdomyolysis. **OVERDOSAGET** There is no specific treatment in the event of overdose. In the event of overdose, the patient should be treated symptomatically and supportive measures instituted as required. Hemodialysis does not significantly enhance clearance of msuvastatin

rosuvastatin. DOSAGE AND ADMINISTRATION The patient should be placed on a stan-dard cholesterol-lowering diet before receiving CRESTOR and should continue on this diet during treatment. CRESTOR can be administered as a single dose at any time of day, with or without food. Hypercholesterolemia (Heterozygous Familial and Nonfamilial) and Mixed Dyslipidemia (Fredrickson Type IIIa and IIb) The dose range for CRESTOR is 5 to 40 mg once daily. Therapy with CRESTOR should be individualized according to goal of therapy and response. The usual recommended starting dose of CRESTOR is 10 mg once daily. Initiation of therapy with S mg once daily may be considered for patients requiring less aggressive LD-C reduc-tions or who have predisposing factors for myopathy (see WARNINGS, Myopathy/ Rhabdomyolysis). For patients with marked hypercholesterolemia (LD-C > 190 mg/dL) and aggressive lipid targets. a 20-mg starting dose may be considered. The 40-mg dose of CRESTOR should be reserved for those patients who have not achieved goal LDL-C at Hhadomyolysis). For patients with marked hypercholesterolemia (LUL-C > 190 mg/dL) and aggressive lipid targets. a 20-mg starting does may be considered. The 40-mg dose of CRESTOR should be reserved for those patients who have not achieved goal LDL-C at 20 mg (see WARNINGS, Myopathy/Rhadomyolysis). After initiation and/or upon titration of CRESTOR, lipid levels should be analyzed within 2 to 4 weeks and dosage adjusted accordingly. Homozygous Familial Hypercholesterolemia The recommended starting dose of CRESTOR is 20 mg once daily in patients with homozygous FI. The maximum recommended daily dose is 40 mg. CRESTOR should be enalyzed utilin 2 to 4 weeks and dosage adjusted accordingly. Homozygous FA on go CRESTOR should be analyzed utilin 2 to 4 weeks and dosage adjusted accordingly. Bomozygous Familial Hypercholesterolemia The recommended starting dose of CRESTOR is 20 mg once daily in patients with homozygous FI. The maximum recommended daily dose is 40 mg. CRESTOR should be eastrated from pre-aphresis) or if such treatments are unavailable. Response to therapy should be estimated from pre-aphresis. LDL-C levels. Doscoge in PATients Tatking Cyclosporine In patients taking cyclosporine In patients taking cyclosporine (patients taking cyclosporine) mg. Therefield to CRESTOR B mg once daily (see WARNINGS, Myopathy/Rhabdomyolysis, and PRECAUTIONS, Drug Interactions). Concomittom the patients with a bile acid binding resin. If CRESTOR is used in combination with 2 bile acid binding resin. If CRESTOR is used in combination with gemtibrozil, the dose of CRESTOR should be limited to 10 mg once daily (see WARNINGS, Myopathy/Rhabdomyolysis, and PRECAUTIONS, Drug Interactions). Doscoge in Patients With Renal Insufficiency. For patients with sever renal impairment (CL<sub>er</sub> < 30 mL/min1.73 m') not on hemodialysis, dosing of CRESTOR should be started at 5 mg once daily and not to exceed 10 mg once daily (see PRECAUTIONS, General, and CLINICAL PHARMACOLOGY, Special Populations, Renal Insufficiency).</p>

## found in fetal tissue and annoice fluid at 3% and 20%, respectively, of the maternal plasma concentration following a single 25 mg/kg oral gavage dose on gestation day 16 in rats. A higher fetal tissue distribution (25% maternal plasma concentration) was observed in rabbits after a single oral gavage dose of 1 mg/kg on gestation day 16 the potential tissue and annoice distribution (25% maternal plasma concentration) was observed in rabbits after a single oral gavage dose of 1 mg/kg on gestation day 18. If this drug is administered to a woman with reproductive potential, the patient should be apprised of the potential hazard to a fetus. In female rats given oral gavage doses of 5, 15. 50 mg/kg/day rosuvastatin before mating and continuing through day 7 postcotius results in decreased fetal body weight (lemale pups) and delayed obsersion of AUC comparisons). In pregnant rats given oral gavage doses of 2, 20, 50 mg/kg/day from gestation day 7 through lactation day 21 (weaning), decreased pup survival occurred in groups given 50 mg/kg/day, systemic exposures =12 times human exposure at 40 mg/day based on body surface area comparisons. In pregnant rabbits given oral gavage doses of 0.3, 1, 3 mg/kg/day from gestation day 64 uceation day 16 weaning), exposures equivalent to human exposure at 40 mg/day based on body surface area comparisons, decreased fetal viability and maternal mortality was observed. Rosuvastatin was not teratogenic in rab at 2.25 mg/kg/day or in rabbits. Simic expo-

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The study involved 80 obese men and women with a mean body mass index of 34  $kg/m^2$ . All were placed for 5 weeks on an average American diet at about 35 calories/kg per day for weight maintenance and then randomized to one of four weight-loss diets. One test diet contained 15% of calories as fat, another had 30% calories as fat, a third had a glycemic index of 85, and another had a glycemic index of 45.

All four study diets were heart healthy, containing 15% of calories as protein, 5% saturated fat, and identical amounts of fiber and cholesterol.

These were weight-loss diets in which caloric intake was restricted by one-third, compared with that in the first 5 weeks of the study, although the participants could receive more food if they requested it. They stayed on the weight-loss regimens



'A fat calorie and a carbohydrate calorie and a protein calorie are equivalent when it comes to weight loss.'

DR. SCHAEFER

for 12 weeks, then continued on the same diets for 5 more weeks, but in quantities designed to maintain their new body weight.

At the end of the 22-week controlled feeding period, all four diets had resulted in similar weight loss of 6%-8% of baseline body weight, or a mean of about 17 pounds. The reductions in LDL-cholesterol levels were similar across all four study groups, too-11%-12%. Fasting blood glucose was reduced by 4%-5% in all groups as well.

The only significant difference between the diets was that the low-glycemic-index diet and the moderate-fat diet each lowered plasma insulin levels by 22%-25%, which was two to three times more than the other diets. That could be important for long-term reduction in cardiovascular risk, although much more work on that score needs to be done, Dr. Schaefer said.

AHA President-elect Robert H. Eckel, M.D., was quick to add that clinicians shouldn't attach any significance to the insulin findings.

'Insulin levels are not to be measured by practicing physicians. This is research, and insulin assays have not been standardized. So the insulin level is irrelevant to the practice of medicine," stressed Dr. Eckel, professor of medicine at the University of Colorado, Denver.

His own studies suggest that low insulin levels following weight loss by insulinsensitive patients aren't necessarily a good thing, as they were predictive of weight regain, he added.

Dr. Schaefer observed that nutrition research has shown a dichotomy between what's important for achieving weight loss and what's heart healthy. For weight loss, caloric restriction and physical exercise are critical. "But for preventing heart disease, it's animal fat and sugar as well, I believe, that are atherogenic. Those are the culprits."