For different types of constipation...two different laxatives.

Perdierri
The natural vegetable laxative for acute or obstinate constipation
laxative with a mild peristaltic action.

Perdierri Plain
For comfortable relief of simple, chronic, or spastic constipation...a 100% natural bulk forming agent.

Easy to take The Perdierri laxatives are easy-to-swallow granules. Simply place a teaspoonful of granules in the mouth and wash down with 8 or more ounces of water or any cool beverage.

No mixing Perdierri granules require no messy mixing or sticky chewing. When followed by 8 or more ounces of water, both Perdierri and Perdierri Plain leave a clean, minty mouth feel.

All natural Perdierri Plain is 100% psyllium, a natural vegetable fiber. Perdierri is 62% psyllium with 18% senna for gentle peristalsis.

Dietetically acceptable The Perdierri products are low in calories and sodium. No salt, sugar, or sugar substitutes are needed to make palatable.

For different types of constipation...two different laxatives.

Original Contributions

Is Relationship Between Serum Cholesterol and Risk of Premature Death From Coronary Heart Disease Continuous and Graded?

Findings in 356 222 Primary Screenees of the Multiple Risk Factor Intervention Trial (MRFIT)

Jeremiah Stamler, MD; Deborah Wentworth, MPH; James D. Neaton, PhD, for the MRFIT Research Group

The 356 222 men aged 35 to 57 years, who were free of a history of myocardial infarction, screened by the Multiple Risk Factor Intervention Trial (MRFIT) in its recruitment effort, constitute the largest cohort ever standardized serum cholesterol measurements and long-term mortality follow-up. For each five-year age group, the relationship between serum cholesterol and coronary heart disease (CHD) death rate was continuous, graded, and strong. For the entire group aged 35 to 57 years at entry, the adjusted risks of CHD death in cholesterol quintiles 2 through 5 (162 to 203, 202 to 222, 221 to 244, and >245 mg/dL; 4.21 to 5.22, 5.25 to 5.69, 5.72 to 6.31, and >6.34 mmol/L) relative to the lowest quintile were 1.29, 1.73, 2.21, and 3.42. Of all CHD deaths, 46% were estimated to be excess deaths attributable to serum cholesterol levels 180 mg/dL or greater (>4.65 mmol/L), with almost half the excess deaths in serum cholesterol quintiles 2 through 4. The pattern of a continuous, graded, strong relationship between serum cholesterol and six-year age-adjusted CHD death rate prevailed for nonhypertensive nonsmokers, nonhypertensive smokers, hypertensive non-smokers, and hypertensive smokers. These data of high precision show that the relationship between serum cholesterol and CHD is not a threshold one, an increased risk confined to the two highest quintiles, but rather is a continuously graded one that powerfully affects risk for the great majority of middle-aged American men.

METHODS

Seventy-five percent of the study men were identified through coronary risk factors, including screening of male employees by worksite health centers or churches, screening of male members of church groups, identification of men by screening of employee, civic, and church groups; in addition, powerful concordant evidence is available from animal experimental research in several species, including nonhuman primates. However, in recent years, a divergence of opinion has arisen as to whether the association between serum cholesterol and CHD risk is continuous and graded over the whole distribution of this variable or whether it is a plateau-like relationship with no increase in CHD risk over the lower 10% to 40% of the distribution and with excess risk confined to persons with levels in the upper 40% of the distribution.10,11

Recently available data in over 356 000 American men permit evaluation of this issue with a high degree of precision. These data are from the men screened for possible entry into the Multiple Risk Factor Intervention Trial (MRFIT) in a standardized way in 18 cities across the country in the early 1970s. This report presents the findings in this cohort of the relationship between baseline serum cholesterol levels and risk of fatal CHD.

The data collection, screening, and follow-up methods used in this research have been published.12 In brief, from November 1973 to November 1975, 301 062 men aged 35 to 57 years were screened in 18 US cities at 22 MRFIT clinical centers. Several methods of recruitment were used, including screening of employees, civic, and church groups; identification of men by screening of employee, civic, and church groups, and screening of respondents to mass media publicity.

Serum cholesterol levels were determined at one of 14 local laboratories using an automated system of chemical analysis (Auto Analyzer II), with standardization by the Lipid Standardization

Original Contributions

Nov 28, 1986—Vol 256, No. 20

Serum Cholesterol—Stamler et al

2822
Table 1.—Quintiles of Serum Cholesterol and Six-Year CHD Mortality for 356 222 Primary Screenees of MRFIT*

<table>
<thead>
<tr>
<th>Quintile</th>
<th>Serum Cholesterol, mg/dL (mmol/L)</th>
<th>CHD Mortality by Age Group, No. of CHD Deaths (by Death Rate per 1000)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Age Group 35-39 y</td>
</tr>
<tr>
<td>Quintile 1</td>
<td>&lt;167 (&lt;2.75 mmol/L)</td>
<td>1.00</td>
</tr>
<tr>
<td>Quintile 2</td>
<td>168-202 (2.43-3.24 mmol/L)</td>
<td>1.14</td>
</tr>
<tr>
<td>Quintile 3</td>
<td>203-220 (3.25-3.69 mmol/L)</td>
<td>2.32</td>
</tr>
<tr>
<td>Quintile 4</td>
<td>221-244 (3.72-4.63 mmol/L)</td>
<td>2.64</td>
</tr>
<tr>
<td>Quintile 5</td>
<td>≥245 (≥4.93 mmol/L)</td>
<td>7.78</td>
</tr>
</tbody>
</table>

* CHD indicates coronary heart disease; MRFIT, Multiple Risk Factor Intervention Trial. Analysis is age specific and age standardized.

Table 2.—Quintiles of Serum Cholesterol and Relative Risk of Six-Year CHD Mortality for 356 222 Primary Screenees of MRFIT*

<table>
<thead>
<tr>
<th>Quintile</th>
<th>Serum Cholesterol, mg/dL (mmol/L)</th>
<th>Deaths Men</th>
<th>Relative Risk of Six-Year CHD Mortality by Age Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quintile 1</td>
<td>&lt;167 (&lt;2.75 mmol/L)</td>
<td>101</td>
<td>1.00</td>
</tr>
<tr>
<td>Quintile 2</td>
<td>168-202 (2.43-3.24 mmol/L)</td>
<td>176 (4.52)</td>
<td>101</td>
</tr>
<tr>
<td>Quintile 3</td>
<td>203-220 (3.25-3.69 mmol/L)</td>
<td>197 (5.10)</td>
<td>149</td>
</tr>
<tr>
<td>Quintile 4</td>
<td>221-244 (3.72-4.63 mmol/L)</td>
<td>205 (5.06)</td>
<td>192</td>
</tr>
<tr>
<td>Quintile 5</td>
<td>≥245 (≥4.93 mmol/L)</td>
<td>237 (5.67)</td>
<td>247</td>
</tr>
</tbody>
</table>

* CHD indicates coronary heart disease; MRFIT, Multiple Risk Factor Intervention Trial. Analysis is age specific and age standardized.

Table 3.—Deciles of Serum Cholesterol and Six-Year CHD Mortality for 356 222 Primary Screenees of MRFIT*

<table>
<thead>
<tr>
<th>Decile</th>
<th>Serum Cholesterol, mg/dL (mmol/L)</th>
<th>No. of Deaths</th>
<th>Rate per 1000</th>
<th>Relative Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decile 1</td>
<td>&lt;167 (&lt;2.75 mmol/L)</td>
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</tr>
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* CHD indicates coronary heart disease; MRFIT, Multiple Risk Factor Intervention Trial. Analysis is age specific and age standardized.
90 mm Hg and greater than or equal to 180 mg/dL (4.65 mmol/L).

For men for the five quintiles of serum cholesterol levels, CHD mor-

tality was 10% greater for mean cholesterol levels equal to or greater

than 180 mg/dL (4.65 mmol/L), had a DBP less than 90 mm Hg, and were

not cigarette smokers. If a 9% higher serum cholesterol level for the

men in the second, third, fourth, and fifth quintiles, compared with the first

quintile, was the consistent finding without exception. Overall, based on the

data for the men in quintile 2, the estimated excess CHD deaths, distri-

buted across quintiles 2 through 4, were

21% were distributed across quintiles 2 and 3 and 26% were distributed across

quintiles 3 and 4. In all, 31% and 36% of the total excess deaths attrib-

utable to above optimal levels of the five established major CHD risk

factors (eg, cigarette use, blood pres-

sure, cholesterol levels, diabetes, family history) were distributed across the

five quintiles of cholesterol levels.

Comment

The data from this large, prospectively

studied cohort provide the first esti-

mate that a 9% higher serum choles-

terol level was associated with a 1%

greater CHD death rate—that is, a 1%

greater CHD death rate per 1000

persons per year in a population with

a mean serum cholesterol level for the

men in this quintile, which stratified in Table 4, ranged from 21.4

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Therapeutic Response to Lovastatin (Mevolin) in Nonfamilial Hypercholesterolemia
A Multicenter Study

Lovastatin (mevinolin), a potent inhibitor of 3-hydroxy-3-methylglutaryl coenzyme A reductase, was investigated in a double-blind, placebo-controlled, multicenter study of 103 patients with nonfamilial primary hypercholesterolemia. Changes varied from 10 to 80 mg/d in single or divided doses. Patients' cholesterol reductions of 32% and 38%, respectively. High-dose lovastatin cholesterol levels tended to rise slightly and plasma triglyceride levels were modestly decreased. Adverse effects attributable to lovastatin were infrequent. In this study, lovastatin was well tolerated and effective for the treatment of nonfamilial hypercholesterolemia.

Lovastatin Study Group II

JAMA 1986;256:2829-2834

REFERENCE

Hypercholesterolemia—Lovastatin Study Group II

five-center study (82 men and 19 women, with a mean age of 51 years) with a diagnosis of primary hypercholesterolemia (type IIa or IIb) with an LDL-C level above the 90th percentile while on a lipid-lowering diet, stratified by age and sex. The sample size of 100 patients (20 per group) was chosen based on the following power calculations (for α=0.05, two-tailed test): 11% detectable difference between groups in mean total cholesterol levels (12% for LDL-C level) and 4% within groups for total cholesterol level (5% for LDL-C level). Except for two patients with familial combined hyperlipidemia, all patients were considered to have nonfamilial hypercholesterolemia. (However, since familial hypercholesterolemia is easier to diagnose than to exclude, it is possible that a small proportion of the patients studied did have familial hypercholesterolemia. In addition, all patients had evidence of significant coronary atherosclerosis.)

In all, patients who had (1) evidence of significant coronary atherosclerosis (e.g., a positive exercise stress test, angina pectoris, or a history of myocardial infarction and/or coronary bypass surgery), and/or (2) an LDL-C level greater than 215 mg/dL (5.60 mmol/L) while on a standard lipid-lowering diet, were excluded from this study if they were less than 18 years of age or more than 70 years of age, were pregnant, or had familial combined hyperlipidemia.

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