Effects of a Vegetarian Diet on Recurrent Myocardial Infarction Rates

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**Effects of a Vegetarian Diet on Recurrent Myocardial Infarction Rates**

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**QUESTION:**

In patients who have a history of myocardial infarction, how does consuming a vegetarian diet compared to consuming a non-vegetarian diet influence occurrence of a second myocardial infarction over their life spans?

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**BACKGROUND:**

- **Cardiovascular disease** (CVD) is the leading cause of death in the United States (Benjamin et al., 2018).
- CVD includes myocardial infarction, atherosclerosis, and coronary artery disease (CAD) (American Heart Association, 2017).
- A **myocardial infarction**, or “heart attack,” occurs when part of the heart muscle receives inadequate blood flow (CDC, 2017).
- The leading cause of MI is an atherosclerotic process caused from CVD (CDC, 2017). In CVD, low density lipoprotein (LDL) or “bad cholesterol” deposits plaque on the coronary artery walls, narrowing the artery walls, increasing the risk for heart attack, stroke, and peripheral artery disease (American Heart Association, 2018a).
- A **vegetarian diet** is defined as a diet that does not include meat; however, there are many forms of a vegetarian diet (American Heart Association, 2016).

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**Study**

<table>
<thead>
<tr>
<th>Description</th>
<th>Results</th>
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<tbody>
<tr>
<td>“Low-Calorie Vegetarian Versus Mediterranean Diets for Reducing Body Weight and Improving Cardiovascular Risk Profile: CARDIVEG Study (Cardiovascular Prevention With Vegetarian Diet)” (Sofi, et al., 2014).</td>
<td>There was no significant difference in reduction of either body weight or improvement of cardiovascular profiles between the VD and MD except in the VD, which more significantly reduced total cholesterol.</td>
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<tr>
<td>“Red Meat Consumption and Mortality: Results from Two Prospective Cohort Studies” (Pan, et al., 2012).</td>
<td>Consuming red meat, both processed and unprocessed, was linked to higher rates of total mortality, cardiovascular disease mortality, and cancer mortality.</td>
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<tr>
<td>“Plant-Based Diets as a First Line Treatment” (Hart, 2015)</td>
<td>This study showed that a “very strong adherence to a plant-based pro-vegetarian food pattern was linked to a 20% decreased risk of cardiovascular disease mortality” (Hart, 2015, 214-215).</td>
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<tr>
<td>“Effects of Vegetarian Diets on Blood Lipids: A Systematic Review and Meta-Analysis of Randomized Controlled Trials” (Fenglei Wang, et al., 2015).</td>
<td>Through a vegetarian diet, cholesterol and LDL levels were lowered, meaning that this diet can be useful for the treatment of dyslipidemia (p. 1). However, more “well designed randomized controlled trial that are designed to evaluate the effects of specific vegetarian diets on blood lipids are required” (p. 13).</td>
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**RESULTS:**

- Most current available research did not apply to the specific PICOT question, and therefore a conclusion cannot be made as to whether or not a vegetarian diet reduced the rate of recurrent MI.
- However, research showed improved cardioprotective serum markers associated with decreased meat consumption including decreased LDL, increased HDL, decreased total cholesterol, and decreased triglycerides.
- Vegetarian diets were also associated with decreased CVD-related deaths and obesity.

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**NURSING IMPLICATIONS:**

- Based on the results, it is clear that more research needs to be done on the effects of a vegetarian diet on reducing the incidence of recurrent MI.
- Given that CVD is the #1 killer in the United States, nurses in virtually every field will encounter patients that are at risk for or have experienced CVD, including MI.
- Nurses can play an important role in educating their patients on non-pharmacological ways to best care for themselves including lifestyle modifications such as implementing a diet rich in a variety of fruits and vegetables, decreasing tobacco use, and increasing activity.

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This work is not original. This is an evidence-based practice brief that includes published research conducted by professionals. Guidance was provided by Stephanie Burkholder, professor of NURS7: Evidence-Based Practice Research Methods.