



Science Matters

Using Evidence to Influence Health Policy Decisions

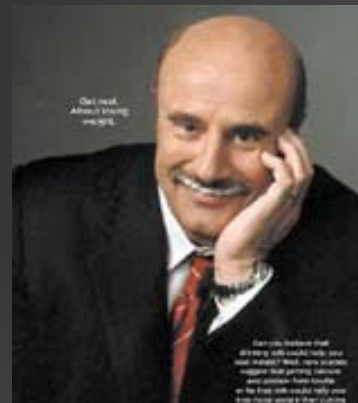
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Dairy Products and Weight Loss?



Advertising Claim:

- Three servings of dairy products daily will aid in weight and fat loss
- “Drink Milk. Lose Weight?”
- “Milk Your Diet. Lose Weight!”
 - http://www.2424milk.com/pdf/ad_crow.pdf
 - http://www.2424milk.com/celeb_serena.php

Background



- Most cheese is 60-80% of calories from fat.
- According to the NICHD, fluid milk is the #1 source of fat in children's diets. (Subar 1998)
- Skim milk is 55% of calories from sugar.
- Low-fat chocolate milk has the same # of grams of sugar as cola—ounce for ounce.

Background



- Obesity crisis
- Suggestive observational data
- Motivated industry
- Possibility for sales growth?

IDFA presentation Oct. 8, 2003

- “National Dairy Council has been supporting a body of emerging science that suggests dairy can be part of the solution to the obesity crisis.”
- “Goal is to introduce dairy’s weight loss benefit by ‘selling the science’.”



“The Secret’s in the Science”

- Promotion was launched in October 2003
- “Drink Milk. Lose Weight?”
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Supported by:

- Hypothesized mechanism (Zemel 2000, 2001, 2002)
- Data reanalysis of studies conducted at Creighton University (Davies 2000)
- CARDIA study finding that higher dairy product intake was inversely associated with BMI in overweight, but not healthy weight adults (Pereira 2002)

Observational studies— suggestive but inconsistent

- Cross-sectional studies not useful for observing associations with weight loss.
- Associations in prospective studies, when observed, were generally with a higher or lower *rate of gain*.
- Two of the largest prospective studies, one including 12,829 adolescents, and the other including >19,000 men found the reverse: increased milk intake was associated with increased weight gain. (Berkey 2005, Rajpathak 2006)

Does scientific evidence:

- Support claims that adding dairy to the diet aids in weight loss with or without energy restriction?
- Support a role for calcium-supplements in weight loss?



Is the secret in the science?

Focused on human experimental trials

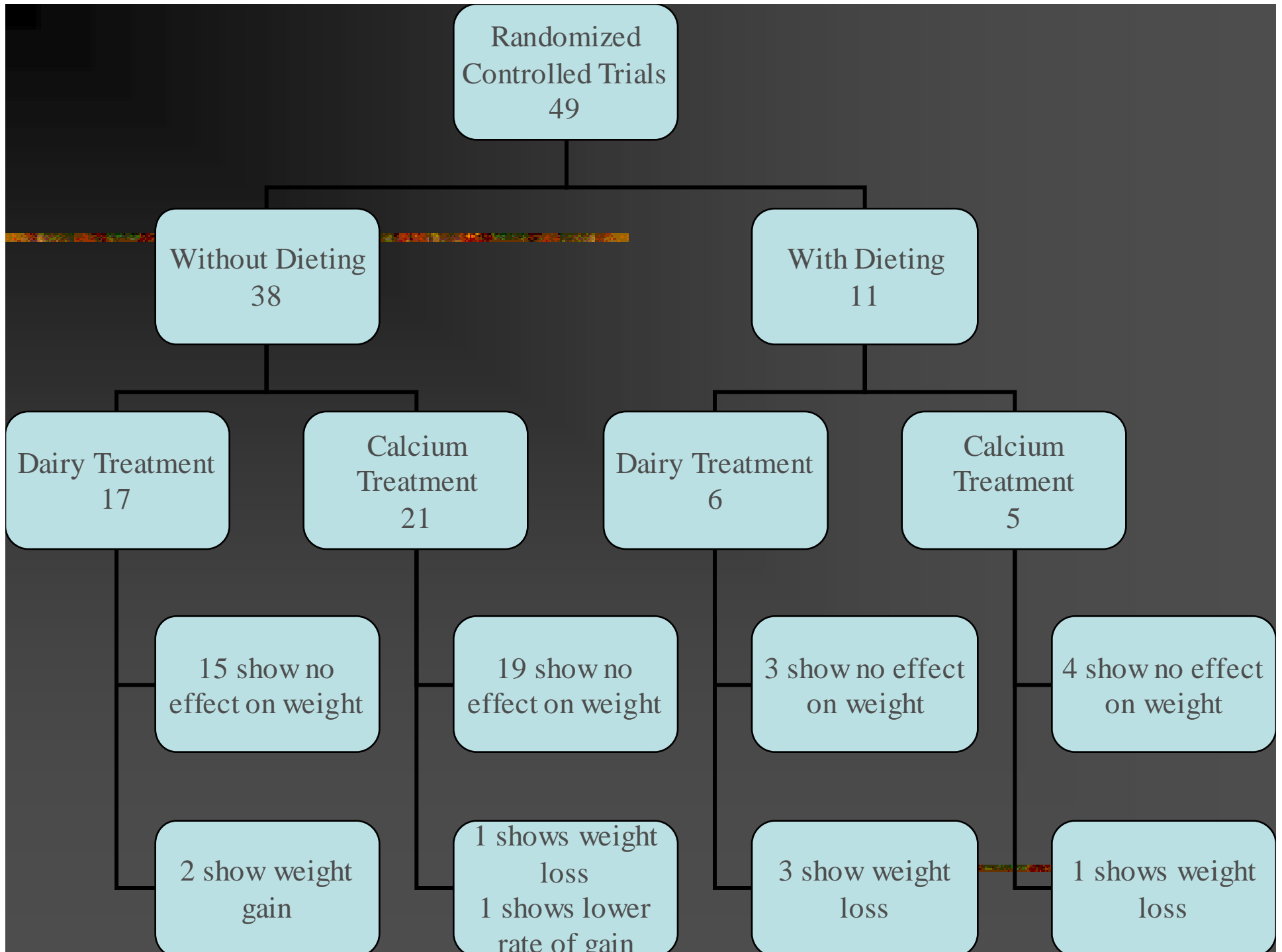
Study categories:

- Dairy-treated vs. control
- Calcium-supplemented vs. control

Sub-categories:

- Without energy restriction: no dieting
- With energy restriction: dieting





What do the studies show?

Without dieting

37 of 38 trials of dairy product or calcium supplementation did not support the claim

In fact, 2 showed greater weight gain in dairy-treated groups (Lau 2001; Barr 2000)

Are dairy products a helpful weight loss aid to dieters?

11 studies have paired dairy or calcium supplementation with dieting in overweight or obese individuals

- 7 did not observe significantly different weight loss in high-dairy or calcium vs. lower-dairy or calcium dieters

(Bowen 2004, Thompson 2005, Harvey-Berino 2005, Jensen 2001, Major 2007, Ricci 1998, Shapse 2004)

- 3 observed greater weight loss in the high-dairy dieters as compared to the low-dairy dieters (Zemel 2004, Zemel

2005 (yogurt), Zemel 2005 (AA))

- 1 observed greater weight loss in calcium-treated dieters compared to placebo (Zemel 2004)

A closer look at these three studies

Caloric-restriction target = 500 kcal/day below E balance

Zemel 2004—32 adults

- high-dairy, low-dairy, or high-calcium for 24 weeks

Zemel 2005—34 adults

- 3 servings yogurt/day or no added yogurt for 12 weeks

Zemel 2005—29 African American adults

- high-dairy (3 servings) or low-dairy (<1 serving) for 24 weeks

- **In all 3, the high-dairy consumers lost more weight than the low-dairy consumers.**

A closer look at these trials:

- Baseline calorie intake is not reported.
- Actual change in caloric intake is not reported.
- Mean weight loss in high dairy group is about 1 lb/week—amount expected at 500 calorie/day energy restriction.

Differential weight loss due to differential compliance with calorie-restriction protocol?

Dietary Guidelines Advisory Committee found that:

- Higher dairy product consumption is not clearly associated with weight gain, and...
- “ ... there is insufficient evidence on which to base a more definitive statement regarding the intake of milk products and management of body weight.”

Report of the Dietary Guidelines Advisory Committee 2004.

The Bottom Line:

Current evidence does not support the claims that added dairy products facilitate weight loss—with or without dieting.

Therefore, dairy and weight loss claims are false and misleading.

Petition to the Federal Trade Commission

- To prohibit the use of these advertisements on the grounds that they are false and misleading.
- Submitted April 2005

PCRM requested that the Commission

- Immediately and permanently discontinue the dairy and weight loss claims in advertising and marketing
- Require corrective advertising
- Work with officials from the USDA and the FDA to ensure that organizations adhere to the laws prohibiting unfair and deceptive advertising

In May 2007, the Federal Trade Commission responded...

- USDA, the Dairy Board, and the Fluid Milk Board “have determined that the best course of action at this time is to discontinue all advertising and other marketing activities involving weight loss claims until further research provides stronger, more conclusive evidence of an association between dairy consumption and weight loss.”

FTC Response

- Any future advertising will be consistent with the dietary guidelines.
- However, no corrective advertising was required and no statements were issued to the public by the FTC, the USDA, or the dairy industry groups.

PCRM's response to this FTC decision

- Press release on May 11, 2007— “USDA and Dairy Industry Halt Misleading Weight-Loss Ads After Physicians Group Complains to Federal Trade Commission”
- Media interviews

Importance of this decision?

- Does the science matter?
- Impact on consumer
- Impact on dairy advertising

The latest “got milk?” campaign

- “Think About Your Drink”
- http://www.2424milk.com/pdf/ad_ramirez.pdf

Lessons to learn

- What else can consumer advocates do?
 - What else can professionals do to reduce confusion and discourage misleading advertising?
 - Is it worth the effort and energy required to combat deceptive health claims in advertising?
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Public Policy Recommendations: Get Real about Milk

- Focus obesity reduction campaigns on methods that have been shown to facilitate weight loss and/or weight maintenance.
- Continued great need to hold industry accountable for misleading public health messages.