

# A Closer Look at the Zone Diet: The Science and the Claims

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## Abstract

The Zone Diet by Dr. Barry Sears has had commercial success since its inception in 1994. My research evaluates the claims made by the Zone Diet concerning weight loss, reduced heart disease, reduced diabetes, improved mental health and increased energy. My hypothesis is that these claims are not backed by sound nutritional science. I have used peer-reviewed literature to analyze the claims made by Dr. Sears that a 0.75 :1 protein to carbohydrate ratio for every meal and snack will result in the health benefits described above. All of the literature found shows many significant flaws in the Zone Diet's claims. The scientific research leads me to conclude that a 0.75 :1 protein to carbohydrate ratio does not result in better health or significant weight loss.

## Introduction

For the past 10 yr, low-carbohydrate diets have received substantial media coverage. Claims have become more and more sophisticated that low to high carbohydrate to protein ratio (P:C) diets have significant impacts on not only weight loss but overall health. The Zone Diet is an excellent example of this phenomenon. Literature written by the Zone creator Dr. Sears makes significant claims of his diet's impact on lowering the risk of heart disease and diabetes, improving energy and providing improved mental clarity (Sears 1995). The diet is based upon a 30/30/40 system, meaning that each meal and snack consists of 30% fat, 30% protein and 40% carbohydrates. The Zone P:C is 3:4, while professional evaluation of a healthy diet recommends 4:1(Cheuvront 2003). The Zone diet claims that this ratio affects endocrinology and eicosanoid metabolism resulting in significant weight loss and health benefits.

I hypothesize that the Zone Diet's claims of significant weight loss and health benefits are not supported by published nutritional science.

## Method

Many studies have been conducted in order to determine the effectiveness of such "fad" diets as the Zone Diet. In order to examine comprehensively the claims made by the Zone Diet, I have referred to peer-reviewed articles on the effectiveness of high protein diets. Information came from peer reviewed journals including *The Journal of the American Medical Association*, *Journal of the American College of Nutrition*, and *The Journal of Clinical Endocrinology and Metabolism*,

## Diet Components

- 0.75:1 P:C for each meal and snack
- Each meal and snack is balanced 40% carbohydrates, 30% fat, 30% protein
- 500 calories per meal and 100 calories per snack.
- Encouragement to eat fresh vegetables, fruits, nuts and leafy green vegetables.
- Moderate exercise
- 8 glasses of water a day

## Results

Table 1 lists claims made by the Zone diet. Evaluations of those claims from relevant studies in peer-reviewed literature are presented.

**Table 1: Evaluation of Zone Diet Claims**

Claim	Evaluations of claims from peer-reviewed citations (1-6)
Significant weight loss	At 1 year, average weight loss was at 3.2 kg (6.0 SD) (1).---An increased P:C could stimulate a more anabolic condition which could be a favorable environment for weight gain (3). ---Any weight loss would be attributed to the reduced caloric intake, not the P:C (6). --- Short term weight loss is more successful with a low carbohydrate diet than a low fat diet but in the long-term the results are reversed (6).
Reduced risk of cardiovascular sickness	A high protein diet will reduce LDL but only a high to low P:C will increase HDL(5).--- There is no correlation between a high protein diet and reduced cardiovascular illness (6).
Reduced risk of type II diabetes	High fiber and high carbohydrate diets emphasizing intake of fresh fruit and vegetables are more effective at increasing insulin sensitivity(2).--- No evidence supports that a 0.76:1 protein to carbohydrate ratio would reduce insulin response(3).
General improved health	High percentages of protein consumption can result in long-term bone loss (4).
Improved energy	Energy comes from carbohydrates and a diet that has a low carbohydrate intake would result in less energy (2).
Improved mental clarity	Mental clarity is also associated with energy intake or carbohydrate intake and there is not correlation between low carbohydrate intake and high protein intake with improved mental clarity (2).

## Discussion

The research shows that adherence to the Zone diet's principles of a 0.75 P:C can result in weight loss during the first few months of the diet (6). However the large standard deviation after one year (1) indicates many did not lose weight, and many gained weight. Thus, weight loss does not continue and one may even rebound, gaining back more than was lost. Any long term weight loss that is experienced on this diet is caused by the reduced caloric intake. The Zone advocates moderate exercise but does not stipulate that 90 minutes daily is necessary for weight loss (7).

There is correlation between eating a high protein to carbohydrate ratio and reducing LDL, which would result in a reduced risk of cardiovascular disease. However, one also needs to increase HDL which is a consequence of exercise (8). Another study shows that in fact there is no correlation at all between reduced risk of heart disease and the Zone Diet (6).

No evidence could be found to support a correlation between the Zone Diet, 0.75 P:C, and Improved general health, energy or mental clarity. In fact one study (3) shows that it may have negative effect of bone density.

## Conclusion

The Zone Diet's claims are based only on incomplete scientific theory. However, these facts are manipulated in order to "*prove*" that it has "*significant*" benefits. No evidence was found to support that following the 0.75:1 P:C is superior to 0.25:1. The Zone Diet, while it may result in short term WL, is unlikely to result in long term WL. Any long term WL experienced with this diet would be a result of the reduced caloric intake, not high P:C. No evidence was found in peer-reviewed literature of the Zone Diet's claims of reduced risk of heart disease, energy and mental clarity. There is a benefit to fish oil and complex carbohydrates, which the diet suggests. To conclude, the Zone Diet's main claims have been refuted by peer reviewed studies.

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