



# Dietary Counseling with Elite Tennis Players

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## INTRODUCTION-RATIONALE

- For players to withstand the rigorous training routines and the other physical demands of competitive tennis and to be able to perform to their potential they must maintain a healthful and well-rounded diet.
- This study was intended to provide tennis coaches and players with essential information for adopting healthy eating habits and for the enhancement of performance on the court.

## PURPOSE

The purpose of this study was to examine the effects of dietary counseling on the nutritional lifestyle habits of elite female tennis players.

## SAMPLE

Two university athletes (ages 19 and 20 years) and five 'A' team players (ages 35, 49, 50, 51, and 53 years) participated in the study

## METHOD

- To determine the usefulness of the dietary counseling program, players' diets were logged and analyzed before and after a regular spring tennis season.
- More specifically, the relative amounts of fat, carbohydrate, protein, vitamins, minerals and total calories of each player's daily intake were measured. Participants' blood lipid profiles (e.g., blood cholesterol levels), body composition, attitudes toward eating, and self esteem were also assessed pre- and post-season.
- Over the course of the season program sessions were carried out with each individual athlete in both written form and over-the-phone

## RESULTS (cont)

- Overall, results indicated that recommendations made during dietary counseling sessions were incorporated into the lifestyle of those individuals who were interested in and engaged with the program.
- A major recommendation that was consistent for nearly all the players was to increase total daily caloric intake.
  - It was also suggested this increase in calories come primarily from food rich in carbohydrates.
- On average, players responded to these recommendations by increasing their caloric intake by 100 calories through an increased consumption of carbohydrates and, unfortunately, grams of fat.



## RESULTS (cont)

- After the dietary counseling, the players were still below the American Heart Association's recommended value for percentage carbohydrate intake and above the 30% recommended fat intake.
- The players' average value for cholesterol intake was well below the American Heart Association recommendation of 200mg per day.
- Other deficiencies in the athletes' diets were in their daily intake of vitamins A and C, pantothenic acid, calcium, and iron.
- Although calcium intake had increased by the post-season assessment, it was still well below the recommended daily allowance.
- While total cholesterol and 'good' cholesterol (i.e., HDL-C) did not change over the course of the study, players' 'bad' cholesterol (i.e., LDL-C) decreased, on average, by 24 mg%.
- Interestingly, although the younger university players consumed more total calories and fat calories compared to the 'A' team players, they had the lowest total cholesterol and LDL-C levels.
- Five players maintained a relatively stable body composition throughout the period of the study.
  - One player had a significant weight loss (about 13 lbs.), with primary weight loss in fat and a maintenance of lean body tissue.
  - A second player increased her total body weight, mostly due to increased lean muscle mass. This increase was thought to be due to an increased caloric intake as well as the university team's weight training program.
- The psychological assessments showed that all participants had either above average or the highest self esteem scores as well as Eating Attitude Test scores that indicated no symptoms of eating disorders (i.e., anorexia nervosa).

## RECOMMENDATIONS

- On average, the players who participated in this study fell short of meeting many of the American Heart Association's dietary guidelines (e.g., low overall caloric intake, low carbohydrate caloric intake, high fat caloric intake, low dietary cholesterol intake and insufficient intake of vitamins A and C, pantothenic acid, calcium, and iron).
  - These findings provide evidence for nutritional deficiencies that are common to this class of athletes as well as justification for the implementation of dietary counseling programs with similar groups.
- A dietary counseling program could serve as a useful tool for optimizing players' on-the-court performances and overall well-being at all levels of play.
  - These benefits should result from program outcome factors such as healthier body composition and blood cholesterol profile.
  - Other benefits may include better immune functioning and increased energy necessary for heightened functioning on the court.

## CONCLUSION

- This study indicated that for a nutritional intervention to be most effective, a player must be bought into the process and interested in offering full participation.
- Be aware that there are related health conditions that cannot be altered by dietary changes alone (e.g., excessively high cholesterol levels). Conditions such as these warrant further monitoring and a medication intervention.



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