

WHAT IS THE DEAL WITH HIGH PROTEIN DIETS?

UNDERSTANDING THE BENEFITS AND RISKS

LAWRENCE J. CHESKIN, MD, FACP, FTOS

DISTINGUISHED PROFESSOR, NUTRITION AND FOOD STUDIES

GEORGE MASON UNIVERSITY - COLLEGE OF PUBLIC HEALTH

ADJUNCT PROFESSOR, DEPARTMENT OF MEDICINE (GI)

JOHNS HOPKINS SCHOOL OF MEDICINE (GI)

INTRODUCTION

- Overview of high protein diets
 - History
 - Definition of high protein diets
 - Common sources of protein: meat, dairy, legumes, nuts

THE STATISTICS ON HIGH PROTEIN DIETS: GOOD? OR BAD?

- Last year, **71% of US adults said they were trying to eat more of it**
- Perhaps the earliest marketing of high protein was the early 1950's: "**Hi Proteen**" powder
- The latest iterations? **Protein iced tea (Fuerte), Starbucks high protein banana cold foam, high protein pale ale, protein-fortified glazed donuts, and many, many more...**
- While dietary guidelines suggest **0.8 g /kg (0.36 g/lb) body weight as the RDA**, most American adults consume **2x that amount**.
- To wit, we eat ~300 lbs of meat/year/adult in the US

BENEFIT

EXPLANATION

Weight Loss

Increases satiety, reducing overall calorie intake (leads the macronutrient hierarchy of satiety/ounce)

Muscle Preservation (athletes, weight losers)

Builds/retains muscle mass during exercise and weight loss

Metabolic Boost

Higher thermic effect of food; burns more calories during digestion.

Heart Health

Improves blood pressure and cholesterol levels in some cases

Bone Health

Can strengthen bones with adequate intake of calcium

Improved Blood Sugar Control

Helps stabilize blood sugar levels



POTENTIAL RISKS OF HIGH PROTEIN DIETS

- Possible negative health impacts
 - **Kidney strain:** Increased workload for those with renal impairment
 - **Nutrient deficiencies through unbalanced intake:** Risk of missing out on fiber and essential vitamins/minerals
 - **Sustainability Issues:** Difficult to maintain long-term; may lead to yo-yo dieting

BUT DO KEEP IN MIND...

- **Not enough** dietary protein is **very bad** for health and vitality
- **Kwashiorkor** is the hallmark disease of protein malnutrition
- Among the macronutrients CHO, protein, and fats, **only protein is needed in the diet essentially every day**: essential AA's can't be produced in the body, so with a deficit, we start to break down our own tissues to secure the AA's needed to make hormones, replace our cells, and form antibodies.

RESEARCH INSIGHTS

- **Current studies** on high protein diets and weight control.
- **Mixed results:** effectiveness varies from person to person.
- Importance of considering individual health and preferences
- For certain populations, it is not controversial that higher than RDA-level dietary protein is needed:
 - Growing bodies (infants, children, teens)
 - Those whose muscles are under stress from exercise, or aging

MORE CONTROVERSIAL...

- While 0.8 g/kg may indeed meet our barest needs for protein, a number of researchers contend that a more optimal (higher) amount would further benefit our health
- That more optimal intake level seems to have a limit: the benefits of high protein diminish as the average daily intake exceeds 1.6 g/kg for non-athletes, and perhaps 2.2 g/kg for athletes...
- Others say re protein intake “There is very little evidence that more is better” (Marion Nestle)
- And there’s a point beyond which high protein intake becomes an expensive waste: >20-40 g in a meal overwhelms the metabolic limits for protein, and it is simply burned as the body would excess carbs or fat

WHO SHOULD CONSIDER HIGH PROTEIN DIETS?

IDEAL CANDIDATES:

- **Athletes:** For muscle recovery and performance, especially among strength trainers
- **Many Weight Loss Seekers:** Individuals aiming for fat loss and avoidance of muscle loss, and those looking for improved satiety to reduce snacking
- **Older Adults:** To preserve muscle mass and strength

WHO SHOULD AVOID HIGH PROTEIN?

- Individuals with renal impairment or other specific health conditions.
- Those wishing to adhere to certain dietary restrictions, like vegetarians or vegans.
- People who struggle with sustainability or cravings.

TYPES OF HIGH PROTEIN DIETS

- Various approaches to high protein intake:
 - **Ketogenic Diet:** High fat, moderate protein, low carbs
 - **Paleo Diet:** Focus on whole foods, lean proteins, and veggies
 - **Dukan Diet:** Four phases emphasizing lean protein and limited carbs

IMPACTS BEYOND INDIVIDUAL PATIENTS

- Meat production in particular increases greenhouse gas emissions and uses huge amounts of land
- The majority of the nitrogen pollution in wastewater has been found to be a byproduct of our diets (Alvarez, (Princeton))
- Protein is typically the most expensive macronutrient by far.
- Thus, poor communities/underserved populations may find high protein out of reach.
- Wealthier populations, where high protein is most popular, often need it the least...

BALANCED APPROACH

- **Importance of balance:** Combine protein with **fruits, vegetables,** and **whole grains.**
- **Variety of protein sources:** lean meats, plant-based proteins like beans, legumes/nuts, and dairy.

CONCLUSIONS

- **Key Point:** Balance is key in any diet
 - High protein diets can offer benefits, but must be approached with the individual patient in mind.
 - Consider individual health needs and patient preferences.

Q & A

- Thank you!