

Clinical Survey

Protein Consumption in Diet of Adult Indians : A General Consumer Survey (PRODIGY)

Manish Mahajan, Senior Manager, Medical Affairs,
Nutricia International Private Limited,
Centrium Gate 1, Level 4, L.B.S Road, Kurla (West), Mumbai.

Abstract

A **PRO**tein consumption in **D**iet of adult **I**ndians, a consumer survey (PRODIGY) was conducted in seven major cities in 1260 respondents across India in order to assess the consumer understanding of protein in their day to day life. It was observed that around 9 out of 10 consumers had a diet deficient in proteins. This was regardless of the gender and the socio-economic group A and B interviewed.

Keywords

protein, protein deficiency, consumer survey, india

Introduction

Although India being one of the largest economy in purchasing power parity (PPP) in the world as per World Bank 2013 estimates¹, but, also where its population living in the extreme poverty². Protein has now been perceived to play more important role than previously thought. Protein intake in India has been studied under different settings and found that there is an unmet demand in pregnancy³ and high risk of deficiency in tribal adult population⁴.

A **PRO**tein consumption in **D**iet of adult **I**ndians, a consumer survey (PRODIGY) was conducted in order to assess the consumer understanding of protein in their day to day life and also to find “Protein – Gap” in major cities across India.

Material and Methods

The consumer survey was conducted with a total sample

size of 1260. The consumer target group was identified as males and females (non-pregnant and lactating) between age of 30-55 years and socio-economic class A and B at seven major cities of India (Ahmedabad, Delhi, Chennai, Kolkata, Lucknow, Mumbai and Vijaywada), regardless of diet preferences were randomly selected. The sample spread is provided as per **Fig. 1**.

The consumer were contacted for their 24 hour dietary recall through household survey and total protein consumption was ascertained using average protein content in the food items suggested by using a calculator developed internally (and available at <http://myprotinex.com/protein-calculator>, based on Nutritive Value of Indian Food, National Institute of Nutrition, 2007). The protein required by adult Indian was calculated as 1 g/kg/day as per Indian Council of Medical Research (ICMR) recommended dietary allowance (RDA) recommendations^{5, 6}. Interview was compliant to the Market Research Society of India (MRSI) and International code of ethics for market research.

The protein deficit in diet was calculated as per the formula below:

Protein Deficit in Diet (in a Day) = Total Weight (in Kg) g/ day Protein – Sum of Total Protein consumption per food item (as per 24 hour dietary recall).

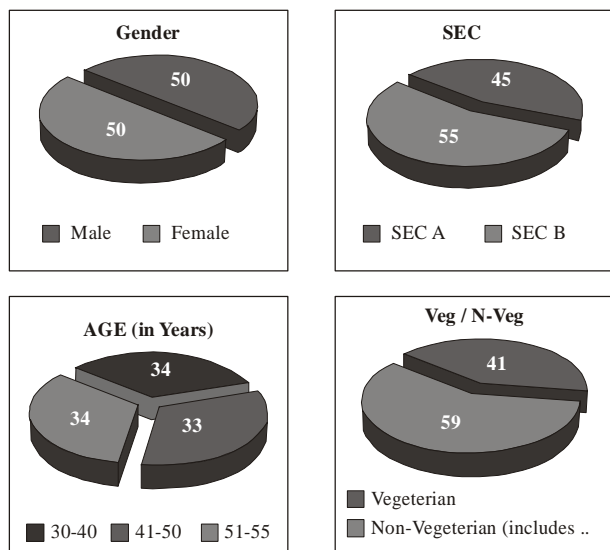
Observations

As per the consumer survey, close to 9 out of 10 people are taking inadequate amount of protein using the calculator. This shows that the overall level of amount of protein consumption is extremely low in India. Higher Vegetarians

(91%) show a protein deficit as compared to non-vegetarians (85%). Lower age group (30-40) show better than average protein intake (gap at 82%). While Delhi had the highest respondents showing Protein gap (99%), Mumbai came out with the least number of respondents showing Protein Gaps (68%). No difference observed on Gender & SEC. Mean gap seen as 28 g, with the highest gap observed in Vijaywada (35 g) and the lowest in Mumbai (22 g).

Fig. 1

Sample spread for PRODIGY



The figure depicts the sample distribution in terms of Gender, Socio-Economic Class (SEC), Age and Diet Preference (Vegetarian and Non-vegetarian)

Discussion

The result from the current survey in was done in Socio-Economic Classification A and B shows that there might be a quantitative dietary deficiency of proteins in this class of adult. This is broadly in concordance with the National Nutrition Monitoring Board Survey report

2009 that median intake of protein was lesser than current RDA by ICMR in almost all the 9 Indian states where the survey was done⁷.

Summary

The current survey illustrates that there is still a deficiency of protein in daily diet of Indians. Further studies are needed to be done in order elaborate on protein quality and outcomes.

Acknowledgements

The consumer survey was conducted by IMRB International with unrestricted educational grant from Nutricia International Private Limited, India.

References

1. http://articles.economictimes.indiatimes.com/2014-04-30/news/49523310_1_capita-income-third-largest-economy-world-gdp. [Cited April 2015].
2. India Country Snapshot. The World Bank Group October 2014 report.
3. D. Millward *et al.* — Protein quality assessment: impact of expanding understanding of protein and amino acid needs for optimal health. *Am J Clin Nutr.* **87**, 1576S–1581S, 2008.
4. S. Swaminathan *et al.* — Protein intakes in India. *Br J Nutr.* **108**, S50–S58, 2012.
5. Gopalan. C. *et al.* — Nutritive Value of Indian Foods, National Institute of Nutrition, ICMR, Hyderabad, 2004.
6. Final Draft. Nutrient Requirements and recommended dietary allowances for Indians. 2010. Report of ICMR
7. Diet and Nutritional Status of Tribal Population and Prevalence of Hypertension among Adults - Report on Second Repeat Survey. 2009. ICMR-NIN, Hyderabad.