



"Delivery of Health Benefits of Plant Proteins through Snacks"



Protein Requirements

ICMR Recommends

1 gram Protein per
kg Body weight per
day.

RDA of Protein for Average Indian male

54 g/day

RDA of Protein for Average Indian female

45.7 g/day

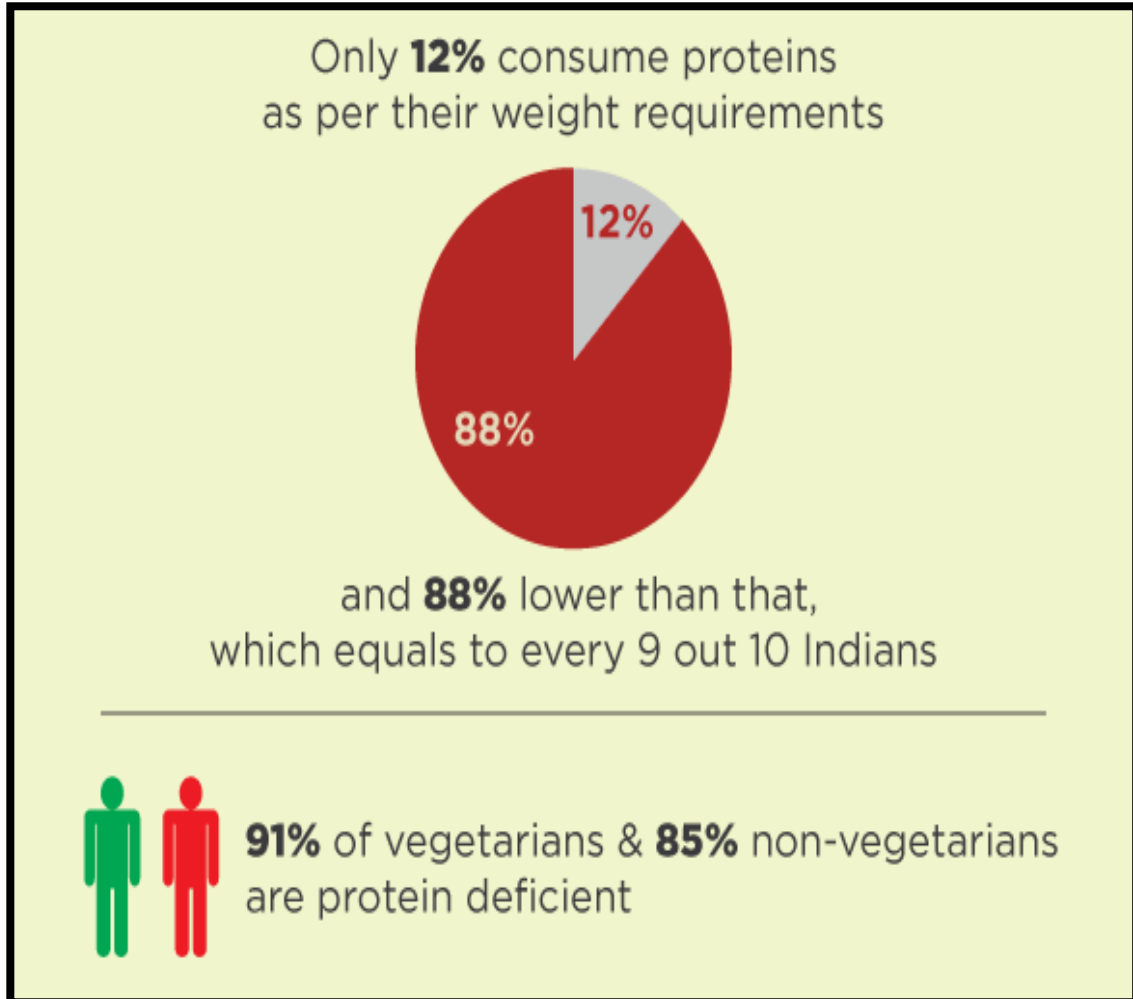
Safe requirement

Is determined to be
0.83 g/kg/d



IMRB survey

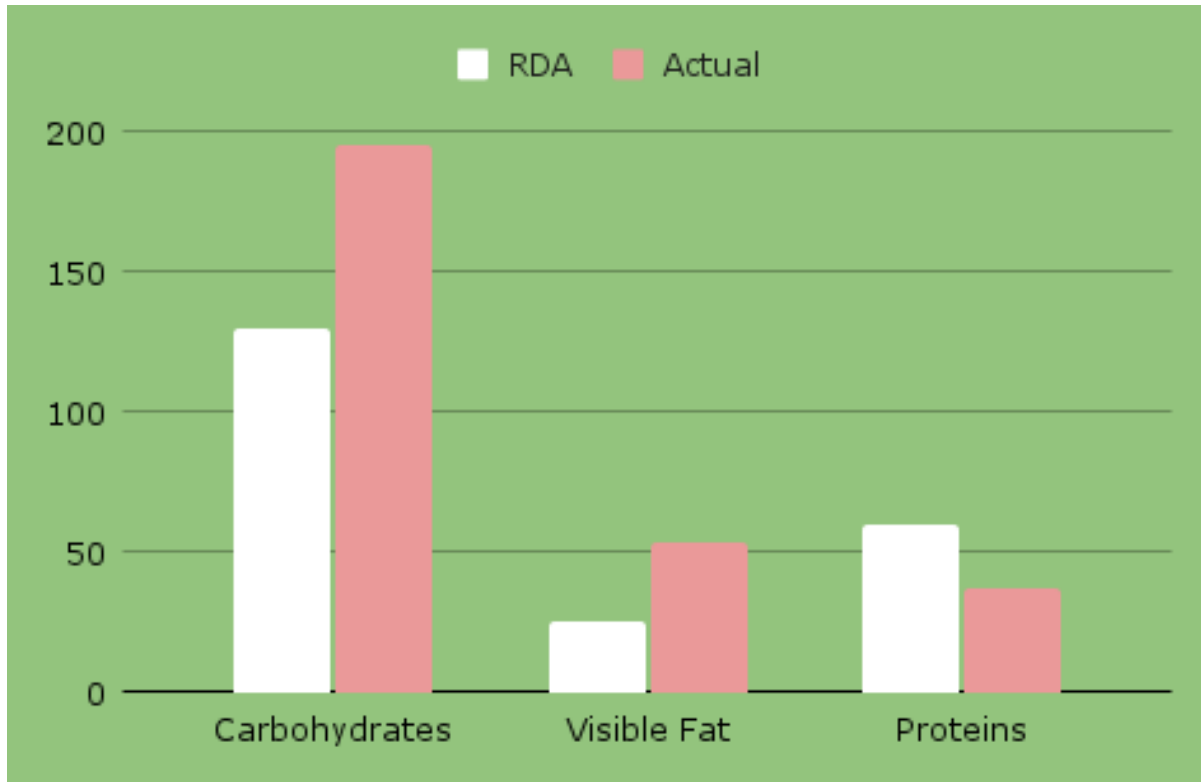
‘Protein Consumption in the Diet of adult Indians Survey’
(Prodigy), 2015



Prevalence of Protein Deficiency

More than 80% of Indians are Protein deficient.

RDA vs Actual Consumption

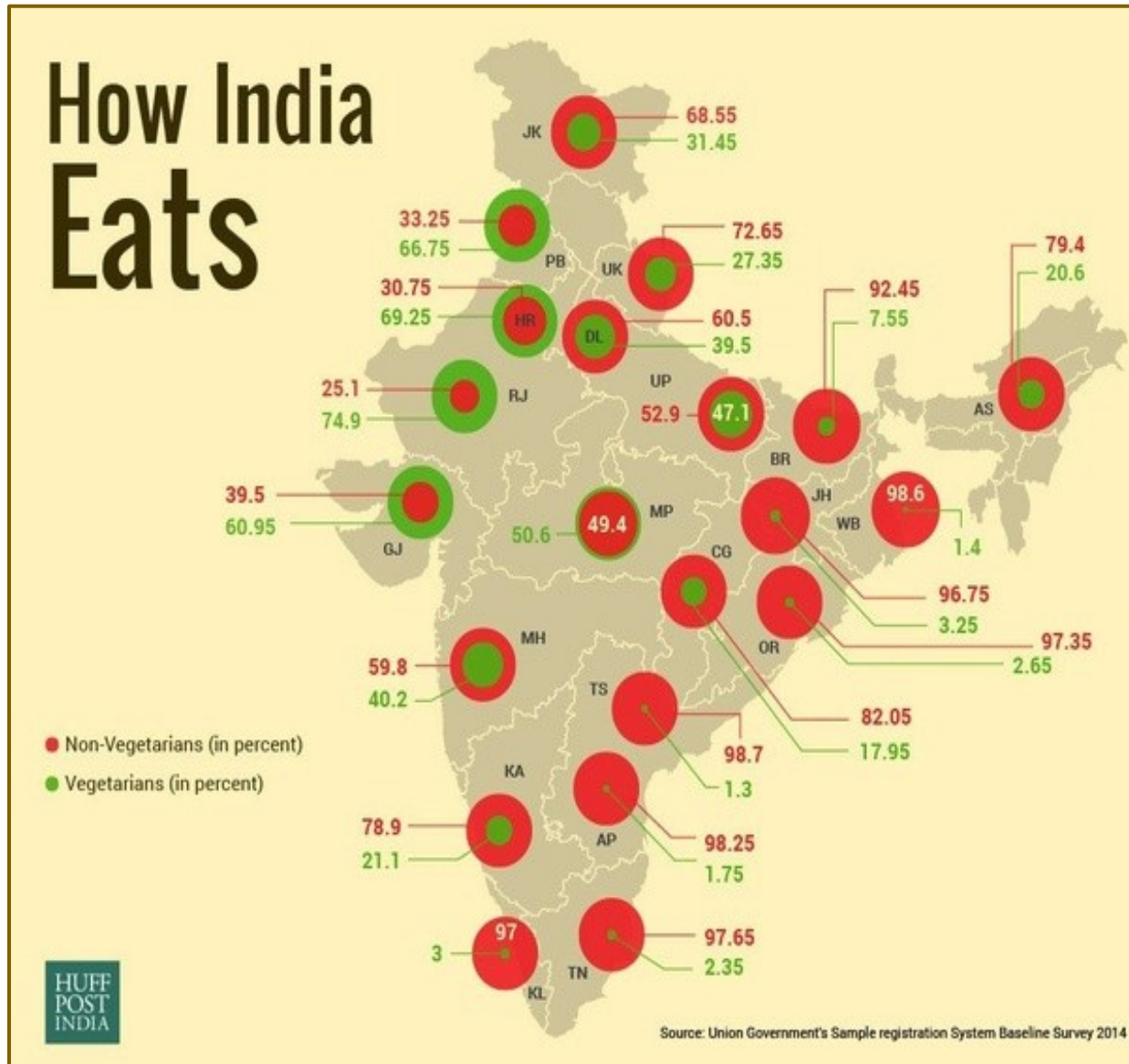


Source: Agrawal et. al., 2020

Protein consumption
37.48g/60g (RDA)

**i.e., 62.5% deficit in
consumption**

STATISTICS ON PROTEIN CONSUMPTION



- Indian diets- 60 % of protein from cereals.
- In one survey by National Nutrition Monitoring Board (NNMB) in urban and rural, Slums and sedentary rural Indian populations protein intake (mainly from cereals) = 1 gm/kg/day.
- Swaminathan S, Vaz M, Kurpad AV. Protein intakes in India. Br J Nutr. 2012 Aug; **108**:103-109. doi: 10.1093/ajph/102.10.1751.
However, less promising in terms of the protein digestibility corrected amino acid score (PDCAAS)



Reasons for Protein deficiency

PLANT BASED PROTEIN

→ Nowadays more consumers are turning to plant-based foods and focusing on:

- Eating clean
- More energy
- Lifestyle preference
- Environmental/sustainability reasons
- Better treatment of animals.

→ Clinical and consumer market interest is increasingly directed towards the use of plant-based proteins too.

PLANT PROTEIN

PLANT SOURCE EXTRACTS

- **Pulses, tofu, soya, tempeh, seitan, nuts, seeds, certain grains and peas.**
- **Provide nutritional, functional, and flavor attributes to vegan foods.**
- **Deliver protein quality equivalent to that of dairy and meat and enhance the nutritional quality of vegan products.**
- **Highly nutritious and a good source of protein, fibre, vitamins and minerals**

BENEFITS OF PLANT PROTEIN



**INCREASE BONE
MINERALIZATION**

PROMOTES WEIGHT LOSS

**PROMOTE POST WORKOUT
RECOVERY**

**ENHANCE THERMOGENESIS
AND SATIETY**

RICH IN IRON

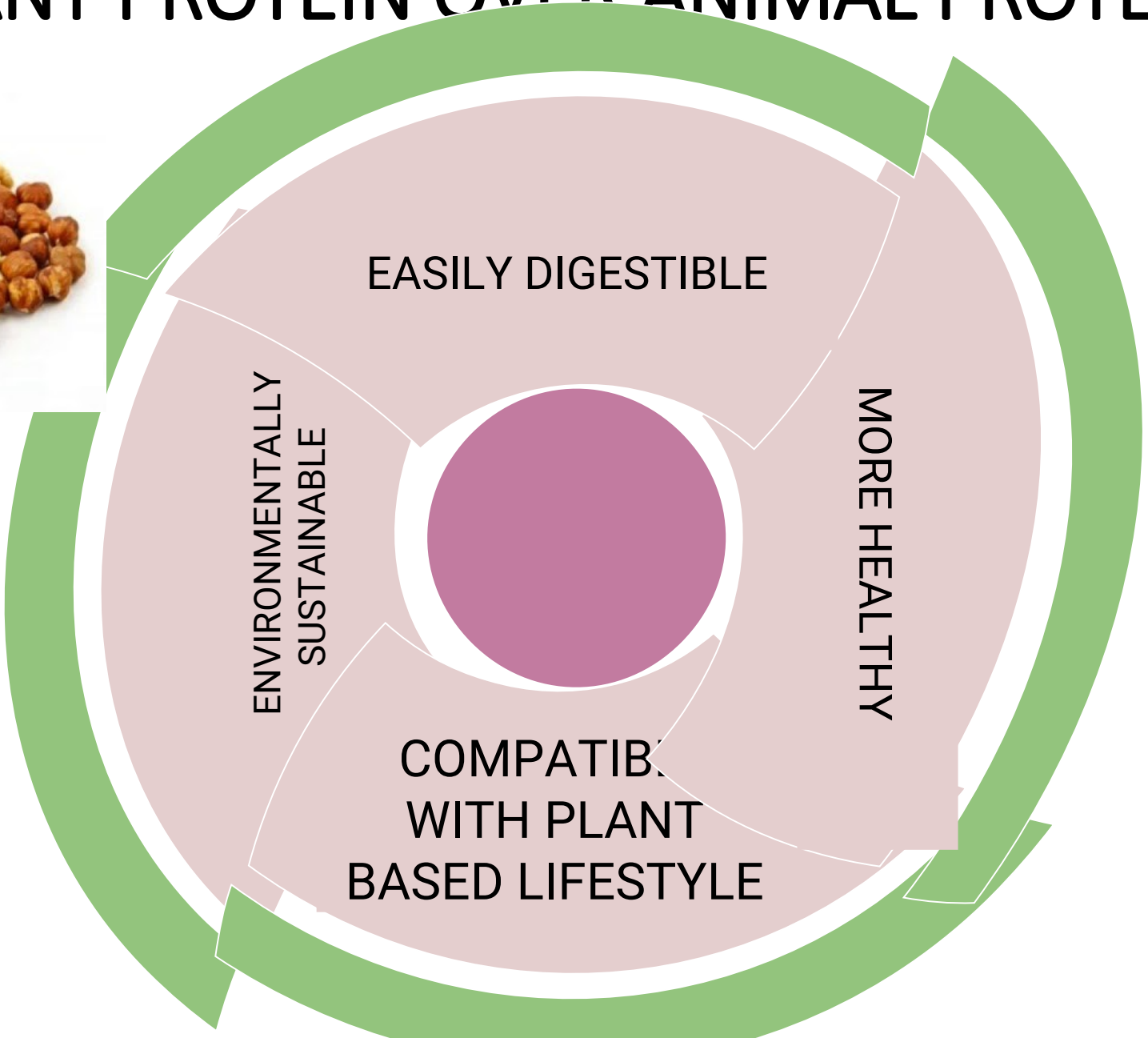
**INCREASING DIET
DIVERSITY**

**LOWERS DIGESTIVE
STRESS**

**IMPROVES HEART
HEALTH**



PLANT PROTEIN OVER ANIMAL PROTEIN



EASILY DIGESTIBLE

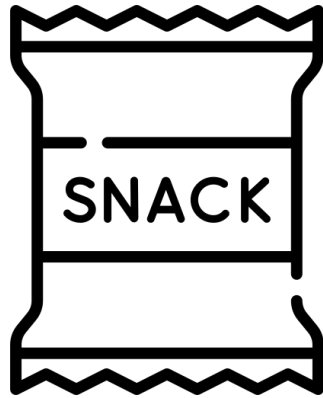
ENVIRONMENTALLY
SUSTAINABLE

COMPATIBLE
WITH PLANT
BASED LIFESTYLE

MORE HEALTHY

The Benefits of Plant-Based Protein Snacks

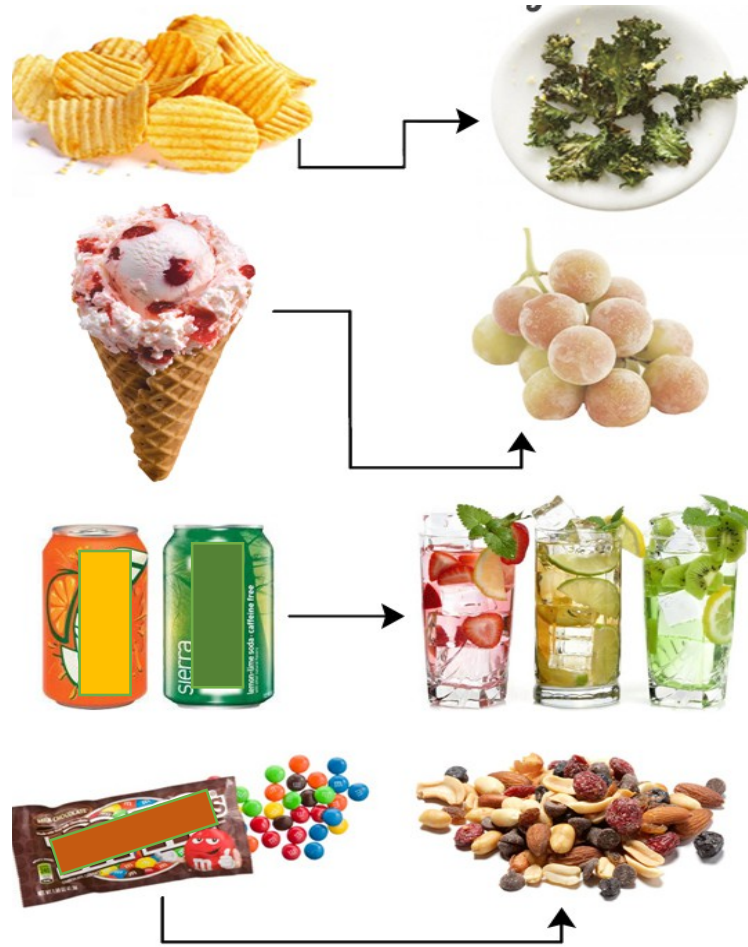




Types of Eaters

“SNACKING” IS WHEN YOU CONSUME FOOD OR BEVERAGES BETWEEN YOUR REGULAR MAIN MEALS.

The term “snack foods” is often used to refer to processed, high-calorie, nutrient poor items like chips and cookies.



In today’s society, Millennials replace main meals and suffice on eating snacks all day.

Hence it is important to differentiate and choose snacks that are healthy, nutrient dense, high in protein and fibre.

According to the 2020 Food and Health Survey, during the pandemic:

85%

of adults have
changed their
eating or food
preparation
habits

24%

of women
reported eating
more food than
usual

17%

of men reported
eating more food
than usual

41%

of parents are
snacking more



FREQUENCY OF SNACKS CONSUMPTION (TIMES PER DAY)

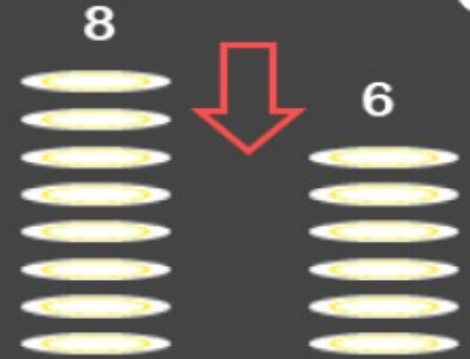


Snacking refers to all non main meal items.

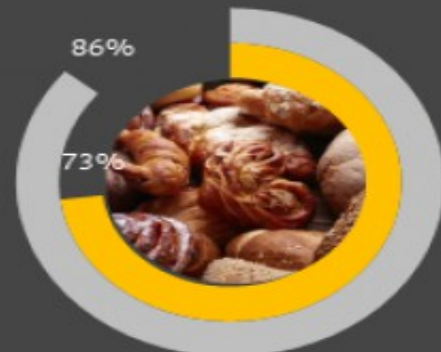
Overall, FREQUENCY of snacks consumption during lockdown has INCREASED.

Whereas, VARIETY in snack consumption has DECLINED.

SNACKS VARIETY



SNACKS CONSUMED



Bakery Products (Biscuits, Pastry, Cake slices)



Dry Snacks

■ Before Lockdown
■ During Lockdown



61%
↓
17%

Fried Snacks



58%
↓
25%

Chaat



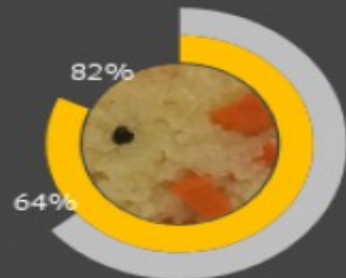
29%
↓
6%

Momos

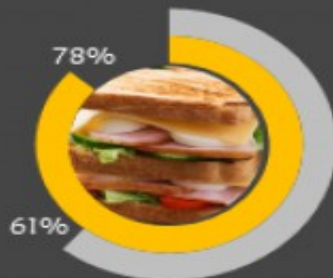


63%
↓
42%

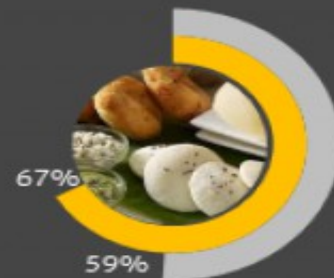
Burger/ Pizza/ Noodles /Pasta



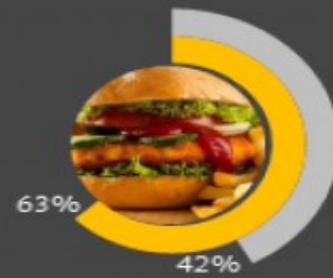
Indian Snacks (Poha, Upma, Dhokla)



Bread/Toast/ Sandwich



South Indian Snacks



Burger/ Pizza/ Noodles/Pasta



Variety

FLAVOR, FLAVOR, FLAVOR

Majority of Indian consumers replace meals with snacks: Mondelez report

Meenakshi Verma Ambwani | New Delhi, Feb 11 | Updated On: Feb 11, 2022

Mondelez International
GLOBAL REPORT
MONDELEZ INTERNATIONAL RELEASES
FIRST-EVER GLOBAL STATE OF SNACKING™ REPORT
A STUDY THAT EXPLORES THE RISE OF SNACKING IN INDIA

- 7 IN 10** Indians say they snack more today than they did 10 years ago.
- 73%** of Indians say they snack more often than they used to.
- 68%** of Indians say they snack more often than they used to.
- 75%** of Indians say they snack more often than they used to.
- 80%** of Indians say they snack more often than they used to.

To know more and download the entire report, please visit www.stateofsnacking.com or contact Rakhee Bansal / Vijayesh Pillai at rakhee@mondelez.com

INTELLIGENT Snacks can be an important part of your diet

- Satiety, after eating, is important in suppressing overconsumption of meals.
- Eating snacks between meals **promote satiety**.
- **Suppress overconsumption** at the subsequent meal.



STUDIES

Conc
satiety.

Factors that influence snacking include

SNACKING



What differentiates the two scenarios is one's **Snacking Behavior**:

- **What** you snack
- **Why** you snack
- **Frequency** of snacking
- **How** snacks fit into your overall eating plan.



Benefits



THE HUNGER SCALE



Effects of Snacking- STUDIES

Effect on Metabolism

- **Night-time consumption of protein results in increased morning resting energy expenditure in active college-aged men**
- Active young men who ate a high-protein or high-carb snack before bed.
- Significant increase in metabolic rate in the morning.
- Snacking every few hours is often believed to increase metabolism.

Night-time consumption of protein or carbohydrate results in increased morning resting energy expenditure in active college-aged men

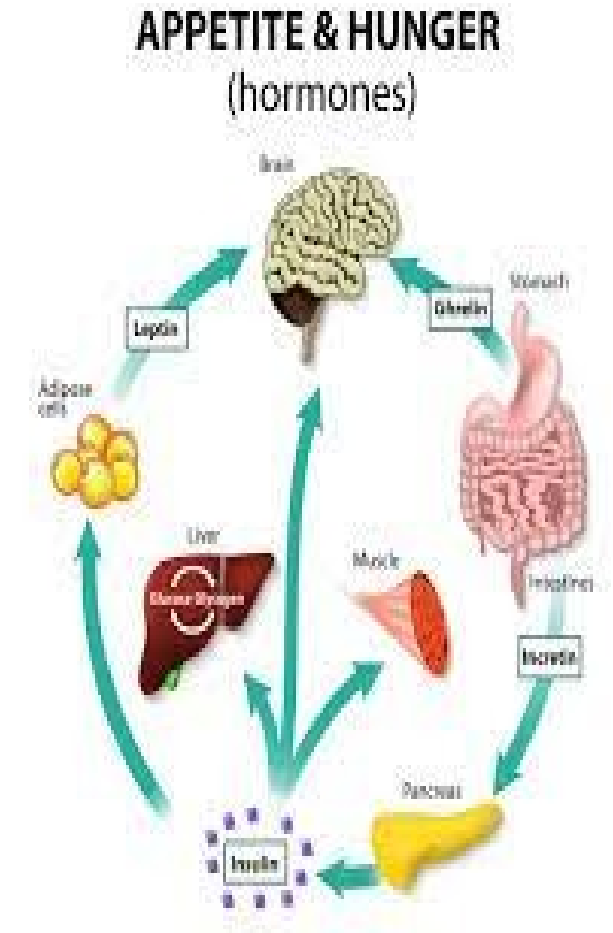
Takudzwa A Madzima 1, Lynn B Panton 1, Sarah K Fretti 1, Amber W Kinsey 1, Michael J Ormsbee, 2014 Jan

Effect on Appetite

- Men eating a high-protein, high-fiber snack bar.
- Lower levels of the hunger hormone ghrelin.
- Higher levels of the fullness hormone GLP-1.

Differential effects of dairy snacks on appetite, but not overall energy intake

Anestis Dougkas 1, Anne M Minihane, D Ian Givens, Christopher K Reynolds, Parveen Yaqoob, 2012 Dec



Effect on Weight

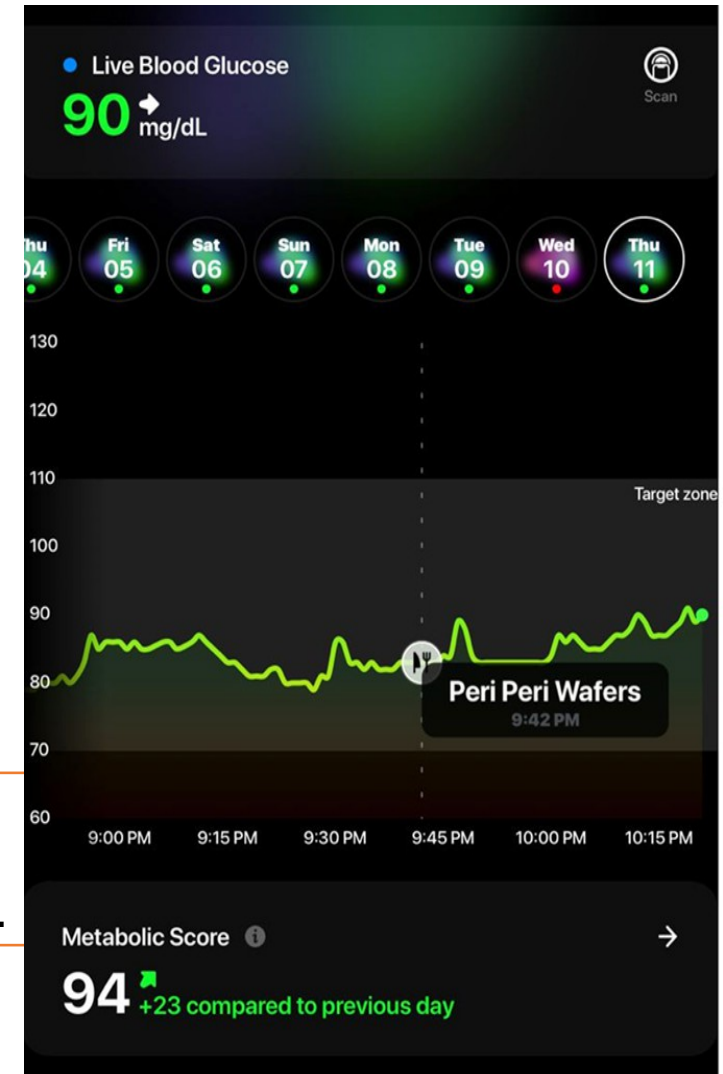
- Chronologically scheduled snacking with high-protein products within the habitual diet in type-2 diabetes patients leads to a fat mass loss
- Munching on snacks high in protein and slow-digesting carbs
- Resulted in weight loss of 1 kg within 4 weeks.
- Weight loss with snacking depends on the type of snack chosen.

Chronologically scheduled snacking with high-protein products within the habitual diet in type-2 diabetes patients leads to a fat mass loss: a longitudinal study
Santiago Navas-Carretero 1, Itziar Abete, M Angeles Zulet, J Alfredo Martínez 2011 Jul

Effect on Blood sugar

- Snacks with a high protein and Fiber content improve blood sugar control.
- Lower-carb, higher-fiber snacks have more favorable effect on blood sugar and insulin levels than high-carb snacks in people with and without diabetes.

Impact of dietary fibre-enriched ready-to-eat extruded snacks on the postprandial glycaemic response of non-diabetic patients
Margaret A Brennan 1, Emma J Derbyshire, Charles S Brennan, Brijesh K Tiwari, 2012 May

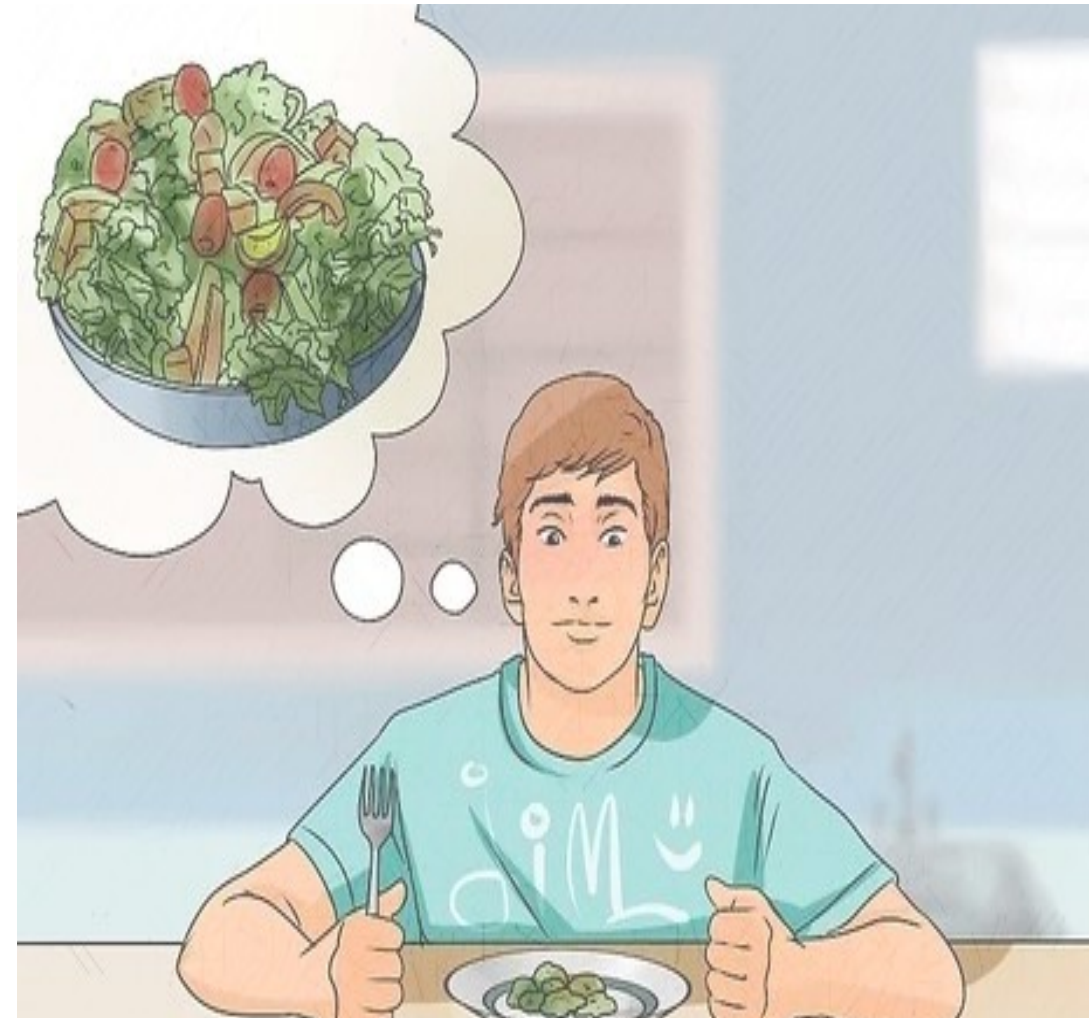


Effect on Hunger

Increasing the protein to carbohydrate ratio in yogurts consumed as a snack reduces post-consumption glycemia independent of insulin

Eating a protein and fibre rich snack.

Curb the hunger and prevent from making poor food choices and excess calorie intake.



A STUDY THAT EXPLORES THE RISE OF SNACKING IN INDIA



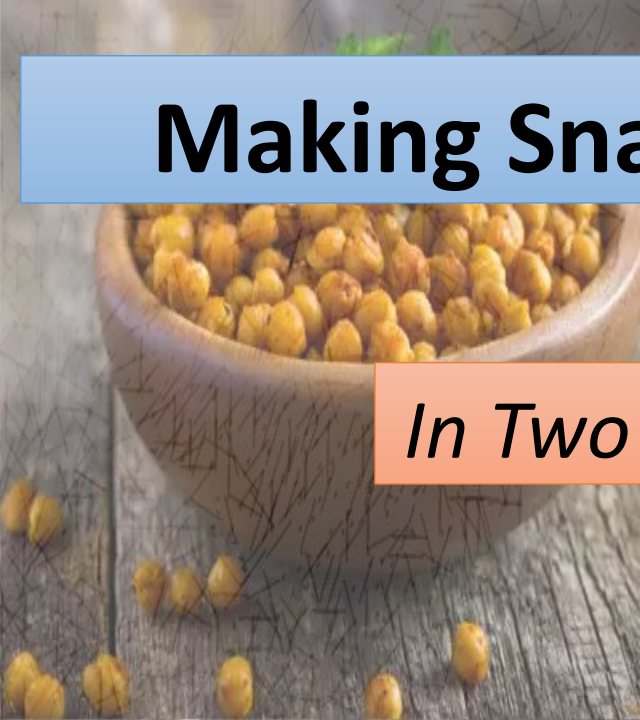
SNACKING trends driving millennials

FLAVOR, FLAVOR, FLAVOR



MEANINGFUL SNACKS DON'T HAVE TO SACRIFICE TASTE & FLAVOUR- What's Trending?

- **Millennials want to experiment and try new things.**
- This **does not mean solely new ethnic food; they are also intensely focused on textural experiences.**
- Manufacturers are placing texture claims on their products, and it is estimated a third of those claims feature **crunchy, crispy, crusty, brittle, or nutty, while another third were classified as smooth, velvety, creamy, and buttery.**
- There is **a clear trend towards healthy and more nutritious snacks that deliver on taste.**
- **New taste and flavor combinations** are expected to flourish, as are snacks that feature alternative ingredients, different proteins, grains, vegetables, and “superfoods,” while delivering nutrition.
- **Protein has become a popular ingredient in better-for-you snack product development.** A good example are **high-protein snacks, thins, crackers, pancakes, noodles, pastas.**
- As noted earlier, **millennials love snacking throughout the day, and they seek salty and savory snacks.**



Making Snack Healthy

In Two Ways

SMART SNACKING





High-sugar
snacks



Candy



Cake



Cookies



Ice-cream



High Sodium
snacks



Deep Fried
snacks



SNACKS



SNACKING TIPS

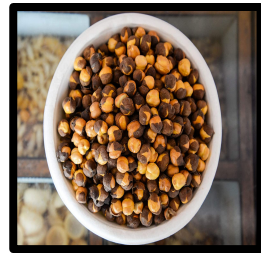
It's a good idea to include a protein source in your snack.



Apple slices with peanut butter



Tofu Rolls



Roasted Chana



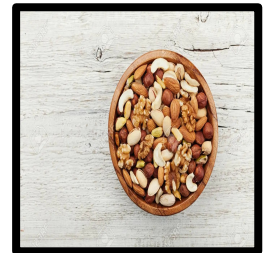
Buttermilk



Yogurt



Chia Seed Pudding



Mixed Nuts Bowl



Protein Khakra



Granola Bars



Hummus with Vegetable sticks



Sprout Salad



Sprout Tikki



Protein Khakra Sandwich



Protein Khakra Pizza

HAVE A MINDFUL SNACK

S **N** **A** **C** **K**

STOP

what you are doing.
Don't just put anything in your mouth.

NOTICE

what are you feeling?

ACCEPT

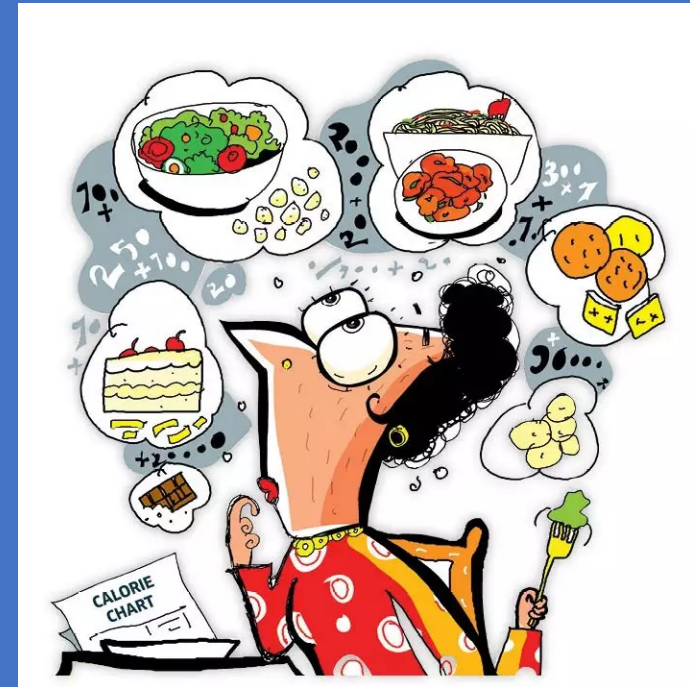
Acknowledge what you are feeling and accept it for what it is.

CURIOUS

Ask questions. Why am I feeling this way?

KINDNESS

Be kind to yourself and get back on track.



MINDFUL SNACKING IS...

...eating with intention and attention, focusing on the present moment, and savoring how the food tastes so you really enjoy it.



RELEVANT

More and more people use mindfulness for well-being and balance.



SUSTAINABLE

Mindful eating can be practiced by anyone, anywhere, and by all ages.



EFFECTIVE

Research clearly shows multiple benefits of mindful eating. The evidence continues to build.



Snack
Mindfully

HOW TO SNACK MINDFULLY...

- Minimize distractions
- Portion out your snack
- Focus on the smell and taste
- Notice the textures
- Chew thoroughly
- Finish one bite before starting the next