

# NEW PLATFORMS TO DELIVER NUTRIENTS FOR CHANGING LIFE STYLE

DR. N. RAMASUBRAMANIAN  
VR Food Tech Pvt Limited, Mumbai

# Gen Y or Millennials

- ▶ Born between Early 1980s to Mid 90s
- ▶ India has 420 millennials
- ▶ Peak of their professional career
- ▶ Huge changes in life style





# Changes in life style

- ▶ Hard pressed for time
- ▶ Work pressure
- ▶ Irregular timings
- ▶ Both partners going for work.
- ▶ Involvement in social media



## Consequences of changing life style

- ▶ Skipping regular meals like breakfast lunch or dinner
- ▶ Snacking replacing meals - usually unhealthy - HFSS
- ▶ Sedentary life - Little or no physical activity
  - ▶ Obesity - 10% of Indian adults are obese
  - ▶ Cardio vascular diseases
  - ▶ Dyslipidemia
  - ▶ Diabetes



# SKIPPING MEALS & OBESITY

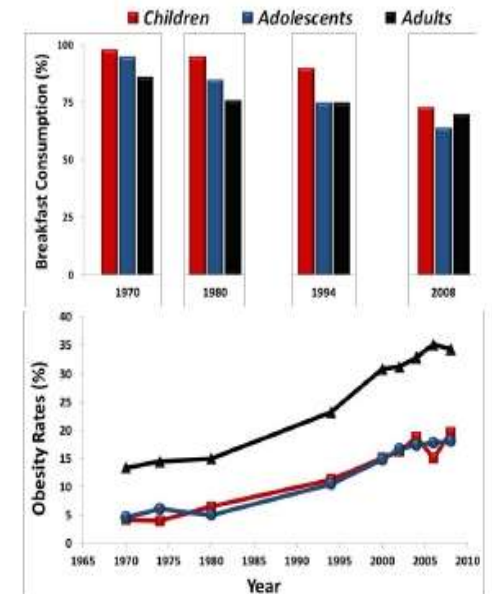
- ▶ Only 3% Indians regard Breakfast as an important meal
- ▶ 75% do not eat adequate breakfast
- ▶ 25% skip it completely
- ▶ Source - Nirmala Niketan College of Home Science, Mumbai
- ▶ Similar findings have been reported in US
- ▶ In Canada, 48.5% of adolescents skipped breakfast at least once a week.
- ▶ Breakfast skipping was more common among men while lunch or dinner skipping was more common among women

# Skipping Breakfast and Obesity

- ▶ The study conducted by researchers from Tel Aviv University (TAU) and Hebrew University in Israel
- ▶ Breakfast consumption triggers the proper cyclic clock gene expression leading to improved glycemic control
- ▶ Bringing in satiety thus reducing in between snacks.

## Breakfast (Skipping) & Obesity

- Breakfast was a staple in the American Diet 50y ago
- Gradual decline has mirrored the rise in obesity
- Current trends: 30-60% of young people skip breakfast on a daily basis





# How to deliver nutrients to the Millennials

- ▶ The delivery platforms or formats, providing the required nutrients, to be
  - ▶ On the Go
  - ▶ Easy to carry
  - ▶ Ready to drink or eat requiring no preparation
  - ▶ Filling and Tasty
  - ▶ Conveniently Nutritious

# Ready To Drink

- ▶ Convenient
- ▶ Balanced food with nutrients - Meal replacer or delivering specific nutrients like probiotics or protein shots
- ▶ Can be coupled with many processes like aseptic packing, High Pressure, Chilling
- ▶ Less pay load - carry less solids
- ▶ Poor stability
- ▶ Expensive





# Innovative Beverage Bottles

- ▶ Beverages have a lower shelf life because of high water content
- ▶ Loss of flavor and nutrients during storage



# Innovative Beverage Bottles

- ▶ Innovative push closure
- ▶ cap protects the dry probiotic cultures to maintain the highest efficacy without the need for refrigeration
- ▶ cap design that dispenses probiotics with the push of a button





# Snacks

- ▶ Convenient
- ▶ Healthy Snack - Low fat and high protein
- ▶ Can deliver micro and special nutrients
- ▶ Easy to manufacture
- ▶ Longer shelf life



## Ready to Eat - Retort Pouches

- ▶ Cooked meal in retort pouches.
- ▶ Shelf Stable and needs no more than heating.
- ▶ Easy and quick
- ▶ Heating may impact the taste and labile nutrients
- ▶ Expensive





# Nutrient Sprinkles

- ▶ Powder containing vitamins, minerals and other nutrients
- ▶ To be sprinkled over any food or beverage before consumption like salt and pepper
- ▶ Convenience
- ▶ Stability



## Eat In

- ▶ Restaurants and On line delivery platforms
- ▶ Offering balanced and conventional meal
- ▶ Convenience
- ▶ Healthy
- ▶ 'Ghar Ka Khaana, Saath Mein Thoda xxxxx!

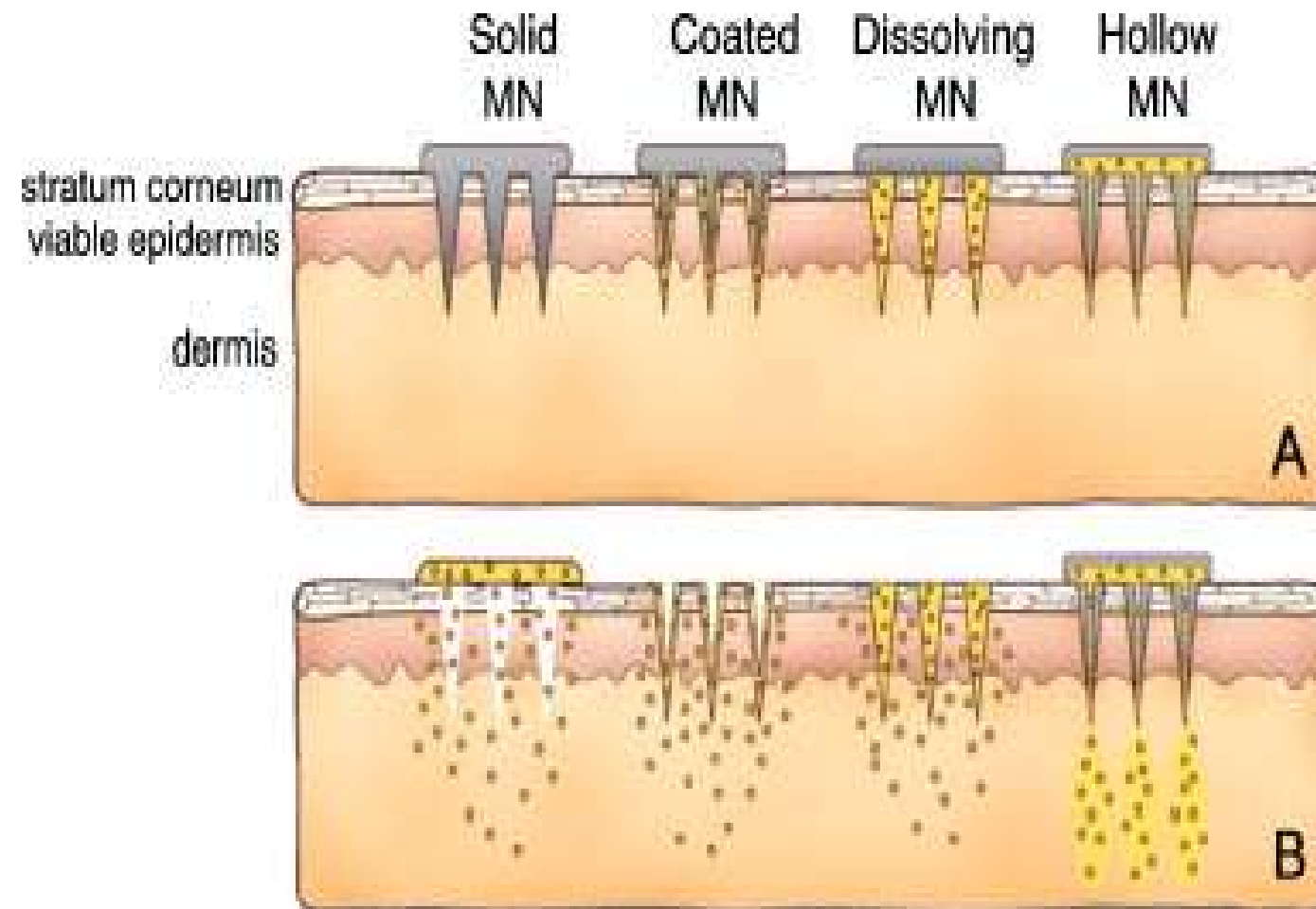




# Transdermal Nutrient Delivery

- ▶ Better Bio Availability
- ▶ Sustained release
- ▶ By passes the harsh gastric conditions
- ▶ Patches – Passive absorption
- ▶ Third-generation delivery systems target their nutrients through skin's barrier layer using microneedles, thermal ablation, microdermabrasion, electroporation and cavitation ultrasound







## Summary

- ▶ Millennials are in a hurry
- ▶ Need “Ready to Consume”, “ON THE GO”, “Nutritious” and Tasty Food
- ▶ Requires new “Delivery Platforms”
- ▶ Combining “Formats”, “Nutrition”, “Packaging” and “Processing”
- ▶ A great opportunity for Nutritionists, Food Scientists and Technologists.

► Thank You for your patience