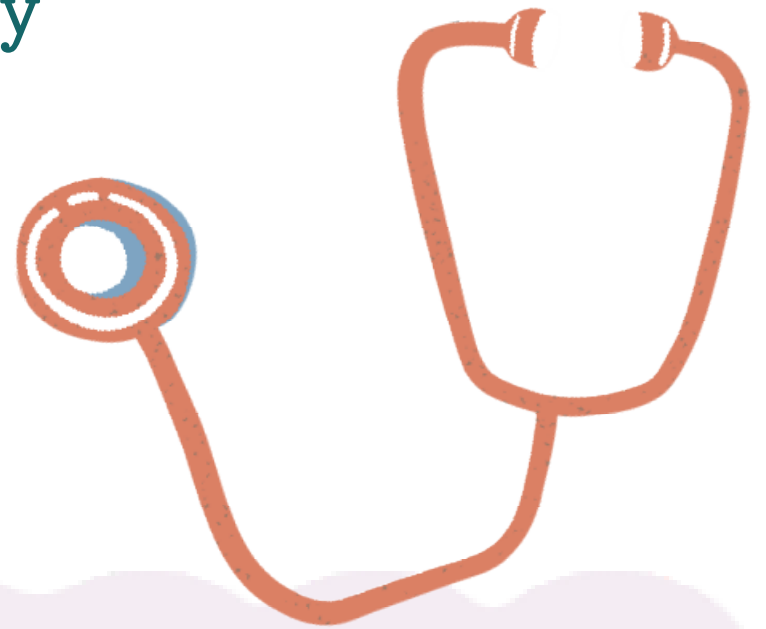


Doctor, Can you recommend the Best healthy Diet?

Dr. M. V. Pillai. M.D,
F.A.C.P.



Optimal Eating : Life Expectancy
increases Lifetime risk of ALL
chronic diseases - decreases
Ameliorate gene Expression



CLAIMS OF MERITS : Distinction
Commercial interest



FUNDAMENTAL
OVERLAP



* No long term studies comparing contenders, unlikely to have due to various reasons

Weight of evidence : Supports : A theme of healthful eating allowing VARIATIONS ON THEME



Minimally
processed
food- close to
nature
Predominantly
Plants

Mental Health
Associated with
health promotion
and disease
prevention
Support



Salient
component of
many distinct
dietary
approaches



Actual Causes of Death in U.S.A



FEET
FORK
FINGERS

JAMA McGinnis et al

Medical
Destiny = Longevity
+
Vitality

Levers of Medical
Destiny

Gene Expression

Nurture Nature
for Long Life

LOW CARBOHYDRATE DIET

No single
definition

Institute of
Medicine: Normal
Carbohydrate 45% -
65% of total
calories



Interest
surged -
epidemic of
obesity
Diabetes

**Studies on
health
outcomes
across the
lifespan -
Absent**

**Conflicting
Observations :
High protein
(Early Satiety)
High Fat
(Calorie excess)**



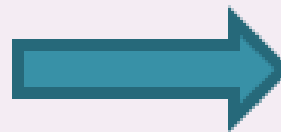
LOW FAT VEGETARIAN DIET

Less than 20% of daily calories

OKINAWANS

SEVENTH DAY ADVENTISTS

LOW FAT PLANT BASED



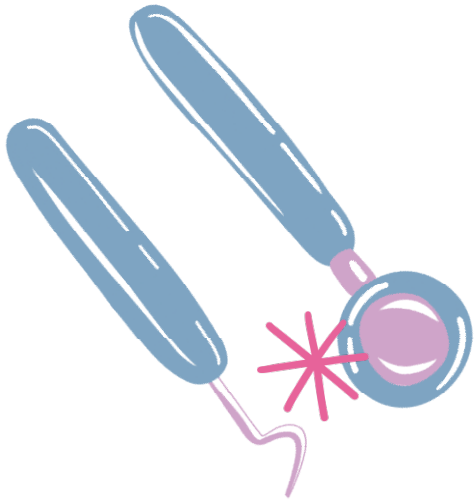
LOWERS RISK OF CANCER &
CARDIAC DISEASES

BENEFITS IN RECURRENT MI

Progression of Atherosclerosis

NO DECISIVE EVIDENCE





LOW GLYCEMIC DIET



GLYCEMIC LOAD :

Glycemic index + Quantity

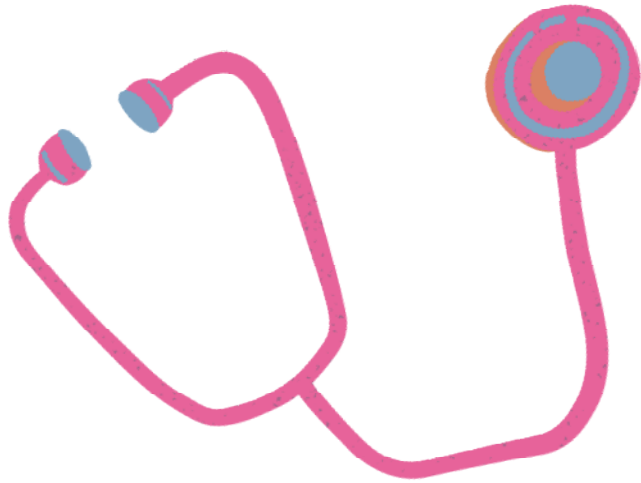
**Glycemic index +
Quantity**

Numerical index (0-100)



**How quickly it
raises blood
glucose after
eating food item**

**Processed foods
Added Sugar**



Weight loss
Diabetic control

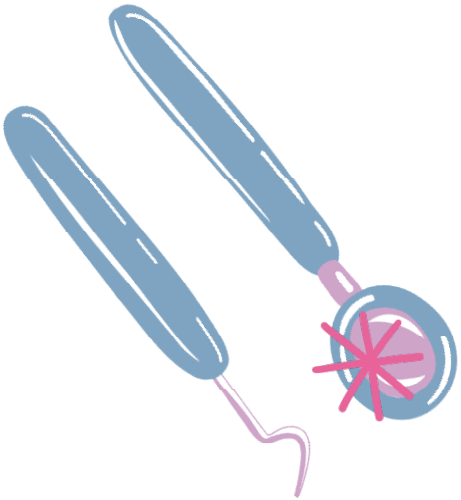


IMPROVE



Inflammation
Vascular function

Decreased
Intake



MEDITERRANEAN DIETS



Dietary pattern of
Vegetables,
Mediterranean
Countries

Olive oil, Vegetables,
Fruits, Nuts, Fibre Seeds,
Beans

(Selective) Dairy, Whole
Grains, Sea Food, Limited
consumption meat,
Moderate wine



**BLUE ZONES OF
WORLD**

Longevity and Vitality



BENEFITS

REDUCED RISK OF



CV Diseases
CANCER

LONGEVITY



Difficult to
unbundle

VARIANTS OF MEDICAL DIET



Support
SYSTEMATIC
REVIEWS

Lipoprotein levels

Endothelial

Insulin Resistance

Antioxidant capacity

CVS Mortality

Neurodegenerative & Cognitive





VEGAN DIET

- Excludes all animal products(Dairy, Eggs, meat)
- Not a balanced diet
- Needs complete protein
- Nutrient supplements
- No data on long-term health benefits





WHICH DIET IS BEST FOR HEALTH?

- If set on rigid principles: NO
- If set on general dietary pattern : YES





Health benefits relate to:	Compatible elements:	And all potentially consistent with:	
Low-carbohydrate	Emphasis on restriction of refined starches and added sugars in particular	Limited refined starches, added sugars, processed foods; limited intake of certain fats; emphasis on whole plant foods, with or without lean meats, fish, poultry, seafood.	FOOD, NOT TOO MUCH, MOSTLY PLANTS
Low-fat / vegetarian / vegan	Emphasis on plant foods direct from nature; avoidance of harmful fats.		
Low-glycemic	Restriction of starches; added sugars; high fibre intake.		
Mediterranean	Foods direct from the nature; mostly plants; emphasis on healthful oils, notably monounsaturates.		
Mixed /balanced	Minimization of highly processed, energy-dense foods; emphasis on wholesome foods in moderate quantities.		
Paleolithic	Minimization of processed foods. Emphasis on natural plant foods and		



MICROBIOME

➤ Emerging invisible hand?

“Collective community of microorganisms—bacteria, viruses, fungi and their genes— that inhabit skin, gut or ecosystems like soil and Oceans”

➤ Essential for health:

Digestion

Immune systems

Defense against pathogens



KEY ASPECTS



- ✓ TRILLIONS LIVE IN AND ON THE HUMAN BODY
- ✓ GI TRACT IN PARTICULARLY
- ✓ THEY BREAK DOWN FOOD INTO NUTRIENTS, PRODUCE VITAMINS, REGULATE IMMUNITY, INFLUENCE BRAIN HEALTH
- ✓ IMBALANCE(DYSBIOSIS) → ILLNESS
IBD,CANCER,
METABOLIC DISEASES
- ✓ ACQUIRED FROM ENVIRONMENT THROUGHOUT LIFE



* OPPORTUNITY KNOCKING ON DOORS OF KERALAM?

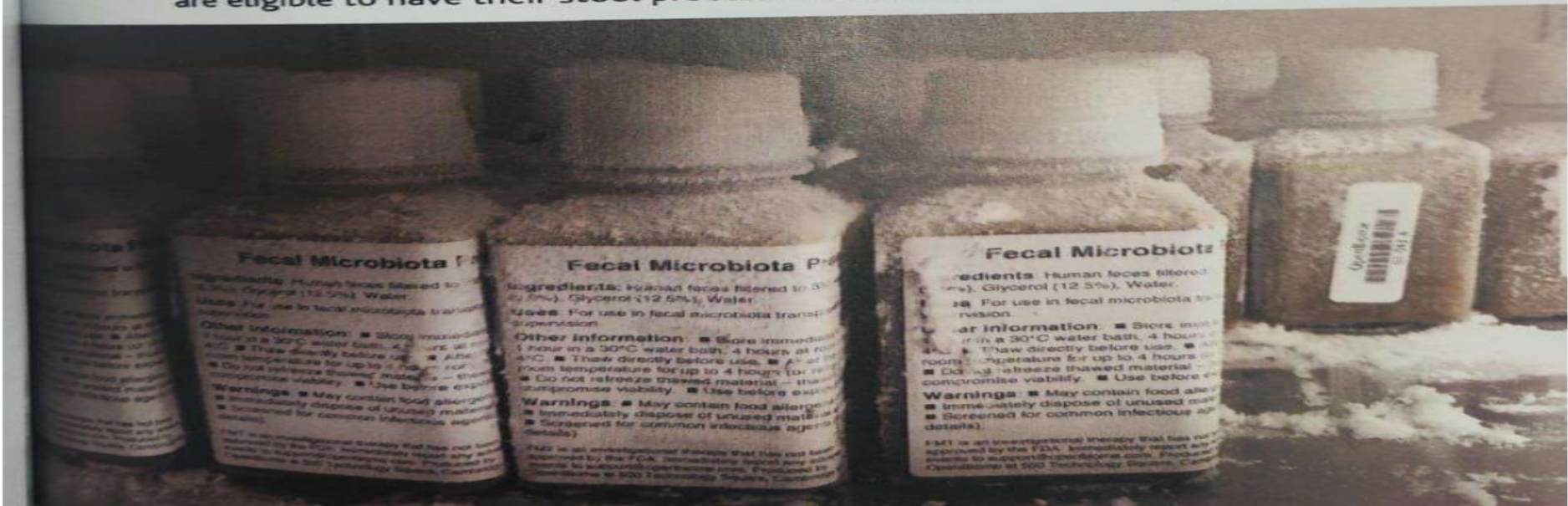
❖ CENTRE OF EXCELLENCE IN MICROBIOME





OpenBiome staff member Mary Njenga processing donated faecal samples to send to *C. diff* patients in hospitals and clinics across the United States for faecal microbiota transplantation.

Volunteers wishing to donate stool to OpenBiome are screened for microbiota-related health problems, including obesity, allergies, autoimmune diseases and mental health problems. Only a small proportion of volunteers are eligible to have their stool processed as a faecal microbiota preparation.



Fecal Microbiota Preparation

Ingredients: Human feces filtered to remove *Cryptosporidium* (12.5%), Water.

Uses: For use in fecal microbiota transplantation.

Other Information: ■ Store immediately at 4°C. ■ Thaw directly before use. ■ Store at room temperature for up to 4 hours. ■ Do not refreeze thawed material — this compromises viability. ■ Use before expiration date.

Warnings: ■ May contain food allergens. ■ Immediately dispose of unused material. ■ Screened for common infectious agents (see label).

FMP is an investigational therapy that has not been approved by the FDA. Immediately report any adverse events to www.openbiome.com. Produced by OpenBiome at 500 Technology Square, Cambridge, MA.

Fecal Microbiota Preparation

Ingredients: Human feces filtered to remove *Cryptosporidium* (12.5%), Glycerol (12.5%), Water.

Uses: For use in fecal microbiota transplantation.

Other Information: ■ Store immediately at 4°C. ■ Thaw directly before use. ■ Store at room temperature for up to 4 hours. ■ Do not refreeze thawed material — this compromises viability. ■ Use before expiration date.

Warnings: ■ May contain food allergens. ■ Immediately dispose of unused material. ■ Screened for common infectious agents (see label).

FMP is an investigational therapy that has not been approved by the FDA. Immediately report any adverse events to www.openbiome.com. Produced by OpenBiome at 500 Technology Square, Cambridge, MA.

Fecal Microbiota Preparation

Ingredients: Human feces filtered to remove *Cryptosporidium* (12.5%), Glycerol (12.5%), Water.

Uses: For use in fecal microbiota transplantation.

Other Information: ■ Store immediately at 4°C. ■ Thaw directly before use. ■ Store at room temperature for up to 4 hours. ■ Do not refreeze thawed material — this compromises viability. ■ Use before expiration date.

Warnings: ■ May contain food allergens. ■ Immediately dispose of unused material. ■ Screened for common infectious agents (see label).

FMP is an investigational therapy that has not been approved by the FDA. Immediately report any adverse events to www.openbiome.com. Produced by OpenBiome at 500 Technology Square, Cambridge, MA.



കഴക്കൂട്ടം കിൻഫ്ര ഫിലിം ആൻഡ് വീഡിയോ പാർക്കിൽ സ്ഥാപിച്ച സെന്റർ ഓഫ് എക്സലൻസ് ഇൻ മൈക്രോബയോളജി മുഖ്യമന്ത്രി പിണറായി വിജയൻ ഉദ്ഘാടനം ചെയ്യുന്നു



കേരള സ്റ്റാർട്ട്അപ്പ് മിഷന്റെയും സെന്റർ ഓഫ് എക്സലൻസ് ഇൻ മൈക്രോബയോമിന്റെയും പ്രതിനിധികൾ ഭാവി സഹകരണങ്ങൾക്കായി ധാരണാപത്രങ്ങൾ കൈമാറുന്നു



OPPORTUNITY KNOCKING ON DOORS OF KERALAM?

- ❖ MICROBIOME AT TECHNOPARK
- ❖ AYURVEDA ACADEMIC CENTRES
- ❖ ALL INDIA INSTITUTE OF AYURVEDA
- ❖ POPULATION WITH DIVERSE DIETARY HABITS
- ❖ RAJIVGANDHI CENTRE FOR BIOTECHNOLOGY
- ❖ INSTITUTE OF ADVANCED VIROLOGY
- ❖ COCHIN CANCER RESEARCH CENTRE
- ❖ CYCLICAL FASTING





Thank U

➤ “EAST IS EAST and WEST IS WEST NEVER THE TWAIN SHALL MEET”-BALLAD OF EAST AND WEST

By RUDYARD KIPLING

➤ “There is neither East nor West WHEN TWO STRONG MEN STAND FACE TO FACE”

