

- ### We are What We Eat !!
- CHO – 60 %, Not simple CHO, Complex CHO
 - Protein intake must be at least 15% of calories
 - Pulses, legumes, sprouts, nuts, milk proteins
 - Fats – quantity ↓, more of MUFA & PUFA, O3F
 - Fresh vegetables regular diet – fiber
 - Plenty of whole fruits – not juices – they contain pentoses, fiber, vitamins
 - Avoid junk foods – Crispy, crunchy savories, chips, colas, pastries, ice creams, fast foods

- ### General Principles
- Sugar and CHO to be replaced by complex CHO
 - Fiber should be integral part – What foods ?
 - Saturated fat to be avoided totally
 - Do not reuse boiled oil – It is = saturated fat
 - Grill, Broil, Bake, Cook in water or Microwave
 - Don't eat deep fat fried items – very tasty !
 - Use non stick cook ware. Reduce portion sizes
 - Fresh fruits and raw vegetables - must every day
 - Don't eat fried snacks – chips, savories, sweets

Nutrient Composition of TLC Diet

<u>Nutrient</u>	<u>Recommended Intake</u>
• Saturated fat	Less than 7% of total calories
• Polyunsaturated fat	Up to 10% of total calories
• Monounsaturated fat	Up to 20% of total calories
• Total fat	25–35% of total calories
• Carbohydrate	50–60% of total calories
• Fiber	20–30 grams per day
• Protein	Approx. 15% of total calories
• Cholesterol	Less than 200 mg/day
• Total calories (energy)	To maintain desirable weight

- ### The Oily Issues
- SaFA : Saturated fatty acids – Should be < 8 % of calories
 - Coconut, Meat, palm oil, Butter, Ghee, Dalda, Bakery items
 - TrUFA : Trans unsaturated fatty acids – Do not use at all
 - Vanaspati, margarine, crispy fried food, biscuits,
 - MUFA : Mono unsaturated fatty acids- 15-20% of calories
 - Olive oil, Canola, Groundnut oil, Til oil
 - PUFA : Poly unsaturated fatty acids – 8-10% of calories
 - Sunflower oil, Safflower oil, Soya oil, Corn oil
 - Omega 3 fatty acids – EPA, DHA, AA – Fish oils, Green veg
 - Reusing cooking oil – A great peril – It is TrUFA

Which should we choose ?

Name	SAFA %	MUFA %	PUFA %	Chol. mg%
Canola oil	6	55	28	0
Safflower	8	11	67	0
Sunflower	10	18	60	0
Olive oil	12	66	7	0
Sesame oil	13	36	38	0
Groundnut	15	41	29	0
Palm oil	45	33	3	0
Red meat	46	38	10	93 mg%
Butter/Ghee	48	27	4	207 mg%
Coconut oil	79	5	1	0

DASH Diet

Type of Food	Servings (1600 K cal)
Grains (whole grains)	6 per day
Vegetables	3 per day
Fruits (not tinned juices)	4 per day
Low fat milk	2 per day
Lean meat, poultry	3 per day
Nuts, seeds (dry roast, soak)	3 per week
Fats and oils	2 per day
Sweets and pastries	0 per day
Salt at table and salted foods	None

Physical Activity

- What type of activity?
- How much?
- How often?
- At what intensity?

The answer is - do something – why questions !!

The health benefits of physical activity are proportionately related to “Exercise Volume”

$$\text{Exercise Volume} = \text{Duration} \times \text{Frequency} \times \text{Intensity}$$

Guidelines for Physical Activity

- ❖ Assessment of the individual
 - ❖ Medical and psychological fitness, Physical limitations
 - ❖ Current activities; Barriers to activity
 - ❖ Develop physical activity plan
- ❖ Start activity slowly & gradually increase to 200 min/wk
- ❖ Enhance compliance
 - ❖ Programmed versus lifestyle activity
 - ❖ At-home versus onsite activity
 - ❖ Multiple short bouts v/s single long bout of activity
- ❖ Regular physical activity will improve all factors of the MS
- ❖ Combination of weight loss and exercise ↓ type 2 DM
- ❖ 30-60 min moderate-intensity exercise daily (brisk walking)

Waist versus Weight

Relative Risk (RR)	BMI < 23	BMI > 23
WC < 90 cm ♂ WC < 80 cm ♀	GOOD RR = 1	BAD RR = 4
WC > 90 cm ♂ WC > 80 cm ♀	WORSE RR = 8	WORST RR = 16

Practical Tips for Weight Reduction

- All calories count – watch portion sizes
- Avoid sweetened beverages entirely
- Limit fruit juice to one glass per day
- Use whole grains and not refined grains
- Eat at least 5 servings of fruits & veg /day
- Make sweets an occasional special event
- Support others in controlling their weight
- If you love them, don't stuff them!

How to Quit Smoking ?

- Five steps in quitting**
Onus is on the Doctor
One success is great !
- ASK
 - ADVISE
 - ASSESS
 - ASSIST
 - ARRANGE

Ask all patients about

- Personal history of smoking
- Exposure to passive smoke
- Each visit to check smoking status

Advice to quit must be clear

- Be supportive and nonjudgmental !
- You aren't the one quitting !
- Offer resources and support for individual's needs readiness to quit
- Follow-up at each visit !

Smoking Cessation

5. Withdrawal	Reduction of total personal exposure to tobacco smoke, Smoking cessation is the single most effective - and cost effective - intervention to ↓ the risk of CAD and COPD It is crucial for CVD prevention It is the corner stone in PAD
4. Boredom	
3. Sense of deprivation or depression	
2. Emotional upset and stress	
1. Alcohol abuse ! one devil replaced by another devil	

Smoking Cessation – Rx.

- Behavioral therapy counseling
- NRT – Nicotine Replacement Therapy- patch
- Bupropion –
 - Trade names are - Nicotex or Smoquit SR 150 b.i.d
 - In psychological dependence on nicotine
 - Useful in individuals with or at risk for depression–
 - Contraindicated in drug interactions or epilepsy
- Newly Drug –Varenicline – (Champix of Pfizer)

ABC Strategy for Stress

- A = Awareness
 - What causes you stress
 - How do you react and counter
- B = Balance
 - Fine line between positive & negative stress
 - How much can you cope before it becomes negative
- C = Control
 - How do you combat the negative effects

Stress Management

- Adopt positive thinking – never ruminate
- Good sleep hygiene – 8 hours of sleep
- Plan leisure and relaxation - recharge
- Healthy eating habits and physical activity
- Shun smoking and alcohol
- Ventilate your mind to near and dear
- Humor is an excellent stress buster
- Time management – Plan and adapt
- Have some hobby that interests you
- Never let the brain be idle

Shun Negative Behaviour

- Worry, Fault finding, Over protective attitude
- Anger, Blaming others, Frustration
- Lust and Greed
- Jealousy and Vengeance
- Anxiety and depression
- All ↑↑ hs-CRP, IL-6, Endothelial dysfunction
- These pave a perfect way for CAD to set in

Criteria for Metabolic Syndrome

- Abdominal obesity (waist circumference): men >100 cm (40' 36'*); women >88 cm (35' 32'*)
 - Triglycerides > 150 mg/dl
 - HDL cholesterol: men < 40 mg/dl; women < 50 mg/dl
 - Blood pressure ≥ 130/ 85 mmHg.
 - Fasting glucose > 110 mg/dl
- BMI cut off for Indians is 23 and not 25 like other races
The values 36' and 32' of waist are special for Indians
Diagnosis of metabolic syndrome is made when three or more of the risk determinants shown above are present.

Importance of Metabolic Syndrome

- Metabolic syndrome is a hidden volcano
- We need to evaluate every one above 25 years of age for Metabolic Syndrome
- All those with any one manifestation should be screened for the rest of the components
- Waist circumference, IR, Dyslipidemia
- There are effective Rx strategies
- This MS is the “PRE” for T2DM and CHD
- We should not wait till these killers develop

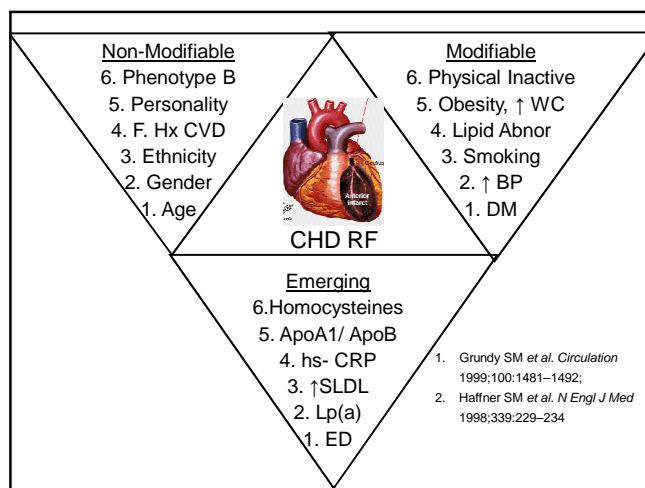
Different Faces of CV Diseases

Organ	Condition	Impairment	Clinical Presentation
Heart	Coronary Heart Disease (CHD)	Ischemia	Angina Pectoris
		Infarction	Myocardial Infarction
Brain	Cerebro vascular Disease (CVD)	Ischemia	Transient Ischemia attack
		Infarction	Stroke
Kidney	Reno vascular Disease (CKD)	Ischemia	Renal HT, Renal impairment
		Infarction	Renal Failure
Leg Muscles	Peripheral Vascular Disease (PAD)	Ischemia	Intermittent Claudication
		Infarction	Gangrene

For all of them, the common denominator is ED

What pulls the trigger ?

- CADI is a combination of Nature and Nurture
- Sedentary life style, Affluence, Urbanization
- **↑** CHO, Crunchy, munchy, fatty food habits
- Minimal or non eating of fruits, nuts, vegetables
- **↓** Fiber, Over boiling, Reuse of oil, **↑** Fast foods
- Central adiposity, Visceral fat, IRS, Apple shaped
- Carelessness, unawareness about risk assessment
- Emphasis on treatment rather than prevention
- Device ridden, Intervention oriented approach
- Extremely important, often forgotten factor - Stress



The Sapta Padi – Seven Steps

1. Screen, define and target high risk patients
2. Modify life style factors – MNT, PA
3. Explain and persuade to quit smoking, **↓** alcohol
4. Aspirin **>**100 mg in all those with **>** 1 RF
5. Aggressive control of DM – HBA1c **<** 7
6. Attain goal B.P of 140/90 in all – DM 10 mm less
7. ACEi and statin for all DM, Statin for **↑** LDL, Address HDL, Lp(a), TG, hs-CRP if abnormal

Think for a moment

- Should we not address this early from 20s or 30s ?
- Should we wait till we all suffer and succumb ?
- Is it not cost-effective and safe to take action now ?
- What for are we waiting? Whose permission is needed ?
- Who will bell the cat to motivate for CAD prevention
- It will never be a priority for our rulers !
- It is we – the answerable ones for all – should take steps
- Take a pledge now to screen all above 30 years
- Initiate them into preventive action – persuade – persist