

## **SESSION - III**

### **WORKING GROUP DISCUSSIONS**

In this session, the participants were divided into two working groups, drawing members from the scientific, industrial and communication backgrounds. Each group deliberated on the following two broad themes respectively:

- Recommendations / Guidelines for ideal fat consumption, and
- Strategies to promote healthy consumption of fats.

### **DELIBERATIONS**

The following are the recommendations of the groups:

#### **GROUP - II**

- Discussion Theme** - *Recommendations / Guidelines for ideal fat intake*
- Moderators** - Dr. S. Kalyanasundaram, PORIM, Malaysia  
Dr. Veena Shatrugna, Dy. Director, NIN
- Rapporteur** - Mr.G. M. Subba Rao, Research Officer (Communication), NIN

#### **Recommendations/ Guidelines for Ideal Fat Intake**

The fat intake in India is income-dependent and highly skewed, with the rural and urban poor consuming much less than what is needed, while the middle and high-income groups consuming more than what is required.

It is well recognized that the incidence of chronic disorders is escalating in India and fat consumption trends play a prominent role. These recommendations are therefore tailored to address these issues.

#### **Quantity of Fat intake**

The total fat (visible & invisible) in the diet should provide 20-30% of the total energy intake. Based on the physical activity and physiological status, the visible fat intake in the diets should be at least 20 g and can go up to 50 g /person/day.

***Low-income Groups (Rural & Urban Poor):*** The current intake of visible fat in the poor socio-economic segments is 5-7% (10-12 g) of energy intake. Based on the physical activity and physiological status, the visible fat intake in the rural and the urban poor should be increased to at least 20 % of the energy intake.

**Middle and High-income groups (Urban and Rural)** : The current total intake of visible fat among these socio-economic segments is more than the desired levels (>30% of energy intake). As invisible fat intake in these segments is relatively high (12-15% of energy intake), based on the physical activity and physiological status, the visible fat intake in these segments should not exceed 15% of the energy intake.

### Quality of fat intake

**Intake of Saturated Fatty Acids:** In general, SFAs are known to increase serum cholesterol levels. Therefore, SFA intake should not exceed 8-10% of total energy.

**TFA:** The intake of *Trans Fatty Acids* has to be as low as possible since the deleterious effects on health by TFAs are currently well recognized. TFA intake should not exceed 2% of energy intake.

**PUFA:** Intake should be 8-10% of energy intake.

**n-6 :** 6 – 8% of energy intake .

**n-3:** 1-2% of energy intake.

n-6 / n-3 ratio should ideally 5 to 10.

**MUFA:** The intake should be 10-12% of the energy intake.

<b>Daily Visible fat intake Vs requirement for Indians</b>					
	<b>Recommendations (energy %)</b>		<b>Visible fat for Indians (g/person)</b>		
	<b>Total fat</b>	<b>LA (n-6)</b>	<b>Requirement</b>	<b>Intake (adults)</b>	
<b>Adults</b>	<b>20-30</b>	<b>3.0</b>	<b>20-50</b>	<b>Rural &lt; 12</b>	
<b>Pregnancy</b>	<b>20</b>	<b>4.5</b>	<b>30</b>		
<b>Lactation</b>	<b>20</b>	<b>6.0</b>	<b>40</b>	<b>Urban HIG &gt; 40</b>	
<b>Young children</b>	<b>25</b>	<b>3.0</b>	<b>25</b>		
<b>Invisible fat - From all foods except visible fat (energy%)</b>					
	<b>Fat</b>	<b>SFA</b>	<b>MUFA</b>	<b>LA(n-6)</b>	<b>ALNA(n-3)</b>
<b>Rural -</b>	<b>7</b>	<b>2</b>	<b>2.2</b>	<b>2</b>	<b>0.2</b>
<b>Urban -</b>	<b>14</b>	<b>6.6</b>	<b>4.2</b>	<b>2</b>	<b>0.2</b>

<b>Recommended Oil Combinations (1:1) In Indian Diets</b>	
<b>↓ LA (n-6) ↑ ALNA (n-3)</b>	<b>↓ LA (n-6)</b>
<b>Groundnut/Sesame/ Rice bran+ Mustard</b> <b>Groundnut/Sesame/Rice Bran+Canola</b> <b>Groundnut /Sesame/Rice bran+Soyabean</b> <b>Palmolein +Soyabean</b> <b>Safflower/Sunflower+Palmolein + Mustard</b>	<b>Sunflower/Safflower+Palmolein/Olive</b> <b>Safflower/Sunflower+Groundnut / Sesame/ Rice bran</b>
<p><b>Additional advantage other than phytosterols and vitamin E: Sesame - Lignans; Ricebran-T<sub>3</sub> and Oryzanol; RPO/Palmolein - Carotenes/T<sub>3</sub></b></p> <p><b>In view of the regional preferences, choose combinations of oils and fats, that are able to provide the prescribed ratios of n-6 and n-3 fatty acids</b></p> <p><b>Use low PUFA containing oils with natural anti-oxidants for deep frying</b></p>	

The group ratified the recommendations made by Dr.Ghafoorunissa earlier in her presentation earlier as it is.

#### **Recommendations for ideal fat intake for Indians:**

- Quantity: Visible fat : 20-50g/p/d
- Quality: Visible fat: Use oils containing ALNA(n-3) along with any other vegetable oil(s)
  - Limit visible fats containing high SFA
  - Avoid hydrogenated fats (containing TFA) as cooking fat source
  - Limit confectionaries & ready to eat/fast/bakery foods : high SFA & TFA
- Increase intake of ALNA (n-3) rich food everyday including non-traditional rich sources of ALNA – perilla/flaxseed
- Other dietary components (invisible fat)
  - Consume 100-200g fish 2 times/week
  - Substitute part of visible fat and/or invisible fat from animal foods with whole nuts
  - Limit animal foods containing high fat/SFA/cholesterol
  - Choose low fat dairy foods
  - Egg: several nutritional advantages, but high cholesterol, Limit to 3 eggs/wk