

TECHNICAL MEETING ON THE DIET AND EATING PRACTICES OF ADOLESCENT GIRLS AND WOMEN OF REPRODUCTIVE AGE



EVIDENCE-BASED SOLUTIONS WITHIN THE CONTINUUM OF CARE

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Presentation goal

- Summarize potential key nutrition actions for interventions to improve nutritional status of adolescent girls, women of reproductive age, women during pregnancy and during lactation
 - For their own health
 - For their first/actual/next pregnancy
- Summarize findings from the scientific literature regarding design and efficacy



The care continuum

- Care is defined broadly and refers to a goal rather than a specific service delivery mechanism or infrastructure
- Certain important nutritional components of care, such as IFA, MM or Calcium supplementation during antenatal care are not discussed



Pre-conceptual Care Goals

- achieve normal weight
- maintain or improve diet quality as a lifestyle goal (adequate intakes of calcium, iron, vitamin C, vitamin A, folic acid, whole grains, vegetables and fruits, reduce alcohol intake)
- maintain or improve physical activity level/active lifestyle
- prevent/treat anemia and achieve adequate iron stores
- maintain sufficient iodine intake to avoid thyroid disorders
- maintain sufficient vitamin A intake to maintain retinol concentrations;
- ensure folic acid intake of 400 ug/d
- **reduce alcohol intake**



Achieve normal weight (BMI) before pregnancy

- Low maternal BMI is a widely accepted risk factor for poor pregnancy outcomes
- For underweight women, it sets up a recommendation for higher gestational weight gains that may not be achievable
- Research is needed on interventions to increase BMI among girls and women with BMI < 18.5 kg/m²



Achieve normal weight (BMI) before pregnancy

- Entering pregnancy overweight/obese increases the likelihood of complications, including fetal demise
- For overweight women, gestational gain and postpartum weight retention contribute to obesity



Evaluation of key components of weight loss programs in WRA (Phelan et al., 2011)

Highly effective	Moderately effective if used in combination with those on the left	Ineffective
Calorie prescription (1200-1500 kcal/d or 1000 kcal/d less than baseline)	Macronutrient alteration (e.g., reducing kcal from fat)	Education alone
Meal replacements structured meal plan	Eating breakfast Reducing television viewing	Body image, body acceptance
High physical activity goals (60–90 min/d)	Moderate physical activity alone (30 min/d, 5 d/wk)	
Daily monitoring of food intake	Social support	
Behavior therapy (goal setting, monitoring, feedback, stimulus control, problem-solving)	Cognitive strategies	
Continued contact (≥ 2 /month)	Motivational interviewing	



Prevalence of inactivity among women 15+ y (Hallal et al., 2011)

Region	Inactive (%)
SEA	6-41
WP	10-65
SSA	11-72
ME	40-76
LAC	17-70

Estimates are stable among women from 15-30 and 30-45 years
In general women are less active than men



Encourage active lifestyle

- Important pre-conceptional goal as physical activity tends to decline during pregnancy, and starting new physical activity is not recommended
- There are multiple effective approaches to improving physical activity (Heath et al., 2012)
 - Various settings: community, school, worksite
 - Behavioral and social support approaches
 - Environmental and policy approaches to create and improve access for places for physical activity



Improving diet quality: eating a healthy diet

Common Principles

- Consume a variety of fruits and vegetables
- Choose whole grains over refined grains
- Choose low-fat foods and those with unsaturated fats
- consume low fat meats, and choose plant sources of protein
- Limit salt intake
- Consume alcohol in moderation.

For women and in case of pregnancy

- Consumption of dairy products (milk) to meet Calcium requirements
- There is no recommendation specifically addressing folic acid needs (sources, fortified food products)
- Iodized salt is the principal means of ensuring iodine status
- Need to include dietary approaches to improve iron intakes
- Greater limitation on alcohol consumption



Do interventions to improve diet quality work?

Conclusions from multiple reviews:

- Home or school based interventions with primary goal being weight loss
- Methodologically weak
- The most often cited positive result is increased intakes of fruit
- Effects are modest/low
- Some evidence of greater effects in adults with chronic disease

Need for more research in relevant populations



Antenatal Care Goals

- **Achieving appropriate gestational weight gain**
- **healthy eating**
- **staying physically active**
- Provision of nutrient supplements
- Nutritional management of gestational diabetes (GDM)
- Reduce alcohol intake



IOM 2009 recommendations for weight gain during pregnancy

Pre-pregnancy BMI	Recommended total gestational weight gain	Recommended gain (range) in 2 nd – 3 rd trimester
< 18.5 kg/m ²	12.7-18.2 kg	0.45 kg/wk (0.45-0.6)
18.5-24.9 kg/m ²	11.4-15.9 kg	0.45 kg/wk (0.36-0.45)
25.0-29.9 kg/m ²	6.8-11.4 kg	0.27 kg/wk (0.23-0.32)
30+ kg/m ²	5.0-9.1 kg	0.23 kg/wk (0.18-0.27)

Many countries follow IOM guidelines; some countries in LAC do not; India recommends 10-12 kg; South Africa purposively has no recommendation



Actions to support recommended weight gain

- Need studies of how women gain the recommended weight
- No trials testing efficacy of interventions to achieve recommended weight gain among women with BMI < 18.5 kg/m² – studies are needed in South Asia and parts of SSA
- Interventions focus on limiting weight gain during pregnancy among women with normal or overweight/obese BMI
- The quality of these studies is low:
 - Most are small studies (< 100 women per group)/pilot studies
 - Limited efficacy in reducing average weight gain
 - Studies do not focus on gaining within recommendations



Recommended components during pregnancy similar to pre-conceptual period

- Caloric restriction
- Structured meal plans
- Behavior therapy
- Body weight monitoring
- Diet monitoring (assessment/feedback)
- Continued patient provider contact
- Physical activity to reduce weight gain may be less important



healthy eating during pregnancy

- For normal weight women, this means 350-450 extra kcal/d, much less than might be appreciated
- Composition should be of higher quality than before pregnancy, but if improved before pregnancy the necessary improvement here is minimized
- Dietary guidelines for women are not that different in or out of pregnancy
- Interventions or studies of dietary patterns to reduce weight gain or GDM are inconclusive



staying physically active during pregnancy

- Women generally become less active during pregnancy
- Quality of intervention studies in this area is low
- Interventions show limited efficacy and no effect on GDM



Postpartum Care Goals

- maintenance of good nutrition (dietary intakes during lactation/weight change)
- postpartum weight loss/gain/stasis
- supporting physical activity
- sustaining healthy changes for the long-term and the next pregnancy



Evidence for Key Postpartum Nutrition Actions

- No intervention studies to improve diet quality during lactation (improve milk quality)
- Issues for most women are similar to pregnancy (high quality diet along with caloric restriction to achieve weight loss)
- Interventions to prevent postpartum weight retention involving behavior change (diet and physical activity) have some impact
- Interventions have no negative impact on breastfeeding
- Few LMIC countries have policies for postpartum weight management/care
- Few countries have guidelines regarding exercise as part of postpartum care



Summary

- There is much work to be done to design and test interventions to identify key nutrition actions to support the nutrition of girls, WRA and pregnant and lactating women in LMIC
- This is an emerging area of research in developed countries with limited efficacy at present
- Research specific to LMIC is needed



Research Needs/Policy Initiatives

- Develop policies regarding nutrition over the continuum of care
- Coordinate guidelines/key practices with efforts to reduce chronic disease
- Conduct research to identify best practices to improve dietary intakes across the continuum of care
- Conduct research to identify best practices to achieving health weight across the continuum of care





Thank you

