

Nutrition guidelines for adolescence girls

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Abstract : The economic and social well-being of any country will one day depend on its current adolescent population. To provide a good foundation for healthy adolescent development, healthy diet, along with physical activity and adequate nutrients, is necessary. Therefore, addressing the nutrition needs of adolescents could be an important step toward breaking the vicious cycle of intergenerational malnutrition, chronic diseases, and poverty. These problems could be addressed with timely recognition and appropriately delivered interventions. Our aim here is to review the existing guidelines on various aspects of nutrition interventions for adolescents and young women. We review all of the major existing guidelines on adolescent nutrition. We were able to find 18 guideline bodies that covered some form of nutritional advice in guidelines that targeted adolescents. Although the guidelines that focus specifically on this age group are limited in scope, we also extrapolated recommendations from guidelines focused on adults, women of reproductive age, and pregnant women, which were based on evidence that included populations of adolescent girls. We were able to extract and synthesize specific directives for nutrition in adolescents, macro- and micronutrient supplementation, exercise, obesity, and nutrition during preconception, pregnancy, and the post conception period.

Introduction

There is never a 'one size fits all' nutrition plan; there are far too many variables to take into account. What we can do is make sure that we choose smart options where possible. We need to be eating plenty of protein, lots of vegetables and then filling in the gaps with dietary fruits, fats and starch. Whole, nutrient dense foods need to make up the majority of our diet and alcohol intake needs to be limited. I always think a smart way of doing things is the 90/10 rule, as long as 90% of our diet is good, we have 10% to play around with. Generally Indians take three major meals in a day. These meals usually include cereals, pulses of different types, green vegetables, oil and animal protein (meat/fish) depending on the economic condition of the household. Malnutrition is of public health significance among the adolescents across the world. The coexistence of overweight/obesity and underweight is rather common in developing countries and is found to be increased proportionally over time. It is evident that diet of the adolescent girls remains deficient with macro and micro nutrients due to their unhealthy eating behaviours. Studies revealed that unhealthy eating habits can lead to a number of immediate health problems, such as iron deficiency, deteriorating bone health and dental caries, under-nutrition, obesity and eating disorders. Iron is an essential element necessary for the formation of hemoglobin (the red pigment present in the red cells of blood). Hemoglobin plays an important role in the transport of oxygen to the tissues. Similarly, calcium is an essential nutrient required for healthy bones and teeth. During adolescence, development of critical bone mass is essential as this forms the ground for maintaining mineral integrity of the 122 bone in later life.

Eating behaviours of the adolescent girls

Adolescent eating behaviour is a function of individual and environmental influences. Individual influences are psychological as well as biological, whereas, environmental influences include immediate social environments such as family, friend, and peer networks and other factors such as school meals and fast food outlets. In addition, another important factor is social system or macro system which includes mass media, marketing and advertising, social and cultural norms of the society. Peer influence and group conformity can be considered as important determinants in food acceptability and selection. For example, a study carried out among Costa Rican adolescents demonstrated direct impact of peer influence on intake of foods containing saturated fat. A teenage girl may eat nothing but a green lettuce salad for lunch following her friend, even though she will become hungry later on.

Key Words: Adolescence, Diet, Guidelines, Macronutrients, Nutrition, Vitamins, Supplement.

Methods

I performed a wide literature search to assess literature that speaks the nutritional and health guidelines for adolescent girls and pregnant adolescents that were published in English and available in the public domain. Since literature relating exclusively to adolescent nutrition was sparse, a lot of guidelines for adolescents had to be removed from guidelines that collectively cover the nutritional needs of pediatric populations, pregnant women and women of reproductive age. I searched online databases of major clinical and public health guideline developmental bodies (detailed in Table S1). The guidelines on healthy eating, dietary guidance, micronutrient supplementation (including iron, folic acid, iron-folic acid (IFA), calcium, vitamin D, vitamin A, zinc, iodine, and multiple micronutrient supplementation); food/protein-energy supplementation; nutrition counselling for pregnant adolescents; gestational diabetes prevention and management; and obesity prevention and management are reviewed in this paper.

Search terms, such as "guideline," "nutrition," and "adolescent," are used to identify the recommending bodies that prepare and circulate nutrition guidelines for adolescent health. The subsequent principal sources, including electronic reference libraries and other databases, were searched to access the available data:

Table 1 Evidence of levels for intervention studies

Level	Sources of evidence	Grade
1++	High-quality meta-analyses, systematic reviews of randomized controlled trials (RCTs), or RCTs with very low risk of bias	A
1+	Well-conducted meta-analyses, systematic reviews of RCTs, or RCTs with low risk of bias	

Level	Sources of evidence	Grade
1–	Meta-analyses, systematic reviews of RCTs, or RCTs with high risk of bias	
2++	High-quality systematic reviews of case–control or cohort studies; high-quality case–control or cohort studies with very low risk of confounding, bias, or chance and high probability that the relationship is causal	B
2+	Well-conducted case–control or cohort studies with low risk of confounding, bias, or chance and moderate probability that the relationship is causal	
2–	Case–control or cohort studies with high risk of confounding, bias, or chance and significant risk that the relationship is not causal	
3	Non analytical studies	C
4	Expert opinion and formal consensus	D
GPP	Good practice point (GPP): the view of the Guideline Development Group	GPP

Total 18 bodies that have formulated guidelines focused on nutrition for adolescents and women. Details for each guideline can be found in Tables S1 and S2.

Box 1: The guideline development bodies that were searched

- **AAP** – The American Academy of Pediatrics
- **ACOG** – The American Congress of Obstetricians and Gynecologists
- **AHA** – The American Heart Association
- **AND** – The Academy of Nutrition and Dietetics
- **CDC** – The Centers for Disease Control
- **CPS** – The Canadian Paediatric Society
- **EASO** – The European Association for the Study of Obesity
- **FIGO** – The International Federation of Gynecology and Obstetrics
- **IOM** – The Institute of Medicine
- **March of Dimes**
- **NHMRC** – The National Health and Medical Research Council
- **NICE** – The National Institute for Health and Care Excellence
- **NZGG** – The New Zealand Guidelines Group
- **PMNCH** – Partnership for Maternal, Newborn and Child Health
- **RANZCOG** – The Royal Australian and New Zealand College of Obstetricians and Gynaecologists
- **RCOG** – The Royal College of Obstetricians and Gynaecologists
- **SIGN** – The Scottish Intercollegiate Guidelines Network
- **SOGC** – The Society of Obstetricians and Gynaecologists of Canada
- **USAID** – The United States Agency for International Development
- **WFP** – The United Nations World Food Program
- **WHO** – The World Health Organization

Results

Total of 29 guidelines relevant to adolescent girls or women before pregnancy and 84 for pregnant women from different sources, such as the American Congress of Obstetricians and Gynaecologists (ACOG), the American Heart Association (AHA), the National Health and Medical Research Council (NHMRC), the National Institute for Health and Care Excellence (NICE), the Royal College of Obstetricians and Gynaecologists (RCOG), and the World Health Organization (WHO) (Box 1 and Table S1). Very few of these guidelines exactly addressed adolescents, and those that did mainly focused on overweight and obesity. Guidelines pertinent to women before and during pregnancy were derived from general guidelines for women of reproductive age that involved adolescents and young women.

Eating healthy

Most of the guidelines that discuss adolescent nutrition recommend a balanced diet. The majority of the guidelines, including those of the RCOG,¹¹ the ACOG,¹² the March of Dimes, the NICE,¹³ the WHO,¹⁴ the Institute of Medicine,¹⁵ and the NHMRC,¹⁶ encourage adolescents and young adults to include food from five groups (i.e., grains, fruits and vegetables, milk and dairy food, meat, fish, and alternatives), tailored according to present body mass index (BMI), and discourage food and drinks having high amounts of fat and sugar. The consumption of soft drinks and sweets negotiations the intake of more nutritious foods and may impede compliance with current dietary guidelines.¹⁷ The Dietary Guidelines for Americans 2010 also recommend that children, adolescents, and adults limit intake of solid fats (major sources of saturated and *trans*-fatty acids), cholesterol, sodium, added sugars, and refined grains.¹⁸ National health objectives in the United States include increasing the consumption of fruits, vegetables, whole grains, and calcium among persons aged ≥ 2 years, reducing consumption of calories from solid fats and added sugars, reducing consumption of saturated fats, and reducing sodium consumption. The Australian NHMRC dietary guidelines for children and adolescents state that children and adolescents require appropriate food and physical activity for normal growth and

development.¹⁶ They recommend that growth should be checked frequently and that children and adolescents should enjoy a wide variety of nutritious foods. Diet should include plenty of grains and cereals, vegetables (including legumes), and fruits. They recommend that everyone should be encouraged to primarily drink water. Only a moderate amount of sugars and foods should be used up. Additionally, low-salt foods and foods containing calcium and iron should be consumed.¹⁶

The WHO guidelines on sodium intake for adults (≥ 16 years of age) and children (2–15 years of age)¹⁹ recommend a reduction in sodium intake to control blood pressure in children (strong recommendation). The recommended maximum level of intake of 2 g/day of sodium in adults should be adjusted downward on the basis of the energy requirements of children relative to those of adults. The commended intake level for children is lower than that for adults when children's energy necessities are less than adults. The WHO guideline on potassium intake²⁰ suggests an increase in potassium intake from food to reduce blood pressure and risk of cardiovascular disease, stroke, and coronary heart disease in adults (strong recommendation). The WHO suggests a potassium intake of at least 90 mmol/day (3510 mg/day) for adults (conditional recommendation).

Micronutrient supplementation

Folic acid supplementation

The RCOG,¹¹ ACOG,¹² NICE,²¹ Centers for Disease Control (CDC),²² and American Academy of Pediatrics (AAP)²³ guidelines concerning folate supplementation recommend promoting a folate-rich diet or folic acid supplementation (400 $\mu\text{g}/\text{day}$) and dietary counselling. These guidelines were not precisely for adolescents, however, and were based on general data on women of reproductive age, including pregnant women, which included adolescents. The NICE²¹ and CDC²² guidelines recommend taking adequate amounts of folic acid before and after pregnancy. They recommend 5 mg of folic acid per day for those who have a neural tube defect (NTD), a previous baby with an NTD, a family history of NTDs or diabetes, or a partner with this history. Daily folic acid supplementation is effective for reducing the risk of NTDs. The recommendation for the weekly folic acid dosage is based on the participants' rationale of providing seven times the recommended daily dose to prevent NTDs and limited experimental evidence demonstrating that this dose can improve red blood cell folate concentrations to levels that have been associated with a reduced risk for NTDs.

Iron and folic acid supplement

There are hardly any guidelines on IFA supplementation that was specific for adolescents. The WHO guidelines on daily IFA supplementation in pregnant women²⁴ recommend intermittent IFA supplementation as a preventive strategy for implementation at the population level. In all clinical settings, women should be given daily iron of 30–60 mg and 400 μg of folic acid. If a woman is diagnosed with anemia in a clinical setting, she should be treated with daily iron (120 mg of elemental iron) and folic acid (400 μg) supplementation until her hemoglobin concentration rises to normal. She can then switch to an intermittent regimen to prevent reappearance of anemia. The WHO recommends that the weekly supplement should have 120 mg iron in the form of ferrous sulfate and 2800 μg folic acid, although evidence for the effective dose of folic acid for weekly supplementation is very limited. The iron dose suggested for weekly IFA supplementation may cause short-term digestive discomfort and black stool, but there is no reported risk of long-term toxicity. Upon confirmation of pregnancy, women should receive standard reproductive care. NICE guidelines on antenatal care in uncomplicated pregnancies²⁵ recommend that anemia screening should be conducted at the booking visit and then at 28 weeks (abnormal Hb < 11 g/100 mL and 10.5, respectively). The current WHO recommendation is to provide daily supplementation with 60 mg iron and 400 μg folic acid to menstruating women²⁶ (Table 2).

Table 2. Micronutrient supplementation recommendation

Micronutrient	Recommendation for adolescents	Recommendation for pregnant women
Iron	Weekly: 60 mg iron _a	Daily: 30–60 mg Daily: 120 mg _a Weekly: 120 mg iron
Folic acid	Weekly: 2800 μg _a	Daily: 400 μg Daily: 400 μg _a Weekl: 2800 μg
Vitamin A		Daily: Up to 10,000 IU _b Weekly: Up to 25,000 IU _b
Iodine		Daily: 150 μg
Calcium	1200 and 1500 mg/day	1.5–2.0 g elemental calcium/day _c
Vitamin D	400 IU among those consuming < 1 L of vitamin-fortified milk	

- ^aPopulations where the frequency of anemia among non pregnant women of reproductive age is 20% or higher.
- ^bPopulations where the occurrence of night blindness is 5% or higher in pregnant women or 5% or higher in children 24–59 months of age.

- ^cArea with low calcium intake.

Vitamin A supplementation

I could not find any specific guidelines on vitamin A supplementation for adolescents. However, the WHO guidelines on vitamin A supplementation in pregnant women 27 recommend supplementing vitamin A in pregnancy as part of routine pre-birth care in populations at high risk of deficiency (strong recommendation). Vitamin A supplementation in pregnancy is needed to prevent night blindness, and, in populations where the prevalence of night blindness is more than 5%, the WHO recommends a daily dose of up to 10,000 IU and a weekly dose of up to 25,000 IU (Table 2).

Iodine supplementation

It was hard to identify any specific guidelines specifically on iodine supplementation for adolescents. However, the NHMRC guidelines on iodine supplementation 28 and the AAP guidelines on iodine supplementation in pregnant and breastfeeding women 29 recommend iodine supplements of 150 µg/day. Fortified bread, dairy, and seafood are the main dietary sources of iodine in Australia (Table 2).

Calcium supplementation

The National Institutes of Health recommend supplementing calcium intakes of 1200–1500 mg/day, beginning during the preteen years and continuing throughout adolescence 30 (Table 2). The National Osteoporosis Foundation recommends ≥60 min of daily physical activity, including bone-strengthening exercise, at least 3 days per week for children and adolescents. 31 this search also failed to locate any specific guidelines on calcium supplementation for pregnant adolescents. However, the WHO, 32 NICE, 21 RCOG, 33 and AAP 30 guidelines on calcium supplementation in pregnant women state that, in populations where calcium intake is low, calcium supplementation 1.5–2 g/day as part of prenatal care is recommended for the prevention of preeclampsia in pregnant women, particularly among those at higher risk of evolving hypertension.

Vitamin D supplementation

Present AAP guidelines recommend 400 IU of daily supplementation of vitamin D for children and adolescents who ingest less than 1 l of vitamin D–fortified milk per day (Table 2). 34 Our search did not locate any specific guidelines on vitamin D supplementation for pregnant adolescents. While the RCOG guidelines on vitamin D in pregnancy 33 state that supplementation of 1000–2000 IU/day of vitamin D is safe for vitamin D shortage (<20 ng/mL), the WHO does not recommend vitamin D supplementation during pregnancy. 35

Food/protein-energy supplementation and other electrolytes

Though none of the guideline development agencies has developed and finalized guidelines for balanced protein-energy supplementation for malnourished girls and women, the WHO is in the process of developing guidelines for balanced protein-energy supplementation during pregnancy.

Malnourishment in adolescents and children, in addition to the general effects of impaired tissue function, immunosuppression, faulty muscle function, and reduced respiratory and cardiac reserve, also results in weakened growth and nutrition. These adolescents require adequate diets containing protein, iron, and other micronutrients. For adolescents requiring parenteral nutrition for specific though rare conditions, the parenteral nutrition guidelines working group suggests improvements in techniques for artificial nutritional support, including ambulatory settings, to prevent penalties of malnutrition, including death. 36

Nutrition education and counselling for pregnant adolescents

Pre pregnancy nutritional counselling is imperative for adolescents who are planning to or may have a chance of getting pregnant. Although we could not locate any guidelines specific to adolescents, we summarize some of the guidance for diets and practices in general pregnant populations that also include adolescents. The RCOG guidelines on nutrition in pregnancy 9 recommend providing pre pregnancy counselling to women on any occasion when they visit a healthcare facility. According to these guidelines, pregnant women are also encouraged to avoid smoking, drinking alcohol, and taking medications without the advice of a healthcare worker. The ACOG guidelines on nutrition during pregnancy 11 and the March of Dimes recommendations on nutrition basics for pregnancy 37 state that omega-3 fatty acids, which are found in oily fish, should also be incorporated into the diet while pregnant or breastfeeding or that docosahexaenoic acid be taken every day. The guidelines add that low-fat diets are not suitable for young children, but, for older children, a diet low in fat and particularly low in saturated fat is appropriate. These guidelines also recommend avoiding foods that contain teratogens and food-borne pathogens associated with illnesses. 38

Obesity prevention and management

Obesity is becoming a leading cause of concern among healthcare professionals with mention to its widespread implications on the health of the population. Many factors may contribute to the increasing occurrence of obesity in adolescents. In particular, barriers to physical activity in girls and young women should be addressed, along with dietary issues, to avoid and curb the further rise in the incidence of obesity in adolescents. The management of obesity requires a multidisciplinary approach, and addressing adolescent overweight and obesity would require actions and involvements that begin in early childhood and in school-age children.

The WHO guidelines on interventions on diet and physical activity 15 recommend using many different approaches, such as policy and environment, mass media, community, and primary health care, to combat the rising widespread of obesity. Family involvement is critical in the treatment of childhood overweight. If treatment is initiated when a family is not ready to support the program, success is unlikely. The action plan should also take into consideration long-term management with continued assessment of the child for adequate growth and development, because overweight is a long-term problem (Table 3).

Table 3. Recommendations for obesity prevention and management

Obesity prevention	Obesity management
Offer weight-loss support program involving diet and physical activity to all adolescents	Encourage healthier eating and physical activity

Obesity prevention	Obesity management
Women seeking pregnancy should be encouraged to maintain BMI in the range 20–25 kg/m ² , as this may increase chances of pregnancy and reduce pregnancy complications	Drugs can be used in adults with a BMI >30 or >27 with risk factors or diseases (hypertension, dyslipidemia, CHD, type 2 diabetes, and sleep apnea)
Women with a BMI >30 kg/m ² should be advised to reduce weight to a BMI <30 kg/m ² before conceiving	Weight-loss surgery can be offered to a limited number of patients with a BMI >40 or >34 with comorbidities

Age-specific dietary modification is the keystone of treatment. The major goals in dietary management are to provide right caloric intake, provide optimum nutrition for the maintenance of health and normal growth, and to help child development and sustain health. Most of the guidelines, such as the NICE guidelines on the management of obesity in clinical settings (children)³⁹ and the CDC school health guidelines to promote healthy eating and physical activity,⁴⁰ recommend offering a weight loss–support program involving diet and physical activity to all adolescents. The WHO guidelines on interventions on diet and physical activity¹⁵ recommend that healthcare providers must advise children, adolescents, and parents that energy balance is critical to weight loss. The WHO guidelines discuss the pivotal role of public health operations, which are required to inform adolescents, particularly adolescent girls and young women, of the potential concerns of obesity during generative years.

The AHA guidelines on dietary references for children and adolescents,⁴¹ the CDC guidelines on school health to promote healthy eating and physical activity,⁴⁰ and the NICE guidelines on management of obesity in clinical settings (children)³⁹ state that healthcare providers must boost healthier eating and increasing habitual physical activity (e.g., brisk walking) to a minimum of 30–60 min/day. The WHO guidelines on sugar intake for adults and children recommend reducing the intake of free sugars to less than 10% of total energy intake.⁴² The WHO guidelines on interventions on diet and physical activity¹⁵ recommend providing healthy options for free/funded meals at work and introducing physical activity programs that employees can access and bear at minimal expense. Obesity treatment should also be considered.

Regular valuation of the populations who have developed or are prone to develop obesity is very important. According to the ACOG guidelines on obesity and pregnancy,⁴³ overweight pregnant women should be considered for venous thrombosis and screened early for gestational diabetes, hypertension, and preeclampsia and must have additional ultrasound scanning to check appropriate fetal growth. However, it is important to note that these guidelines are for general overweight pregnant women and not exactly for adolescents.

The RCOG advices on management of women with obesity in pregnancy ⁴⁴ recommend that all women considering pregnancy should be heartened to maintain BMI in the range 20–25 kg/m². Women who are obese and are seeking reproductive health care should have access to a referral pathway to appropriate healthcare professionals for supporting the acceptance of a healthy lifestyle.⁴⁴ The NICE³⁹ and the WHO¹⁵ state that pregnant obese women should be encouraged to consume a high-carbohydrate, low glycemic index, high-fiber diet with five portions of vegetables and fruits. Emphasizing the importance of avoiding unplanned pregnancy should be an essential component of diabetes education for women with diabetes. Women with diabetes who are planning to become pregnant should be offered preconception care and advice before discontinuing contraception (NICE).⁴⁵

In obese adolescent women, the dosage of folic acid has been greater than before beyond what is recommended for the general population. The RCOG guidelines on management of women with obesity in pregnancy⁴⁴ recommend that women should take a higher dose of folic acid (5 mg/day) if their BMI is greater than 30 from a month before conception to at least the 13th week of gestation. Post-delivery counselling is also very important as measured by better outcomes for both mother and child. The NICE guidelines recommend counselling breastfeeding women that a healthy diet and regular exercise will not harmfully affect the quantity and quality of milk.²¹

Discussion

Adolescent health has recently become a focus of care for policy makers and the research community, with many clinical trials being started and an incipient synthesis of evidence about interventions that target their health and nutrition. Given the global scale of nutritional issues in young and adolescent females and the lack of consistent guidelines, it is important to ensure that nutrition care recommendations are informed by the best available indication, and measures should be taken to develop evidence-based nutrition recommendations. We reviewed the major existing guidelines on adolescent nutrition. We were able to find 18 organizations/groups that covered some form of nutritional advice in their guidelines that targeted adolescent girls, young women, and pregnant adolescents. Very few guidelines and policy statements were made specifically for adolescent girls and boys.^{15, 26, 46, 47} Eleven guidelines focused on adolescents in some way; if adolescents were not specifically highlighted, they were either part of the general population or mentioned within the age group of guidelines focused on women or children. The guidelines that specifically focused on this age group are limited in their scope, concentrating on only school feeding, dieting trends, obesity management, or some micronutrient supplementation. Most of the guiding principles focus on adults, women of reproductive age, and pregnant women, with specific directives for nutrition during preconception, pregnancy, and post conception; macro- and micronutrient supplementation; exercise; obesity and diabetes; and gestational diabetes mellitus prevention and control. Most of the guidelines focused on children report on school-feeding programs. The guidelines also provide little to no guidance on application strategies and delivery platforms.

Numerous guidelines focus on the importance of IFA supplementation. Iron and folate insufficiency not only cause anemia, but also lead to impaired cognitive and physical growth in childhood, with adverse effects continuing into adulthood, including decreased productivity and the promulgation of further micronutrient absences in future children of affected women. Most guidelines recommend promoting a folate-rich diet or folic acid supplementation (400 µg/day) in dietary counseling; encourage adolescents and young adults to include food from five groups (i.e., grains, fruits and vegetables, milk and dairy food, meat, fish, and alternatives, tailored according to existing BMI); and discourage food and drinks containing high amounts of energy, especially

sugar-containing drinks. Calcium supplementation is recommended as part of antenatal care for the prevention of preeclampsia in pregnant women, particularly among those at high risk of low calcium intake in their diets. Improving dietary intake of calcium through natural and fortified foods could be encouraged among adolescents in all such contexts. Vitamin A supplementation during pregnancy is recommended as part of routine prenatal care for the prevention of night blindness, and adequate dietary intake of vitamin A-containing foods could be promoted among adolescents in all such settings. Pregnant women and young girls should also be encouraged to avoid smoking, drinking alcoholic drinks, and taking medications without the advice of a healthcare worker. We also have a few important recommendations that have not been consistently highlighted in these guidelines. For example, there is a need to start the importance of working in liaison with adolescents and their families to prepare guiding principles and to establish individual goals and approaches on the basis of a child's age, degree of overweight, and the presence of comorbidities. Guidelines on obesity prevention and management should inform adolescents and young women of the possible consequences of obesity during reproductive years and the need to provide a supportive environment that promotes healthy dietary and lifestyle interventions. Most of the guidelines indicate the need to use any opportunity to advise, encourage, and help adolescents and young women to maintain their BMI within the normal range and the need to encourage women to check their weight and waist measurements periodically. The guidelines collectively emphasize that healthcare providers must advise, encourage, and help adolescents to reduce weight before becoming pregnant. There is also the need to highlight the importance of psychosocial support and to provide interactive behavioral therapy, exercise, and nutritional advice to adolescents and young women at home and in schools. There is a need to take into account the tools and proficiency required for effective delivery of these interventions and the suitable delivery platforms. This would further strengthen the delivery strategies and make way of a healthier plan for adolescent nutrition care.

There is a general lack of strong, complete guidelines that target adolescent girls, and pregnant adolescents. This age group currently faces high rates of disease and mortality and has high-priority needs that require urgent attention by global and national bodies. We recommend that healthcare professionals, researchers, and policy makers come together and formulate guidelines on nutrition and healthy behaviors for adolescents that are based on strong proof from RCTs on adolescents and best practices, when possible, and are updated as new evidence becomes accessible.

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