

ADOLESCENCE



National Institute of Nutrition

Jamai Osmania Post
Hyderabad - 500 007

2007

Adolescent Phase

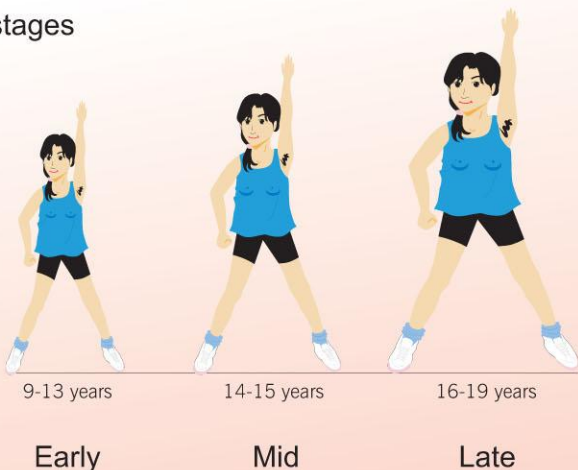
It is the important phase of life. The word adolescent is derived from Latin word "Adolescence" meaning to grow mature with special features in physical growth.

It is the transition phase between childhood and adulthood.

This period is characterized by:

- ★ Rapid physical growth and development
- ★ Physiological and emotional changes
- ★ Social and psychological maturity
- ★ Development of mental growth and search for adult identity
- ★ Transition from total socio-economic dependence to relative independence.

Adolescence can be categorized into 3 main stages



Stages during the adolescence

Early Adolescence (9-13 years)

Characterized by growth spurt - Physical development of secondary sexual characteristics like development of breasts, enlargement of hip region, initiation of menstruation.

Mid-Adolescence (14-15 years)

Characterized by

- ★ Widening of hips, hair growth in genitals and armpits
- ★ Development of a separate identity from parents
- ★ New relationship with peer groups and the opposite sex
- ★ Urge to explore new things

Late Adolescence (16-19 years)

- ★ Regular menstruation at an interval of 28 ± 3 days which lasts for 4-5 days.
- ★ Growth in external genitalia like enlargement of vagina.
- ★ Growth in internal organs such as development of uterus.
- ★ Development of physical characteristics similar to adults
- ★ Looking for a distinct identity with well-formed opinions and ideas

Importance of Nutrition during adolescence

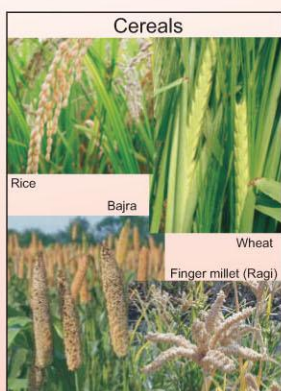
Food and nutrition play a very important role during this period.

Rapid physical growth demands more energy and nutrients. Therefore, adopting healthy eating life styles and following dietary guidelines are essential for the adolescent population to ensure optimal growth and development.



Food Pyramid

Requirement of energy is also essential therefore, inclusion of variety of cereals such as rice, wheat, bajra, finger millet (ragi) and corn etc., would help in proper growth and development of the body.



Consume more body building foods such as pulses, meat, milk and eggs as the body demands more proteins for adequate growth.

Micronutrients such as iron, iodine, calcium are essential for proper growth and development.

Tips to lead healthy adolescent life



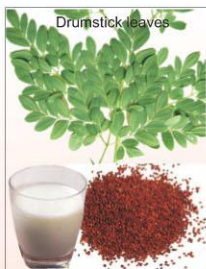
Consume Iron rich foods such as green leafy vegetables as they supply iron to the body in addition to beta carotene and fibre.

Meat and meat products such as liver are also rich in Iron.



For better absorption of iron consume vit. C rich fruits such as lemon, orange and guava.

Intake of calcium-rich foods promotes height and in the growth of strong bones as the requirement of calcium is more during this period. Milk, ragi and drum stick leaves are rich in calcium.



Avoid intake of bakery food items as they contain trans fatty acids which promote obesity during this period.

Avoid carbonated beverages as they

provide only energy without any vitamins and minerals. Instead intake of fruit juices and milk helps in proper growth of the body.



Reproductive health is also important during this period.

Personal hygiene is equally important

RDA for Adolescent girls

Age years	Energy Kcal/day	Protein g/day	Fat g/day	Calcium mg/day	Iron mg/day	Vit.A Beta carotene
10-12	1970	57	22	600	19	2400
13-15	2060	65	22	600	28	2400
16-18	2060	63	22	500	30	2400

Source: Recommended Dietary Allowance for Indians, NIN, ICMR 1989



This was developed as part of the project: Assessment of nutrition knowledge and impact of nutrition education related maternal health on adolescent girls in urban slums of Hyderabad.

Investigators : Dr. D. Raghunatha Rao, T. Prasanna Krishna, T. Vijaya pushpam, Anil Kumar Dube, N. Amulya Rao and K.V. Rameshwar Sarma