

plasma leptin, insulin and lipids, in obese diabetic and non-diabetic adolescents, especially those with PCOS. The only two drugs approved for obesity in adults in Europe and the US are sibutramine and orlistat. Sibutramine, a selective serotonin and noradrenaline re-uptake inhibitor which suppresses appetite, can reduce weight by 5-15%¹¹. Orlistat, an inhibitor of gastrointestinal lipases, decreases fat absorption by 30%, and causes significant weight loss, with improved lipid and glycemic profile. It may lead to flatulence, frequent stools, and deficiency of fat soluble vitamins like A and D¹². Rimonabant is contraindicated below age 18 years, and can cause depression.

SURGERY

Surgery is contraindicated in patients less than 18 years of age. Very rarely, e.g. in extreme obesity with severe sleep apnea or other complications, not responding to non-surgical treatment, gastroplasty may be considered¹³.

MAINTAINING WEIGHT LOSS

A questionnaire based study of persons who lost and maintained significant loss found that the common features were consumption of a diet low in calories (1380/day) fat and low in fat (24% calories from fat); and daily consumption of breakfast. Less than 1% had low carbohydrate diets.¹⁴ Continued self-monitoring of food intake and regular exercise of up to an hour daily were very strong predictors of weight maintenance. Decreased screen time (TV, computer, video games) has been shown to contribute significantly.

PREVENTION

Given the difficulty in achieving and maintaining weight loss, all attempts should be made to prevent obesity (Table). Pediatricians must educate parents and significant others from the beginning to adopt healthy attitudes. Several schools serve/sell food which promotes obesity, and pay little attention to physical activity. Clinicians must also work with school authorities to alter these malpractices, at the same time identifying and paying attention to high risk children (obesity/diabetes/hypertension/dyslipidemia in parent(s)/sibling(s), maternal age over 35 years at birth, single child, single parent, rapid weight gain). All children should have growth charted through childhood, and rapid weight gain picked up early. Children with rapid weight gain and their parents should be helped make lifestyle changes. This is one area where a clinician's timely inputs can help prevent much morbidity and unhappiness.

STRATEGIES FOR PREVENTION OF OBESITY

1. Physicians should recommend a healthy lifestyle rather than

thinness.

2. Physicians should encourage families to adopt sensible eating habits:
 - a. Avoid force feeding
 - b. Do not keep calorie dense foods and sweetened drinks at home
 - c. Do not use food as reward or punishment
 - d. Express affection and approval through ways other than food
 - e. Keep fat intake moderate
 - f. Encourage intake of unprocessed foods: fruits, salads, sprouts, etc.
3. Physicians and families should encourage physical activity, and minimize TV/ computer time.
4. Clinicians should identify high risk families and situations and emphasize prevention for the beginning.
5. Clinicians and families should emphasize that children need support not criticism, and that obesity is not only due to greed and sloth.
6. Clinicians and families must aim for gradual, permanent changes rather than drastic changes which are not sustainable.
7. Schools should influence attitudes by
 - a. Serving/ selling healthy food choices
 - b. Not allowing sweetened drinks and fried foods on campus
 - c. Increase time for physical activity
 - d. Allow premises to be used for sports after school hours
 - e. Identify high risk children and support weight loss attempts by them.
8. The community encourages physical activity, e.g. lobby for sports to be allowed in open spaces like parks (a major problem in cities).

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ETHICAL GUIDELINES FOR BIOMEDICAL RESEARCH

The need for uniform ethical guidelines for research on human subjects is universally recognised. It has acquired a new sense of urgency as the critical issues in the area of biogenetic research involving human subjects have become acute. Apart from the mandatory clinical trials on new drugs, a number of diagnostic procedures, therapeutic interventions and prevention measures including the use of vaccines, are being introduced which involve human subjects. Further the advent of new medical devices and radio-active materials and therapeutic benefits of recombinant DNA products have added a new dimension to the ethical issues that need to be considered before evaluating these for their efficacy, utility and safety.

Any research using the human beings as subjects shall bear in

mind the following principles of : i) essentiality, (ii) voluntariness, informed consent, (iii) non exploitation, (iv) privacy and confidentiality, (v) precaution and risk minimisation, (vi) professional competence, (vii) accountability & transparency, (viii) maximisation of public interest and distributive justice (ix) institutional arrangements (x) public domain (xi) totality of responsibility and (xii) compliance.

Recent advances in the field of Assisted Reproductive technologies, organ transplantation, Human genome analysis, and gene therapy promise unquestionable benefits to mankind. At the same time, they raise many questions of law and ethics, stimulating public interest and concern.

(Source : ICMR Publication 2000)