enlight

QUARTERLY NEWSLETTER

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Chennai . India

Apollo launches its 1st Bariatric Center of Excellence in November 2012

contents inside:

from the surgeon's desk: Dr. Rajkumar Palaniappan

2013

Welcome to Apollo Bariatric Institutes. With alarming increase in prevalence of obesity and its consequences, we are at the brink of war with the most threatening lifestyle disease of this age. The aim of this newsletter initiative is to spread awareness about this looming issue and its management possibilities. We at our institute provide a holistic approach to the management of obesity and its metabolic consequences with focus on all aspects including nutritional management, counseling, wellness program and surgical management to combat any type of weight & its related syndromes.

what's hot & what's not:
obesity facts

2013

Indians seem to be more vulnerable to lifestyle changes. The culprit may be what is called the 'thrifty genotype'. According to this theory, Indians, are genetically adapted to scarcity in calories due to just one meal and rarely two meals a day and follow a "famine–feast cycle". This was true until two decades ago when suddenly our country became richer and three meals became affordable. As a result, their bodies can't cope over-indulgence, and it takes only a small increase in daily calories for their metabolism to tip over into obesity and diabetes. This made Indian prone for alarming weight gain and its issues more rapid than other countries when added with sedentary lifestyle.

Chennai tops national obesity survey amongst 11 metropolitan cities

A C Nielson
For Johnson & Johnson Medical

India has been the focus of interest for WHO in the recent years for the main reasons, namely obesity. There have been reports on obesity being endemic in India with south being more affected by this lifestyle disease. Recently a research to understand the current status and trends in the management of obesity in Chennai and south India was conducted by A.C. Nielsen for Johnson & Johnson, Medical.

A survey conducted in 11 metropolitan cities across the nation revealed Chennai emerging as the obesity capital. 38% of Chennai's population was found to be above its ideal weight of which 12% are obese and 3% are morbidly obese. 6% of total obese population in top 11 cities is on the verge of being morbidly obese with their BMI in the range of 35 – 37.5 of which 23% are from Chennai. More so 40% of morbidly obese across these 11 locations have their BMI >50, of which the highest contribution is again from Chennai at 17%. Obesity is more prevalent in women (16%) as compared to men (13%) and prevalence increases with age with significantly more with the age group over 31 years.

Overweight individuals feel that the top three causes for prevalence of obesity* in Chennai are –Irregular eating habits (62%), eating oily or fatty food (53%) and lack of physical activity or sedentary lifestyle (43%). Basically begins as a problem, grows into an emotional burden and then transcends into a disease state.

70% of people above their ideal weight suffer from at least 1 coexisting disease condition. In Chennai, 51% of all people above their ideal body weight suffer from at least one co morbidity, associated with obesity* but nearly 33% are unaware of existing conditions since they have never consulted a doctor making it the most unsafe of all locations for obesity. Average duration of suffering from any coexisting indication/ illness is 3 to 4 years with incidence of hypertension 52%, heart diseases in 45%, type 2 Diabetes in 42%, sleep apnea in 39%, heart burn in 38% and arthritis in 35% of overweight patients. Other common illness include polycystic ovarian disease, gout, liver diseases, menstural irregularities, depression and thyroid deficiency in up to 20% individuals.

What is more alarming is that significantly higher number of respondents have never done anything nor intend to do anything in future about their weight and co-existing illness. 43% of obese individuals have never done anything to tackle their problem of obesity. In spite of being aware of several weight loss options, we find limited takers for those options. While 82% believe that obesity is caused due to eating, we find only 25% practicing dieting. When asked about reasons for not doing anything currently, paucity of time (46%), comfortable / happy the way I am (27%), need a quick solution to the problem and there are no quick fix methods (21%) were the most significant responses for their weight and co-morbid issues. However among overweight and obese the urge/ need to lose weight is missing.

The expenses from consumers point of view may seem minimal but its all about what they "remember". Right from food, living, travel whatever they must have spent towards weight loss they do not correlate anything as an expense on the treatment of obesity. Hope of being successful, motivation, cost & their current health status are refraining morbidly obese from losing weight. Most consumers try inexpensive options , and less than 1% patients are aggressively follow some scientific treatment and that is why more than 99% are failures. Chennai fast needs to wake up to obesity and its deadly consequences.

experts believe:

- People fall prey to advertisements for quack treatments than scientific treatments. People fail to realize that Obesity is a disease and it can be treated scientifically.
- Psychologically the consumer is constantly feeling that they have attempted to lose weight.
- Consumers feel that losing weight means giving up food/ drinks and stop living, hence they prefer the way they are.
- There are several expenses associated with weight loss measure like costs related to healthy eating, gym and travel costs, medical costs for ailments, absenteeism from work. To add, are indirect costs of "Missing out on the essence of life".
- People look for shortcuts and especially those which are economical. Such options don't give a sustained weight loss solution and after a failure they are resistant towards trying anything new.
- Consumers may idolize film/ sports personalities but friends, spouse, relatives play a key role in persuading people to undertake any weight loss measures.

"ENLIGHT" Bariatric support group initiative for obese individuals

To aid in patient's fight against obesity and metabolic syndromes..

We recognize that obesity is a debilitating disease of mind, body and spirit and must be addressed holistically to achieve long-term success. Patients post-surgery realize that surgery will not miraculously eliminate the emotional or psychological trauma that morbid obesity had inflicted on them for years. They are also in the process of developing an entirely new way of looking at food as well as their bariatric surgery experience, both on a personal and professional basis.

Support groups constitute an integral part of vision to provide safe, effective and efficacious care to the patient population. Research has consistently demonstrated that all types of ongoing weight management plans, including people on diet, medical management, pre and post- surgical patients, support is absolutely critical to long-term sustained weight loss and maintenance. Support group meeting attendance directly increases the chances of short and long term patient success post bariatric surgery.

We at Apollo Hospitals has taken this seriously and started a quarterly support group system named "ENLIGHT". We conducted our first support group meeting on the 8th of March and was attended by 20 patients (8 pre-op and 12 post-op). Our support groups are in place to assist patients with addressing more immediate and long-term questions and needs including the most beneficial diets, exercise regimens, body contouring options, dealing with lifestyle changes that follow bariatric surgery, , importance of adhering to the medication regimen strictly, ways to bolster one's emotional, mental, psychological and spiritual health.

This highly beneficial session is planned once every quarter and the next session is slated on June 8th. Regardless of whether a patient is in the process of considering bariatric surgery, just prior to the surgery or post-surgery, they are welcome to attend the sessions and are highly encouraged to bring their loved ones along as well. The success of this surgery also hinges on the support the patient receives at home, which is why educating the family is a priority for us.

"enlight" features:

- Know about obesity & co-morbidities
- Understand types of bariatric Surgery
- Nutrition and lifestyle master classes
- Pre & Post operative patient interactions
- Sharing of experience with obesity
- Quarterly meeting with Bariatric team

what's hot & what's not: co-morbidty facts

2013

India has the second largest diabetic population in the world with seven crore people and equal urban (25.4%) and rural (25.2%) distribution of obesity among them. An estimated increase of more than 50% is predicted in the next 15 years making the count to around eleven crore and to become the diabetic capital of the world by 2030. India is also tipped to be having the second largest hypertensive population with 11 crore individuals and predicted to become the hypertensive capital by 2025 with an estimated disease population of 21 crore. At present 20% of all deaths in India are either obesity or metabolic disease related.

VENUGOPAL is one happy man after losing 64 kg..

I'm a professional working with Ashok Leyland as Deputy manager. I was always on the plump side, slowly started adding weight in years due to work demands, irregular diet habits and sedentary lifestyle. I was weighing 140 kg in 2011 and was not even able to walk properly. My self esteem and confidence were low and was even suffering from depression which started affecting my performance at work.

Though i was aware of Bariatric surgery, I was very worried to go under the knife. That is when i read about the scarless SILS technique of Bariatric surgery at Apollo Hospitals, Greams Road. I underwent surgery in March 2011 in spite of negative comments from relatives and friends. After the surgery i lost an amazing 64 kg in 8 months. Now I feel more healthier and more free, have better self-confidence, self-esteem and performance based promotion at work. In simple terms the surgery has turned my life upside down for the best.

It's been close to 2 years since surgery and i still stand at 76 kg. I am proud to have made one of the best decision in my life.

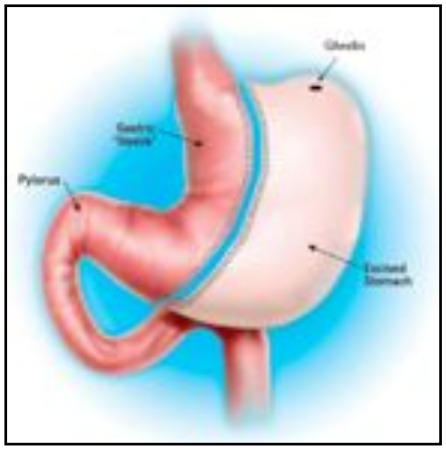
what's hot & what's not: BMI facts

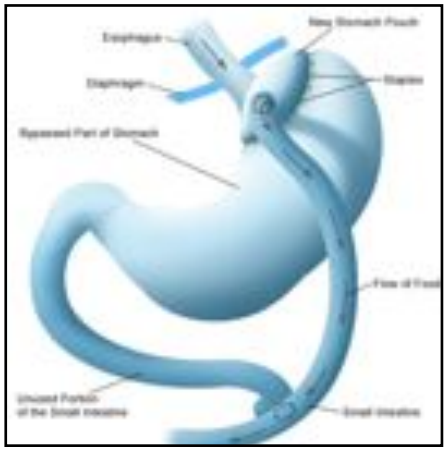
2013

$$BMI = \frac{\text{Weight in kg}}{\text{Height in } m^2}$$

As per IFSO-APC guidelines, BMI for Indians is reduced by 2.5 due to the occurrence of potentially life threatening co-morbidities at an early BMI. Less lean body mass, more body fat and central obesity are postulated to be the reasons.

Underweight	< 18.4
Normal	18.5 - 22.4
Overweight	22.5 - 27.4
Obesity I	27.5 - 32.4
Obesity II	32.5 - 37.4
Obesity III	> 37.5





Bariatric Surgery: Battle on the Bulge

Dr.Rajkumar Palaniappan
Bariatric Surgeon

Bariatric surgery is a surgical procedure wherein the size of the stomach is curtailed and / or intestines are bypassed leading to reduced consumption of calories and thus aiding in weight loss. Over the last decade, weight loss surgery has been continually refined to improve results and minimize risks. Today, bariatric surgeons have access to a substantial body of clinical data that supports the use of surgery as a safe and effective weight loss treatment when other methods have failed.

People who fall in the Grade III category of obesity stand most eligible, patients in Grade II obesity with one or more co-morbidities may also opt for bariatric surgery. Bariatric surgery leads to drastic weight loss, in a significantly smaller time frame. As it is exclusively done by laparoscopy, recovery is faster with less post-operative complications. It also requires less effort to lose weight. More importantly bariatric surgery significantly increases the life span of an obese individual simultaneously ridding of co-morbidities. The choice of surgery depends on patients BMI & co-morbidities.

Surgical procedures promote weight loss by two different ways:

1. By decreasing food intake (restriction) by surgeries that limit the amount of food the stomach can hold by closing off or removing parts of the stomach. NOTE: The majority of patients report early satiety and, and hunger is lost from 30 – 70 % depending on the procedure. The most popular in India and commonly used restrictive procedure is sleeve gastrectomy (see picture). During this procedure a thin vertical sleeve of stomach like a hockey stick is created using a stapling device. This sleeve will typically hold between 80-100 ml. The excised portion of the stomach is removed. In clinical studies across India, patient lost an average of 60 – 70% of their excess weight. It is also shown to help resolve high blood pressure and obstructive sleep apnea, and to help improve type 2 diabetes and hyperlipidemia. However long term durability is not proved due to paucity of data and being a new procedure.

2. By causing food to be poorly digested and absorbed (malabsorption). Surgeon makes a direct connection from the stomach to a lower segment of the small intestine, bypassing the duodenum, and some of the jejunum. NOTE: Vitamin and mineral rich high protein intake will be required for life to prevent the problem of nutritional deficiencies. Although results are more predictable and manageable, side effects persist for some patients.

Gastric bypass, which combines restrictive and malabsorptive surgery techniques, is the most frequently performed bariatric procedure and is the GOLD standard in Bariatric surgery. In this procedure, stapling creates a small (15 to 20 cc) stomach pouch. The remainder of the stomach is not removed, but is completely stapled and divided from the lower stomach. The small intestine is then divided just beyond the duodenum and a connection with the new, smaller stomach pouch is constructed (see picture). The length of either segment of the intestine can be increased to produce lower or higher levels of malabsorption. An analysis of clinical studies reported an average excess weight loss of 70 – 80 % over a period of 2-3 years. It is shown to help resolve type 2 diabetes, high blood pressure, and obstructive sleep apnea, and to help improve high cholesterol with success rates more than 80%.

The bariatric procedure can successfully start patients on the road to recovery from clinically severe obesity, but surgery alone will not ensure long-term success. Most patients lose more than half of their excess weight in the first year and continue to lose weight after this point. Successful habits include eating three small, well-balanced meals, and a maximum of one snack a day. Patients tend to gain weight back if they start eating larger portions, graze, consume high fat or "junk" foods, or drink high-calorie beverages. A program of regular exercise is very important for promoting and maintaining weight loss. Patients who exercise 45 minutes at least three times per week lose an average of 18% more excess weight than patients who do not exercise.

techniques:

- Conventional Laparoscopy
  Surgery is done through three or more tiny keyholes through the abdomen.
- Single Incision Laparoscopic Surgery
  Surgery is done through a single hole in the belly button and there wont be any visible scar in the abdomen.
- Robotic Surgery
  Similar technique as conventional laparoscopy, with 3D vision, better precision, control, safety, and less pain.
- Endoluminal Surgery (to be launched)
  For low BMI patients where surgery is performed through endoscope.

control your mind

When we aim for our goals, we take into consideration many factors: do we have the necessary talent and abilities to achieve them? Are we motivated enough? What obstacles do we have in our way, and how do we overcome them?

However, our perception of these factors can make a big difference to the way we achieve. Let's assume that our goal is weight loss. Perhaps we are not motivated to eat right because we think, "The holidays are around the corner, and I can start dieting once they're over". Or perhaps "I have too much stress in my life right now, and eating food that I enjoy is one of the few pleasures I can get." Such thoughts can slow us down, or prevent us from achieving our goals; but, by controlling our minds, we can work toward overcoming these negative thoughts and procrastination. So, try replacing them with positive thoughts. For instance, the holiday example can be turned into, "I know the holidays are coming, so let me use this as an opportunity to test my ability to control my eating habits". We can also try to look at the positive side of stress as well: "I realize I'm feeling stressed, so maybe I could try talking to someone about the issue to see if they can help. I want to get pleasure from more aspects of my life than just eating!".

Must eat low calorie nutrition for winter

Dr.Deepa Agarwal
Bariatric Nutritionist

Seasonal eating is a healthier bet! As the winter's chill sets in, we find ourselves reaching for cozy, comfort foods that equate warm ovens with warm hearts. Winters can be hard on health with most people staying indoors. With days getting shorter, outdoor exercise becomes difficult and people engage in more passive activities like watching television and reading. Studies have suggested that there is an increase in aches and pains during the winter, along with an increase in functional impairment associated with seasonal depression. An increase in appetite is also reported, with the festive season leading to temptation to indulge.

Nature has its own way of keeping the body warm. The heat can be generated from within the body as well as from food that raises the body's temperature to help it cope. The body needs to burn more calories to keep warm and hence there is a need to eat judiciously. Certain foods have a more warming effect than others.

Apart from the traditional Indian whole grain cereals besides wheat and rice, include bajra, oats, maize or corn. Millets can be used to make hot porridge. Whole pulses and legumes like beans, soyabean and lentils can be used in soups and stews. Winter is an excellent time to incorporate ginger, garlic, cinnamon, turmeric and cloves into one's daily diet. In addition to their warming effect, they contain phytonutrients, anti-microbial and anti-inflammatory properties that help fight infections and disease. Garlic has special decongestant, antibiotic and antifungal properties to fight coughs, colds and sinusitis. Ginger increases peripheral circulation. Almonds, walnuts, peanuts, black and white sesame seeds and flax seeds are nutrition-packed for cold days. They are rich in heart-healthy fats, fiber, magnesium and vitamin E. Honey and jaggery are natural substitutes for sugar and have warming effects. Dark green leafy vegetables like Mustard greens and amaranth greens (bathua) are good sources of iron and folate and help maintain good haemoglobin levels. Vitamin C loaded foods like carrots, pumpkin, turnips, cabbage, tomatoes, oranges, guava, lime and amla help fight infections like the common cold and flu. Lean meats, fish, and poultry are high biological value protein foods and are associated with increased heat production and higher thermogenesis. Hot soup, masala tea, green tea, and hot water with condiments help keep the body hydrated and maintain body temperature.

Tea and coffee produce warmth but should be consumed in moderation. Of course some comfort foods will always need to be eaten in strict moderation - for example puddings loaded up with custard or cream, cakes, biscuits, chocolate and crisps.

Eat healthy during winters and include foods that'll keep you snug and steady at the same time. Exercise can also give you a similar mental high to eating comfort food. If you can, wrap up warm and go for a brisk walk outside every day.

what's hot & what's not: nutrition facts 2013

Calling all almond lovers! A new study published in the American Journal of Clinical Nutrition found that almonds have 20% fewer calories than originally thought. The results found that one-ounce serving of almonds has 129 calories as opposed to 160 that's currently listed. Interestingly, it has nothing to do with the composition - rather, the way we metabolize it.

Recipe to Try:
Honey and Fennel Glazed Almonds:
Preparation: Preheat oven to 300°F. Melt unsalted butter (2 tbsp) in a large skillet on medium heat. Stir in honey (3tsp), water (1 tbsp), salt (1 1/4th tsp) and ginger (1/4th tsp) . Stir in almonds (2 cups) and fennel (1tsp), and remove from heat. Spread almonds onto foil, and bake 25 to 35 minutes, stirring once, until almonds are golden (cut one open to test). Transfer almonds on foil to a rack, cool completely and serve.
Nutrients: Calories:205, Fat:2.6g, Protein:6g, Carb:11g, Fiber:4g

Metabolic syndromes: Killer diseases that complicate obesity

Dr.Boochandran
Consultant Endocrinologist

Metabolic Syndrome is a combination of medical condition and disorder, when occurring together invokes the risk of Diabetes and Cardiac Disease. According to the International Diabetes Federation (IDF) – the definition of Metabolic Syndrome is Central Obesity (Waist circumference with ethnicity specific values) and any of the following:

- Raised triglycerides > 150 mg/dl
- Reduced HDL < 40 mg/dl
- Raised BP Systolic BP >130 mm Hg
  Diastolic BP > 85 mm Hg
- Raised Fasting Glucose >100 mg /dl

If BMI > 30 kg /m2, waist circumference need not be measured. High sensitivity C-reactive protein has been developed and used as a marker to predict Coronary Vascular Disease in Metabolic Syndrome.

Terms like metabolic syndrome, Insulin Resistance Syndrome, Syndrome X are used for a group of conditions predisposing to Type 2 DM and Atherosclerotic Vascular Disease.

"Metabolic syndrome" dates back to at least the late 1950s, but came into common usage in the late 1970s to describe various associations of risk factors with diabetes, that had been noted as early as the 1920s.

- The Marseilles physician Dr. Jean Vague, in 1947, made the interesting observation that upper body obesity appeared to predispose to diabetes, atherosclerosis, gout, and calculi.
- In 1977, Haller used the term "metabolic syndrome" for associations of obesity, diabetes mellitus, hyperlipoprotinemia, hyperuricemia and steatosis hepattis when describing the additive effects of risk factors on atherosclerosis.

diabesity

Diabesity, a new terminology coined for patents suffering from Obesity and Diabetes is today's most blatantly visible – yet most neglected public health problem. The link between obesity and diabetes is firmly established and threaten the health, well-being and economic welfare of virtually every country. Since organ damage is inevitable if not controlled, early multi modality treatment should be considered, especially in India which is tipped to become the obesity and diabetic capital by 2025.

what's hot & what's not: metabolic facts 2013

In a recent population based study from Chennai, the metabolic syndrome prevalence was 18.3% by ATPIII criteria. In Northern India, the prevalence (ATPIII) was 35% in an industrial population and 24.9% in a community based study. Metabolic Syndrome causes higher incidence of cardiovascular disease than patients with diabetes. Congestive Heart Disease is 50% more common in patients with metabolic syndrome, 37% have premature artery disease at age 45, particularly in woman.Its prevalence increases with age and is higher in men than in women in south India. Almost 1% of children born in India are found to be suffering from "Inborn Metabolic Syndrome".

- In 1988, in his Banting lecture, Dr. Gerald M. Reaven proposed insulin resistance as the underlying factor and named the constellation of abnormalities Syndrome X. Reaven did not include abdominal obesity, which has also been hypothesized as the underlying factor, as part of the condition.

In a study done in 2010, by Vinayaka Mission University, Salem, South India, 1568 patients with Metabolic Syndrome were studied. Waist circumference, dyslipidemia and GTT were assessed and it was found that 33% of males and 27% of females were found to have Metabolic Syndrome. It was also found that it was more prevalent in men than in women. Compared to the European population, Asian Indians have a lower BMI but had a greater waist to hip circumference ratio.

In another recent study, done in Urban India by Hinduja Hospital Mumbai, a total of 548 subjects were screened in a cardiac evaluation camp and it was found that Metabolic Syndrome was present in 19.72% of population, 79% had a Body Mass Index of more than 23. Raised triglycerides & low HDL were found more in males than in females. Incidence of metabolic syndrome increased with increase in BMI.

The pathophysiology is extremely complex and only partially understood. The important factors predisposing to Metabolic Syndrome are Obesity, genetics, endocrine disorders such as PCOS, sedentary lifestyle. A number of inflammatory markers are elevated such as C-reactive protein, fibrinogen, interleukin-6, TNFα and others.

With appropriate cardiac rehabilitation, change in lifestyle (Eg. Diet, physical activity, weight reduction, if needed medications), the prevalence of the Syndrome can be reduced. However in country like ours, people seek medical attention only very late when the symptoms had already become irreversible.

Since metabolic syndrome with obesity accounts for more than 20% of all causes of death n India, IDF through its Asia Pacific Chapter (APC) has postulated guidelines to consider Bariatric surgery as an effective option. The point statement issued in 2011 states that Bariatric/GI metabolic surgery SHOULD be considered for the treatment of T2DM or metabolic syndrome for patients who are inadequately controlled by lifestyle alternations and medical treatment for candidates with BMI≥30 and MAY be considered as a non- primary alternative to treat candidates with BMI ≥ 27.5.

Obesity and Snoring: Potential life threatening Obstructive Sleep Apnea

Dr.Narasimhan
Consultant Pulmonologist

SNORING is a symptom of a serious disorder called sleep apnea. Sleep apnea is characterised by repeated collapse of the upper airway during sleep with consequent cessation of breathing. A person who snores is often an object of ridicule and causes sleepless nights for others. This problem is worse when one is a frequent traveller.

snoring facts:

Many do not realize that a person is breathing only when he is snoring. The sudden cessation of snoring followed by heavy snoring occurs because of the signal to brain from oxygen-starved organs. This results in fragmented and daytime sleep.

Forty-five per cent of normal adults snore at least occasionally, and 25 per cent are habitual snorers. The problem is more frequent in males and overweight persons, and usually grows worse with age. They may wake up frequently at night resulting in sleepiness and fatigue during the day. This could also result in serious medical problems like hypertension and in some cases even cause sudden death.

The main cause is an obstruction to the free flow of air through the passages at the back of the mouth and nose. This area, where the tongue and upper throat meet the soft palate and uvula, is collapsible. Snoring occurs when these structures strike each other and vibrate during breathing. People who snore may suffer from:

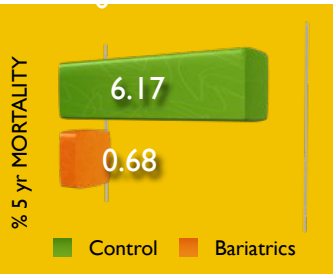
1. Poor muscle tone in the tongue and throat. This happen during deep sleep.
2. Excessive bulkiness of throat tissue in obese individuals. Children with large tonsils and adenoids often snore.
3. Long soft palate and/or uvula. They narrow the opening from the nose into the throat. As it dangles, it acts as a noisy flutter valve during relaxed breathing.
4. Obstructed nasal airways. A stuffy or blocked nose requires extra effort to pull air through. This creates an exaggerated vacuum and pulls together the floppy tissues of the throat, and snoring results.

A common question is whether OSA is a genuine problem and if there is a cure. OSA can be cured. Equipments like BIPAP (Bilevel positive airway pressure) and CIPAP (Continuous positive airway pressure) help keep the airways open and in some cases surgery can solve the problem. But a detailed ENT examination and a sleep study are mandatory before surgery. BIPAP and CPAP are to be used on a long-term basis. If the patient is suffering from obesity as well, Bariatric surgery mostly cures OSA. Even people using PAP for decades get relieved of symptoms after weight loss surgery.

what's hot & what's not: surgery facts

2013

Nicolas V Christou studied the hypothesis that bariatric surgery reduces long-term mortality in morbidly obese patients. Bariatric surgery resulted in significant reduction in mean percent excess weight loss (67.1%, $P < 0.001$). They had significant risk reductions for developing cancer, cardiovascular, endocrine, infectious, psychiatric, and mental disorders compared with controls which translates to a reduction in the relative risk of death by 89%.

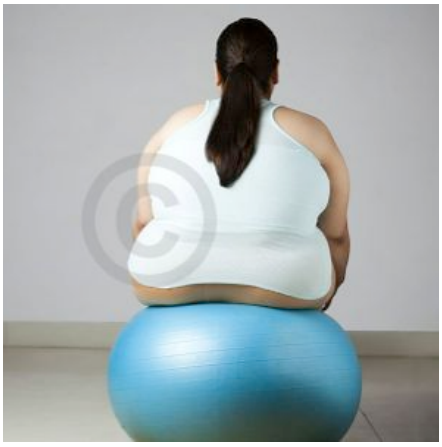


Easy daily lifestyle routines to lose excess weight

Ms. Krithvi Shyam
Clinical Psychologist

There has been a misconception among public that dieting is enough to lose weight. And people are literally advised to starve in the name of dieting. Dieting alone cant help you lose weight for long. It is not the healthy way to lose weight too. Unfortunately slimming center use artificial fat dissolving techniques that are temporary and diet charts with far less-than-required calorie intake that are unhealthy. You might lose weight for the first few months, but further loss will be arrested because the body reduces burning its calories. Add exercise to it, you will lose energy and get tired early. Your performance at work will also be compromised. Life style changes are the real healthy way to keep check at your weight loss program. Add responsible eating and exercises, you will lose weight the right way, the healthy way.

Increase your daily physical activity routine. Incorporate standing and walking activities as a part of you home and work activities. The first and foremost change is to become more mobile. If you move around enough, you can reduce the risk of all lifestyle diseases and burn up to 750 calories per day without even dieting or hitting the gym. It requires you to rethink all your habits and find new, more active ways to get through the day, making your own cup of tea than asking your maid or office boy, or going for thrice a week shopping instead of once a week bundled purchase. Other major issue is the timing of meals. Our body will have the least calorie-spending rate between 8 pm and 6 am. If the person has an erratic meal timing, body either will be depleted of calories due to long gap between meals, or because of you feeding in with more calories during the time of least metabolic rate, your body tend to store most of the calories than spending it. Also there will not be much of activity after you meal late in the night, which will not allow you to spend the calories taken in. If you can regularize your meals to the time when your body is at its peak metabolism potential, ie 7 am, 12 pm, 7 pm, you will burn up to 500 calorie more than before without even moving a muscle. Morning people tend to eat early, and give themselves a chance to be active after supper, thus burn more calories before going to bed and thus stay more slimmer. They will be up early and continue with breakfast during the peak metabolic activity. This helps them be more fit and active and help them burn more. The above lifestyle changes can add up to burning of 1500 calories apart from an insensible loss of 500 calories, accounting for the expenditure of 2000 calories intake in a healthy Indian diet. This is simply how you go from being couch potatoes to muffin-top blasting fitness freaks.



Lighter. Healthier Happier

editor:
Dr. Rajkumar Palaniappan

co-editors:
Dr. Boochandran
Dr. Deepa Agarwal

secretariat:
Bariatric Institute
Apollo Hospitals
21 Greams Lane
Chennai 600006
India

contacts:
tel: +91 44 42041788
mob: +91 7299952999
fax: +91 44 28294429

email:
bariatrics@email.com

website:
www.apollohospitals.com