



البديعة LaBadi



Quality Systems International



HOPE MCF

HERBAL MANAGEMENT OF OBESITY



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*Rational Healthy Food & Herbal
Contributing to Sustainable
Development Goals Conference*

“Obesity”

is a health condition when excessive body fat gets accumulated

arising out of balance energy reserve in the human body. Obesity which till a few decades ago, was considered a sign of beauty, wellness, health, authority and prosperity, has become a veritable curse plaguing humanity the world over.

It has assumed epidemic proportions in as much as between the year 1962-2000 and beyond obesity rate has nearly trebled and still on the incline bringing in its wake morbid health conditions in addition to social trauma and routine difficulty and inconvenience in performance of daily chores

- **Etymologically “obesity”** has been derived from the Latin word “obesus” which means, “stout, fat or plump” and in layman terms, “Obesity” is the term used to describe body weight that is much greater than what is considered as healthy and it mostly means having too much body fat resulting from excess calorie balance i.e. when “cals-in” is more than “cals-out” in the normal process of body metabolism. An average healthy adult male requires 2400 kilo calories a day while a woman requires 2200 with pregnant women requiring 300 kilo calories more and any intake more than this contributes to excess body mass/fat.
- **Obesity** is different from being overweight which means weighing too much. The weight may come from body muscles, bones, fat and water. The balance calories in the energy equation is deposited as fat and this differs from person to person and factors that might tip the balance include genetic traits, over eating, eating high fat foods and not burning sufficient calories by physical activity/physical exercise. It can be defined either in absolute or in relative terms. In a practical setting, this is typically evaluated by measuring the “body mass index or BMI” which is determined by: weight in Kgs divided by height measured in meters i.e. kg/m^2 . A ready reckoner of BMI is indicated as below:

BMI of 18.5-24.9 is considered normal weight

BMI of 25.0-29.9 is considered overweight

BMI of 30-39.9 is considered “obese”

BMI of 40 and above is considered as “severely obese” or “clinically Obese” or “morbidly obese” or “class-3 obesity”

BMI of 36 or more in presence of one or more co-morbidity factors can also be included in the category of “morbidly obese”



2014

35.0000000



2025

75.0000000

LAST 10 YEARS CONSUMPTION OF SUGARY DRINKS WORLD WIDE INCREASED BY THIRD 33%



38%

The evidence for a link between sugar-sweetened beverage consumption and childhood obesity is compelling. Two papers published in 2012 showing that interventions to reduce consumption of sugar-sweetened beverages significantly decreased weight gain in children and adolescents



SOME STATISTICS TO NOTE:

▲ 300 million people worldwide are obese and 750 million more are overweight. 22 million of world's children under 5 years of age are overweight or obese. (Mary Bellizzi). A whopping 10-14% of adolescent population worldwide is affected by obesity.

▲ About 66% of adults in USA are overweight and almost 33% are obese as per data of Health and Nutrition Examination Survey (NHANES) of 2001 to 2004. Approximately 17.5% of USA children (6 to 11 years) and 17% of adolescents (12 to 19 years) are overweight. At present approximately 9 million children over 6 years are obese (2005 study).

▲ In USA, a recent study estimated annual spending due to overweight and obesity (BMI more than and equal to 25) to be as much as \$92.6 billion in 2002 which is 9.1% of US health expenditure.

▲ In USA, cost of lost productivity related to obesity among Americans of 17 to 64 years of age has been \$3.9 billion (1994 study) and cost of workdays lost arising out of direct and indirectly related to obesity was \$39.3 billion (1994 study).

▲ In USA, number of obese adults over the age of 60 years will rise from 14.6 million in 2000 to 20.9 million in 2010-an increase of 43 %.(2004 US publication)

▲ A recent health survey in England predicts that in UK, 12 million adults and 1 million children will be obese by the year 2010.

▲ Overweight children have a 70% chance of becoming overweight or obese adults. This risk increases to 80% if one or more of parents are overweight/obese.

▲ During the period 1980-2000, obesity has increased by 10%, physical activity decreased by 13% and calorie increased by 1% (Tanson, 2003).

▲ Statistical records of obesity in India though not systematically documented, it is reported that about 12.1% males and 16% females (in case of Punjab, 30.3 males and 37.5% females) suffer from obesity. Morbid obesity has reached epidemic proportions in the 21st century affecting 5% of the country's population.

The anti-obesity drug:

The Garcinia fruit is a rich source of hydroxycitric acid (HCA), the active agent that aids in weight loss by inhibiting fat production and suppressing appetite. (-)-Hydroxycitric acid [(-)-HCA] is the principal acid of fruit rinds of Garcinia cambogia, Garcinia indica, and Garcinia atroviridis. (-)-HCA was shown to be a potent inhibitor of ATP citrate lyase (EC 4.1.3.8), which catalyzes the extramitochondrial cleavage of citrate to oxaloacetate and acetyl-CoA: $\text{citrate} + \text{ATP} + \text{CoA} \rightarrow \text{acetyl-CoA} + \text{ADP} + \text{P(i)} + \text{oxaloacetate}$. The inhibition of this reaction limits the availability of acetyl-CoA units required for fatty acid synthesis and lipogenesis during a lipogenic diet, that is, a diet high in carbohydrates. Extensive animal studies indicated that (-)-HCA suppresses the fatty acid synthesis, lipogenesis, food intake, and induced weight loss. In vitro studies revealed the inhibitions of fatty acid synthesis and lipogenesis from various precursors. . HCA; and its biochemistry, which includes inhibition of the citrate cleavage enzyme, effects on fatty acid synthesis and lipogenesis, effects on ketogenesis, other biological effects, possible modes of action on the reduction of food intake, promotion of glycogenesis, gluconeogenesis, and lipid oxidation, (-)-HCA as weight-controlling agent

HERBS USED FOR OBESITY

Hoodia Gordonii :In Africa, Hoodia Gordonii was use by the San tribesmen of the Kalahari Desert to fight hunger. They used to eat this plant to suppress hunger when they are on long hunting expeditions. This stone-age wonder plant can be found at the regions of the Southwestern African continent and has been proven effective in fighting against obesity.

Aloe Vera helps to improve digestions and cleans the digestive tract.

Astralgus helps improves nutrient absorption while increasing energy.

Bee pollen is quick to satisfy craving for sweets and stimulate metabolism.

Bladderwrack helps enhance thyroid function and brewer's yeast helps reduce cravings for a variety of food and drink.

Cayenne helps increases calorie burning and fight hunger

Chitosan helps slow down the absorption of fat in the intestine.

Ephedra is good at suppresses appetite

Fennel :Like Ephedra, Fennel helps suppresses appetite and remove fat and mucus from intestinal tract. Green tea is effective in increase energy expenditure while enhancing the body to burn fat.

Guaraná helps suppresses appetite and increases metabolic rates.

2.7g
CARBS

Cumin

0.6g
FIBER

- ✓ Low in Saturated Fat
- ✓ Low-Fat
- ✓ Cholesterol-Free
- ✓ Low-Sodium
- ✓ Low-Calorie
- ✓ Gluten-Free
- ✓ Sugar-Free

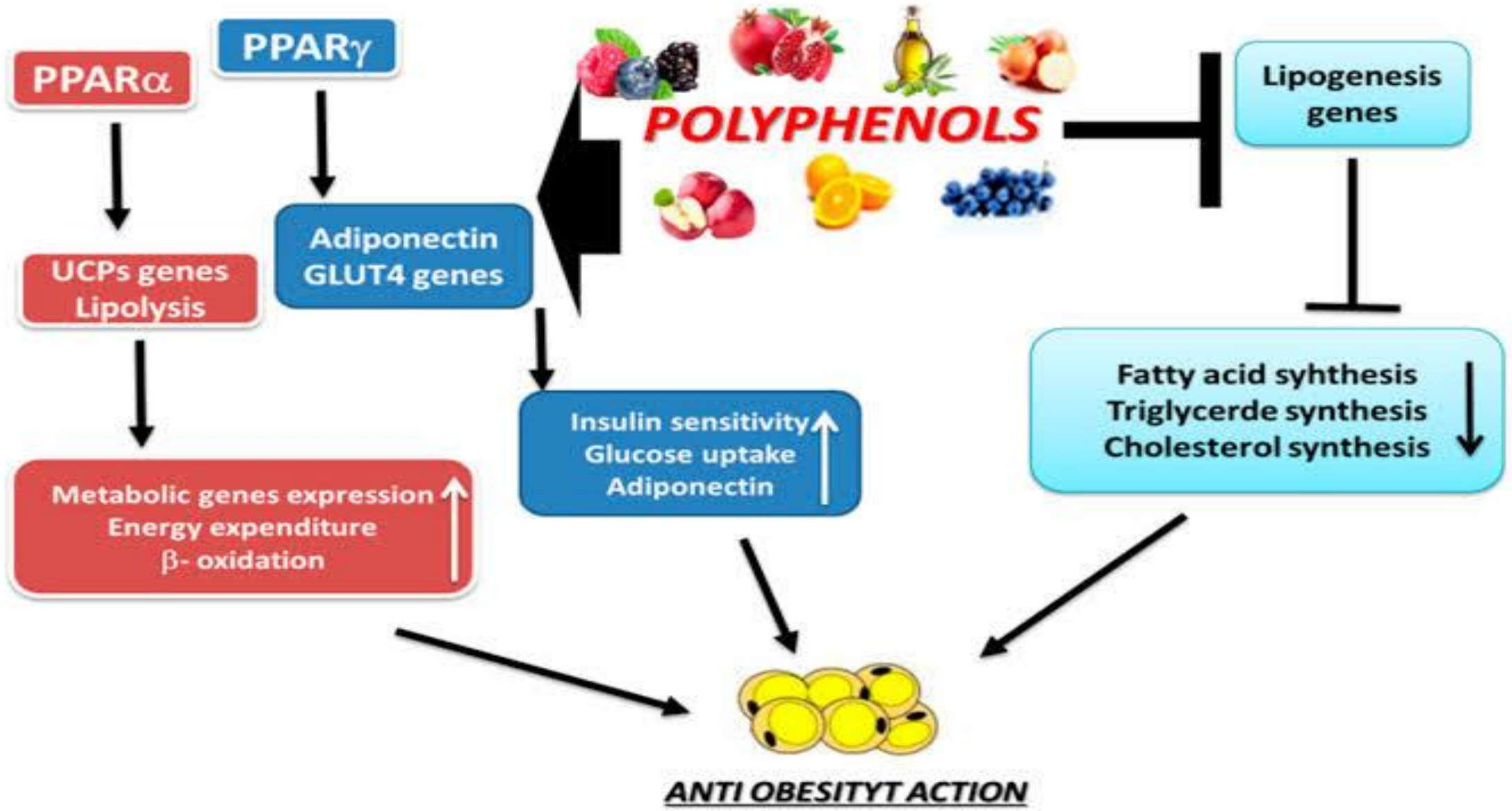
22
CALORIES

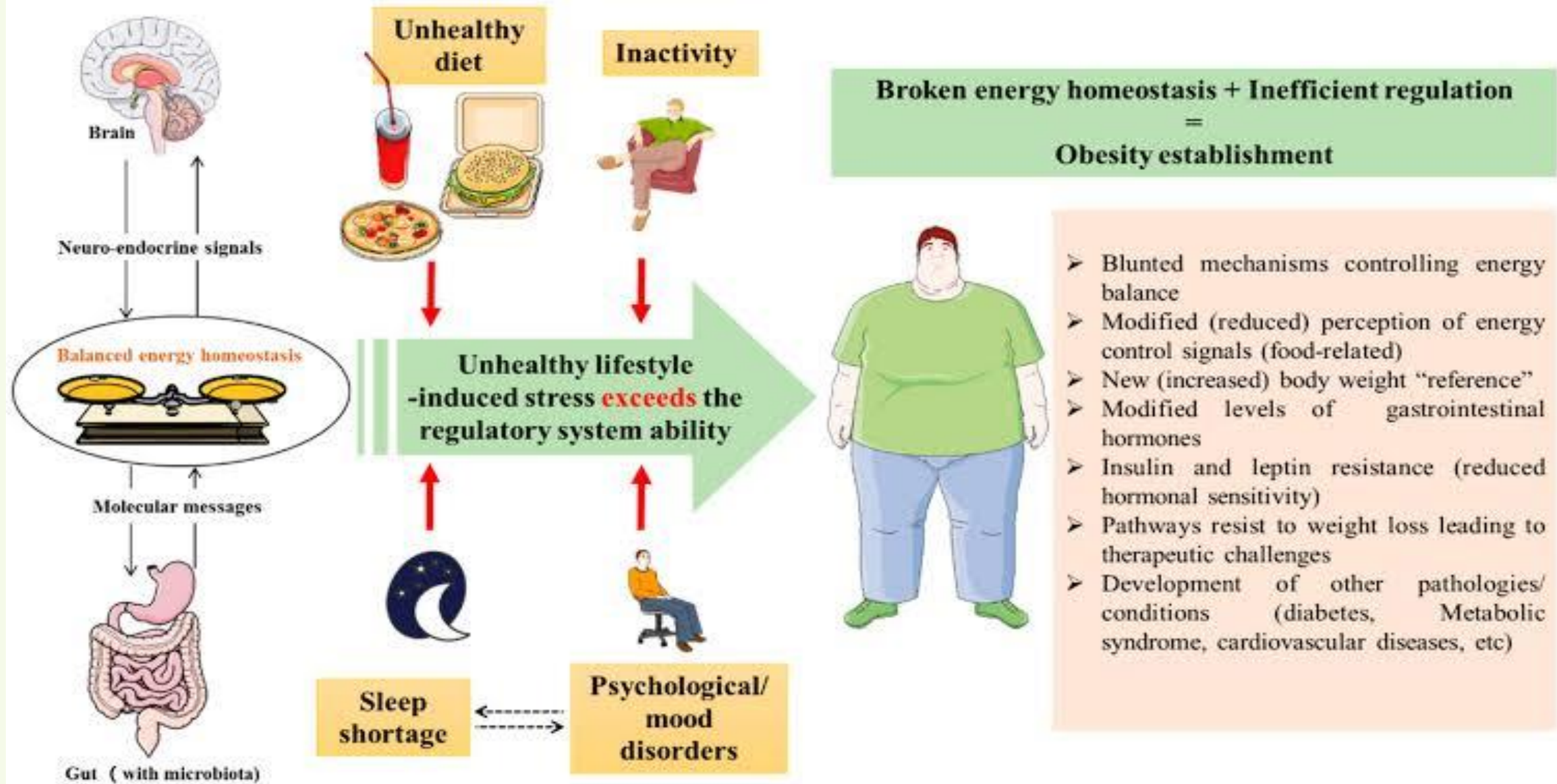
May aid in weight loss and improving cholesterol. May also help improve fasting blood glucose in overweight people with type 2 diabetes

1.3g
FAT

1.1g
PROTEIN

(per tablespoon)





Science
Explains How
Turmeric
Helps Your
Body Lose Weight



Benefits of Senna Tea

Most of you might be of the belief that senna tea leads to fat loss. If you lose weight after taking senna tea, it is due to water weight. It means if you rehydrate yourself after the tea has worked its way through, then chances are that you will once again gain weight. That is senna side effects for you!



Side Effects Of Senna Tea

Want to know the senna tablets side effects? Well, mild diarrhoea, stomach cramps, bloating, gas and discolored urine are common symptoms. However since the main agenda is treating constipation senna tea reviews show it as a herbal laxative used in some diet supplements.





The Prophet ﷺ said:

“Upon you is the Senna and the Sanoot (cumin)
for indeed in the two of them is a cure
for every disease except Saam”

He was asked “O Messenger of Allah,
What is Saam?” He said “Death”



Tumors

Fungal infection

Bacterial infection

Astringent

Stomachic

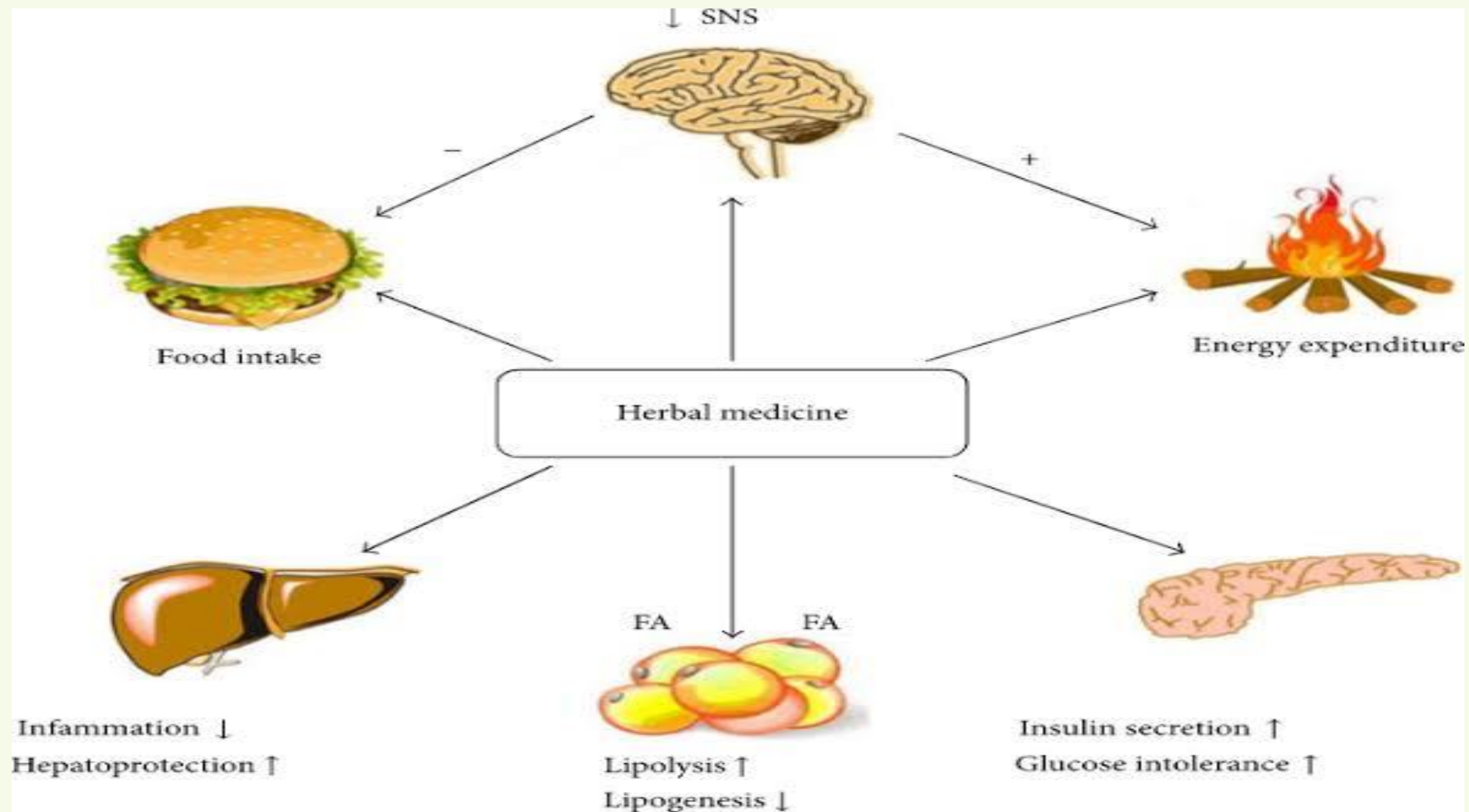
Spasm

Sore throats

Diaphoresis

Organ indurations







Inflammatory ↓

Cholesterol ↓

Gingerol

Triacylglycerol ↓

Insulin sensitivity ↑

Glucose
metabolism ↓

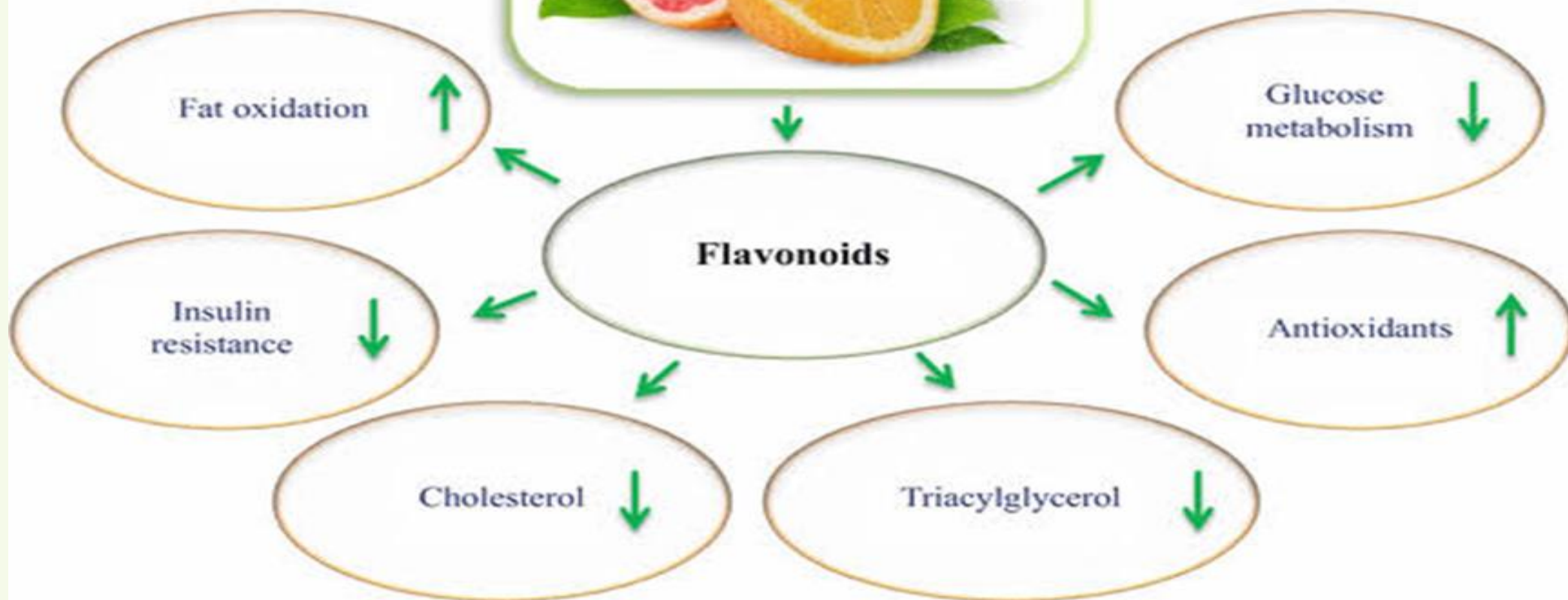
Antioxidants ↑

Lady's Mantle

Alchemilla vulgaris

Lion's foot





***Citrus reticulata* peel extract: an Anti-obesity therapy for Adolescents**

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ABSTRACT

The potential benefits of the water extract of *Citrus reticulata* peel were assessed on obesity and

Black seed oil weight loss

What's in *Nigella sativa* Seeds ?


Moisture = 4 - 6%


Ash = 3 - 14%


Fiber = 6 - 36%


Protein = 20 - 23%
3.7% Branched Chain Amino Acids


Carbohydrate = 29 - 37%



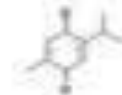
Omega-6 fatty acids
Omega-3 fatty acids
Tocopherols
Carotenoids
Phytosterols

Oil = 34 - 39%



Quinones
Monoterpenoid phenols
Alkaloids
Saponins
Phytosterols

Essential Oil = 0.5 - 1.5%



Thymoquinone = 0.0 - 0.75%


iBlackSeed.com



Phyllium :Phyllium curbs hunger. A teaspoon of Phyllium aids weight loss when taken half an hour before meals with water.

Senna :It is a good laxative. It improves metabolism of fat by stimulating the colon.

Cinnamon : Cinnamon is effective in reducing cholesterol levels. It lowers bad cholesterol and effects blood sugar and it



Iman Kamel

Green Tea is tea in its natural state that has not undergone fermentation. Generally, it is the fermentation process that releases the aroma and makes tea a pleasant drink. Only Green Tea (unfermented tea) has medicinal properties.

The main components of this tea are natural xanthines such as caffeine, theobromine, theophylline and tannin. The association of tannin with caffeine allows the caffeine to be released slowly into the blood. It is absorbed in small quantities and therefore does not cause insomnia. Green Tea is also diuretic. It fights against water retention. The slimming activity of this tea is probably due to another property: the caffeine of Green Tea helps in the secretion of adrenalin and keeps it at a high level. It is known that adrenalin is the hormone that frees fatty acids of the adipose tissues. This slimming activity has been proven in a double blind against placebo study conducted by Arkopharma Laboratories: 60 overweight women were divided into two equal groups. One took Green Tea Arkocaps and the other a placebo. Both groups followed a 1,800 calorie diet. This 30 day-long study concluded that the group who tested the Green Tea Arkocaps, had a significant weight loss and a reduction of waist measurement. Moreover, a significant decrease of the rate of blood triglycerides proved to be particularly active in the mobilization of fats. The clinical and biological tolerance levels were perfect, no side effects or sleep loss was reported. Green tea can help you to burn the body fat. As a matter of fact, there are some weight loss products which are made from green tea^{5,6,7}.

Meshashringi :Gymnema sylvestre is a woody climbing plant that grows in the tropical forests of central and southern India. Its active constituents include two resins (one soluble in alcohol), gymnemic acids, saponins, stigmasterol, quercitol, and the amino acid derivatives betaine, choline and trimethylamine. The active principle of this plant is gymnemic acid. It is a mild diuretic and has the property of abolishing the taste of sugar and neutralising the excess sugar present in the body

Green Coffee Bean Extract



Additional Health Benefits

Reduce High Blood Pressure



Increase Body Energy Level

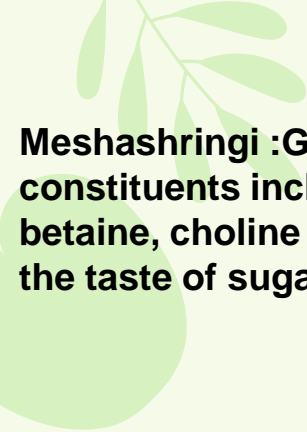


Improve Immunity



Balance Blood Sugar Level





Meshashringi :Gymnema sylvestre is a woody climbing plant that grows in the tropical forests of central and southern India. Its active constituents include two resins (one soluble in alcohol), gymnemic acids, saponins, stigmasterol, quercitol, and the amino acid derivatives betaine, choline and trimethylamine. The active principle of this plant is gymnemic acid. It is a mild diuretic and has the property of abolishing the taste of sugar and neutralising the excess sugar present in the body.

Green Tea

(Camellia Thea) (Ternstreimiaceae)

Haritaki :Terminalia chebula is a potent antioxidant and anti-inflammatory herb. Numerous studies have documented the potent cholesterol lowering activity of Terminalia chebula4.

Consumption of 4-6 glasses of water in empty stomach early morning is beneficial. Also a glass of warm water with a, spoonful of honey consumed in empty stomach helps to reduce excess fat

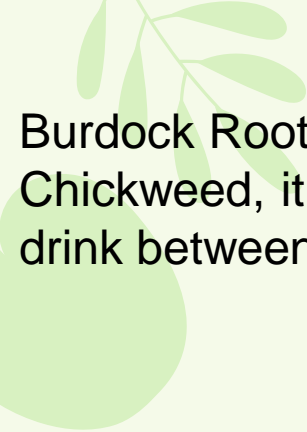
Kelp (*Fucus vesiculosus* L. (Fucaceae)) helps increase metabolism.

Seaweed also has polysaccharides(4) which form mucilage in contact with water; this mucilage distends the stomach without being assimilated, thus inducing reduction in appetite and a slight laxative effect. For this reason it would be worth using Seaweed in the following cases:

- General fatigue due to its stimulating action on the general metabolism.
- In certain hormonal deficiencies, when an iodine supplement is necessary to treat obesity.
- In case of a slimming diet, as a hunger-suppressant due to the mucilage which gives a feeling of fullness²

Guggul (Commiphora mukul) Family: Burseraceae

Chemistry: The oleo-gum resin contains 0.37% essential oil consisting chiefly of myrecene, dimyrecene and some polymyrecene. There are a number of useful steroids like Z-guggulusterone, E- guggulusterone, guggulusterol I, II and III. Guggulu is an oleo-resin obtained from the plant commiphora mukul and is very much used in Indian System of medicine as astringent, antiseptic, expectorant, aphrodisiac, demulcent, carminative and anti-spasmodic emmenagogue and used in rheumatism. Guggul is one of the most renowned herbs in Ayurvedic herbal supplement. Guggul or Guggulu has strong purifying and rejuvenating powers. People now days most frequently use it to benefit from Guggul's lipid regulating and immunomodulating actions. It has been shown that Guggul or commiphora mukul can lower blood cholesterol by 14-27 percent and can lower triglycerides by 22-30 percent. The effects that Guggul or guggulu has on the blood cholesterol levels are similar to prescription medications but, being a natural plant extract, it is a far greater and much safer product. Guggul or guggulu works on the liver by rising the metabolism (or break down) of the bad cholesterol known as LDL Cholesterol. After taking the product for 1 to 3 months, total cholesterol levels can drop triglyceride levels can drop and an augment in HDL (the good cholesterol) of approximately 16 percent can occur.



Burdock Root: Burdock Root is a diuretic and a mild laxative. It helps reduce cravings and hunger. In combination with Chickweed, it helps transporting fat out of the body. Like Chickweed, Burdock root is also taken in the form of tea to drink between meals..

Nettle: Nettle help clear toxins and helps feeding the cells at a deeper level. Nettle and Fennel tea is said be good for curbing appetite and help in weight loss.

Flax Seed :Flax seed is a laxative and it helps in curbing hunger. It is a good source of protein and fiber. Flax good when taken half an hour before meals. It will help you eat less. It strengthens your immune system too.

Guar Gum: Guar Gum has a laxative effect. It reduces hunger. It promotes normal gastrointestinal motility and also maintains the fecal bulk. It promotes a feeling of fullness and thus decreases appetite.

Kola Nut :Kola Nut is a stimulant. It aids in the metabolism of fat. It also decreases appetite

Lemon balm (Melissa) would also be important for the glands due to its function in the lymph system. Diuretics can be important when the weight appears as edema or water gain.

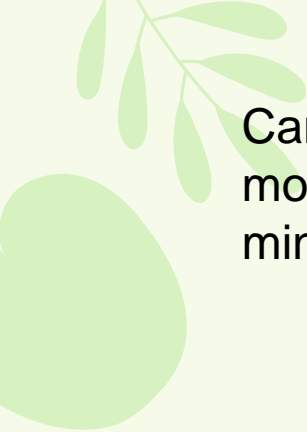
Rushi Medohar :Rushi Medohar is an aesthetic blend of clinically tested herbs, which help in fighting obesity the natural way while strengthening your internal system.In a lifestyle which is full of irregular eating and resting habits which result in hypertension, indigestion and obesity, Rushi Medohar is an effective, proven and trusted ayurvedic herbal formulation for fighting obesity.Obesity is the root cause of several health hazards and diseases. Rushi Medohar improves digestive power, purifies blood, and prevents accumulation of fat in the body.

BENEFITS:

Dissolves fat : It burns fat and excess calories using a balanced herbal formulation. It improves the functionality of thyroid and strengthens the digestive power. **Speeds up metabolism** : By improving blood circulation, it helps in improving and regulating body metabolism. **Removes toxins** : Cleanses toxins from blood, tissues, lungs and lymphatics.

Suppresses excessive appetite : While other herbal diet pills decrease normal appetite which might cause harmful effects, Rushi Medohar will only suppress excess appetite, thereby reducing weight and curbing excess sugar and food craving. It also burns fat and calories. **Preserved muscle tissues** : Rushi Medohar is a natural, healthy, stimulant-free thermogenic herbal formulation which strengthens the internal immune system without any side effects.

Reduces bad cholesterol : Rushi Medohar accelerates the breakdown of fat and helps in flushing them out in the form of triglycerides and serum cholesterol, thus helping in reducing weight and maintaining the shape of the body and keeping it fit



Cardio protective : Effective lowering of LDL levels reduces cardiovascular morbidity and total mortality in patients with known coronary artery diseases. It also minimizes the incidence of atherosclerosis and CHD


Haridra *Curcuma longa* Family: Zingiberaceae

Guduchi (*Tinospora cordifolia*)

Guduchi is an indigenous Indian herb which is not very well-known out of India. It is a commonly prescribed herb in Ayurveda for the condition of obesity. It helps in the proper canalization of fats in the body and thus reduces obesity.


Indian Gooseberry (*Emblica officinalis*)

Known as amalaki in Indian medicine, the Indian gooseberry is the richest source of vitamin C among all foodstuffs. Vitamin C can disintegrate fatty buildup in the body. Hence, it is a very effective herb for the treatment of obesity and related conditions. The amalaki is an integral component of Triphala, which is commonly prescribed in the treatment of obesity.



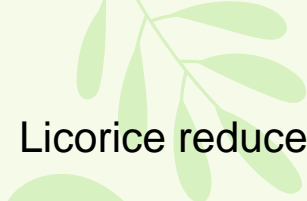
Nomame Herba: CT-II, extract of Nomame Herba, inhibited the porcine lipase activity dose-dependently in vitro (experiment 1). Body and liver weight were reduced and hepatic histological examination showed an amelioration of fatty liver in CT II treated animals (experiment 2). CT-II significantly inhibited body weight gain and plasma triglyceride elevation in a dose-dependent manner, without affecting food intake in lean rats fed the high-fat diet. Elevated plasma AST and ALT were also decreased (experiment 3). When obese rats fed the high-fat diet were treated with CT-II for up to 6 months, body weight was initially reduced and thereafter weight gain was significantly suppressed. Total body fat was also significantly reduced and significant reduction of plasma AST and ALT was observed 15.

Chickweed is the herb most often thought of for metabolizing and burning fat. It also serves as an appetite depressant. It is wonderful in salads. Tinctures are preferable to the dried leaf. Diane Stein names chickweed along with cleavers and poke root as herbs that "stimulate weight loss by helping to burn fat." Regulators such as kelp are extremely important because they are so good for the glands. Chickweed is known for its ability to break down fat molecules. It is usually taken in the form of a tea to curb cravings and assist digestion. Chickweed is mostly recommended in combination with Burdock Root.



Medhika (*Trigonella foenum-graecum*): In Ayurveda, the seed and leaves are known for their cholesterol-reducing, anti-inflammatory, anticancer, carminative, demulcent, emollient, expectorant, febrifuge, galactagogue (milk producing), hypoglycaemic, laxative, parasiticidal, restorative and uterine tonic effects. Medhika has potent anti-diabetic activity. Various studies have documented the anti-hyperglycaemic activity and the herb has been shown to reduce plasma glucose levels and increase muscle glycogen resynthesis, thereby normalising the energy metabolism in the physiological milieu⁵. Treatment with Medhika was also found to lower serum and tissue cholesterol levels in experimental studies 8-13.

Siberian Crabapple: The kinetics of the inhibitory effects of the leaf extract of Siberian Crabapple, named Shan jingzi in China, on chicken liver fatty acid synthase was shown. This extract had much stronger inhibitory ability on fatty acid synthase than that from green teas. The inhibitory ability of this extract is closely related to the extracting solvent, and the time of extraction was also an important influencing factor. The inhibitory types of this extract on different substrates of chicken liver fatty acid synthase, acetyl-CoA, malonyl-CoA and NADPH, were found to be noncompetitive, uncompetitive and mixed, respectively



Licorice reduces cravings for sweets and regulated blood sugar level.

Malabar tamarind helps suppresses appetite and decreases the production of fat.

Siberian ginseng (*Eleutherococcus senticosus*) helps reduces craving for sweets and control blood sugar level. So the next time you looking for a diet pills, opt for those wonder herbs. All these herbs has been proven scientifically to help lose weight. Nature's energy booster. The chemical compound of Siberian Ginseng is complex. Among the many active substances which have been isolated, the most important seem to be 6 glycosides called eleutherosides(1), but vitamins, amin-acids and other principles are also found. It is difficult to dissociate the different components in the overall action of the plant. It has a non-specific stimulant action on physical and intelectual capacities. It differs from that of the traditional stimulants (caffeine or amphetamine type) which produce a "lift" followed by a depression. Siberian Ginseng is the "anti-fatigue" and "anti-stress" drug par excellence. It was for this type of action that Brekhman(1) created the ideas of an 'adaptogen', whereas Fulder(2) preferred the name "Biological optimiser"^{3,4}.

Brewer's yeast can also help to reduce your cravings for food and drinks.

There are even herbs which can helps to boost metabolism.

Yohimbine, on the other hand, can also help to boosts your metabolism furthe

Bladder Wrack: Bladder Wrack helps strengthen thyroid and increases metabolism. It gives body easily available nutrients and feed the body on a cellular level. It also reduces cravings.

Slimaluma (Gencor Caralluma): Gencor Caralluma extract has been tested and certified non-toxic by a double-blind, randomized clinical trial on 60 volunteers in one of the largest hospitals in India. Caralluma's lack of toxicity has been confirmed by a leading Ayurvedic academician: It finds use as a famine food and appetite suppressant in drought-hit villages across the sub-continent. Caralluma's appetite suppressant property is well known to Indian tribe's people and hunters. Indian folklore also records its use as a potent appetite suppressant and weight-loss herb.

Chinese medicinal herbs : A: Rhizoma Alismatis (Zexie), B: Fructus Crataegi (Shanzha), C: Semen Coicis (Yiyiren), D: Rhizoma Atractylodis Macrocephalae (Baizhu), E: Rhizoma Atractylodis (Cangzhu), F: Sclerotium Poriae Cocos (Fuling), G: Semen Cassiae (Juemingzi), H: Folium Sennae (Fanxieye), I: Radix Angelica Sinensis (Danggui), J: Rhizoma Curumae (Ezhu), K: Flos Chrysanthemi (Juhua), L: Radix Notoginseng (Sanqi), M: Folium Nelumbinis (Heye), N: Herba Taraxaci (Pugongying), O: Pericarpium Citri Reticulatae (Chenpi), P: Fructus Schisandrae Chinensis (Wuweizi) and Q: Fructus Mori (Sangshen).

Dietary Fibers “Psyllium” – Health Impact American Dietetic Association & US FDA

- The US Food and Drug Administration in 2006 authorized a health claim that **psyllium husk** reduces the **risk of heart disease**

Giaccosa A, Rondanelli M. The Right Fiber for the Right Disease: An Update on the Psyllium Seed Husk and the Metabolic Syndrome. *J Clin Gastroenterol*. 2010; 44 Suppl 1: S85–S90.
Position of the American Dietetic Association: Health Implications of Dietary Fiber. *J Am Dietetic Assoc*. 2008;108:1716–1731.
Food and Drug Administration. Food labeling: health claims; final rule. Rockville, MD: US Department of Health and Human Services; 1997. Internet. <http://www.fda.gov/cfsan/fda/oc/101/970123.html>



عايز حاجه تسد النفس



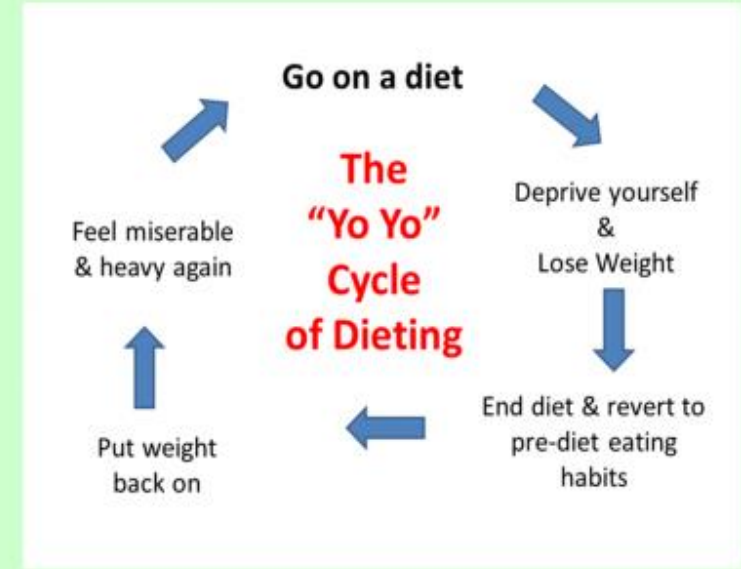
عايز دايت فيه عصير



العيل ما بيشبعش



حرقى ضعيف وبيجىلى امسك
ومقدرش اتحرك



Say No
To Yo Yo
Dieting

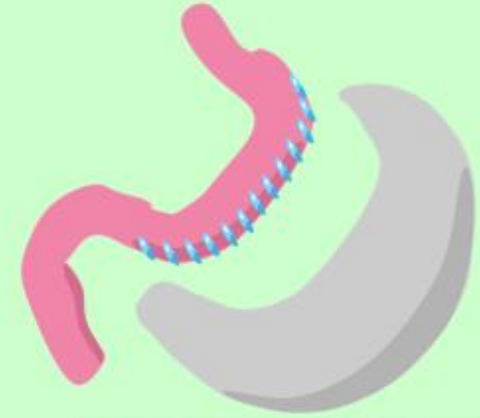


21/90





بلاش ادويه



لا اقدر على عمليه ولا على تكاليفها

**FEEL FULL FASTER
WITH LESS FOOD ,
MORE FIBERS,NO
SIDE EFFECTS**

!!!!!!????!!!!!!

Psyllium البَزْرُ قَطُونًا أو البَزْرُ قَطُونَاءُ أو

البَدْرُ قَطُونًا أو البَزْرُ غُوْثِيّ، اسمه العلمي، وهو نوع
من لِسَانِ الحَمَلِ أو اذن الجدى أو ذنب الفار أو
زمارة الراعى.

- Psyllium Husk
- A water-soluble fiber obtained from the husk of ***Plantago ovata*** plant's seeds MENA



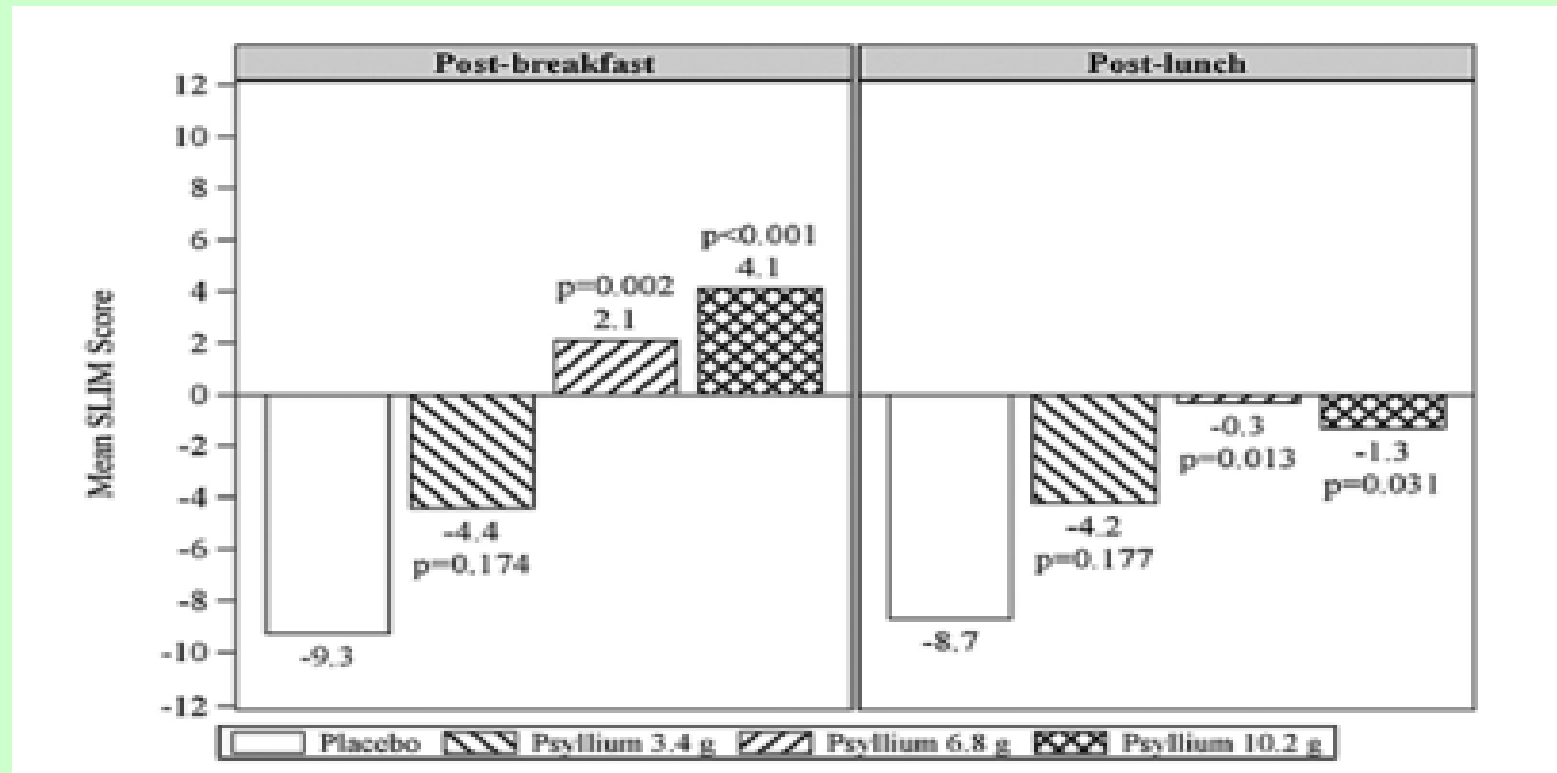
Health Benefits of Psyllium

1. Promotes **satiety sensation**
2. Promotes **digestive health**
3. Helps lower **cholesterol** to promote **heart health**
4. Helps maintain healthy **blood sugar** level and promotes **pancreatic health**

Psyllium - Curb Appetite & Satiety Sensation?

- The sources with **low glycemic indices** and those that are **fibers** are the most effective in promoting **satiety** and **weight loss** because they:
 - cause the **least rise in blood glucose** and **insulin**
 - take **longer to digest** and to be absorbed than carbohydrates with high glycemic indices

Psyllium Effect on Satiety



all 3 Psyllium doses resulted in statistically significant mean **reductions in hunger and desire to eat, and increased fullness between meals** compared to placebo.

The 6.8 g dose provided more consistent (p 0.013) satiety benefits versus placebo.

The Cholesterol-Lowering Role of Psyllium

The mechanism by which Psyllium as **a viscous & gel-forming fibers** lowers serum cholesterol is **by trapping and eliminating bile acids.**

A reduction in the available bile acid pool **stimulates hepatocytes to synthesize more bile acids.**

Cholesterol is a component of bile, and **hepatocytes express LDL receptors to harvest LDL cholesterol from blood, drawing down serum LDL (bad) cholesterol and total Cholesterol.**

The Blood Sugar-Lowering Role of Psyllium

Reduction in Fasting Blood Sugar might be achieved by several proposed mechanisms:

- 1) **rapid feeling of fullness** by delay intestinal transit time which leads to reduction in extra energy consumption.
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Laxative effect

Constipation

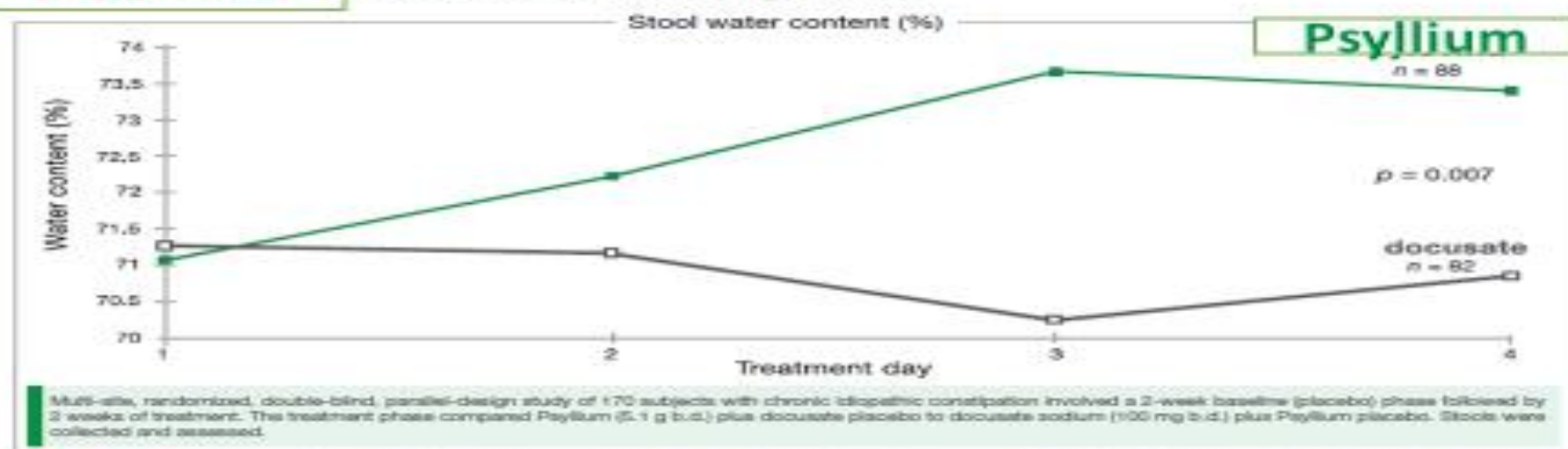
- **Psyllium** fiber has long been used as a laxative
 - It **absorbs water** in the large intestine and swells, increasing fecal **bulk**
 - It also increases **bowel movement** by stimulating **contraction** of the colon walls
- **Psyllium** is superior to **docusate sodium** for softening stools by increasing stool water content, and has greater overall laxative efficacy in subjects with **chronic constipation**

Psyllium

Constipation Relief

Psyllium

Relieves Constipation.



Psyllium is superior to docusate sodium for softening stools by increasing stool water content, and has greater overall laxative efficacy in subjects with chronic idiopathic constipation.⁴

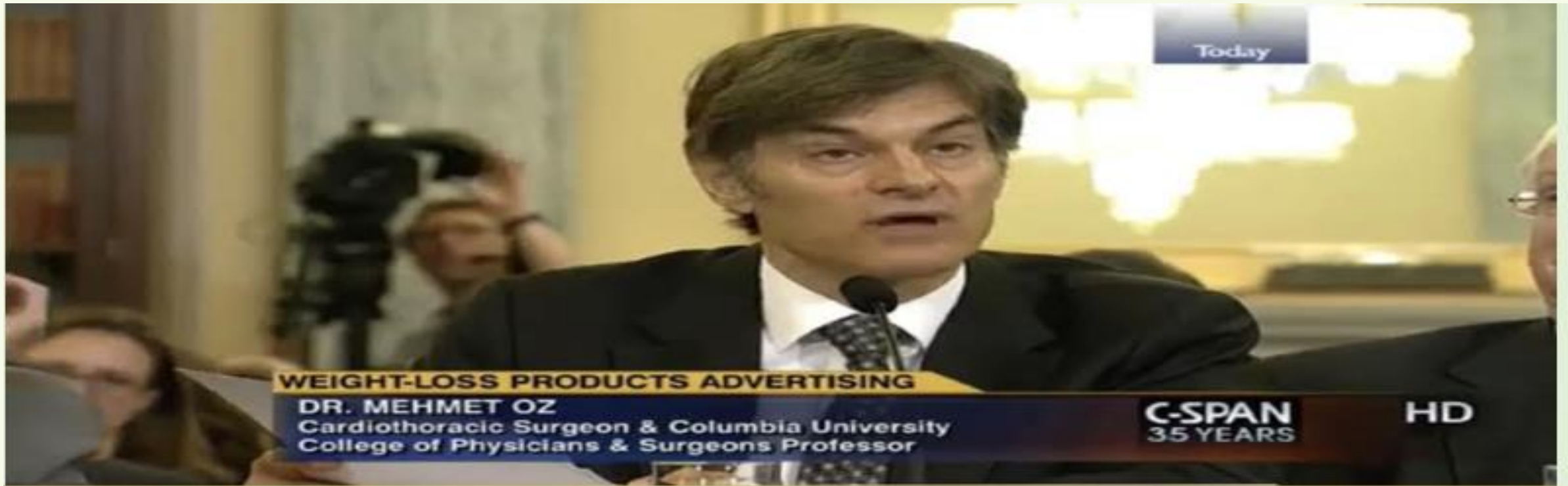
McRorie J. W. *et al.* Psyllium is superior to docusate sodium for treatment of chronic constipation. *Aliment Pharmacol Ther* 1998; 12: 491 – 497

Garcinia cambogia



- Normally, the body converts the carbohydrates from meals and snacks that cannot be used immediately for energy into glycogen. Glycogen is the storage form of carbohydrates, deposited in muscles and the liver.
- When the glycogen stores are reasonably full, additional carbohydrates are then converted into body fat. Hydroxycitric acid blocks up to 70% of the conversion of carbohydrates into fat, thus helping to prevent added fat storage on the body. Thus, carbohydrates are forced to be accommodated as more glycogen in the liver. This added glycogen load in the liver stimulates a longer lasting neuro-signal from the liver to the brain, of satisfaction, thus helping to suppress appetite longer¹.

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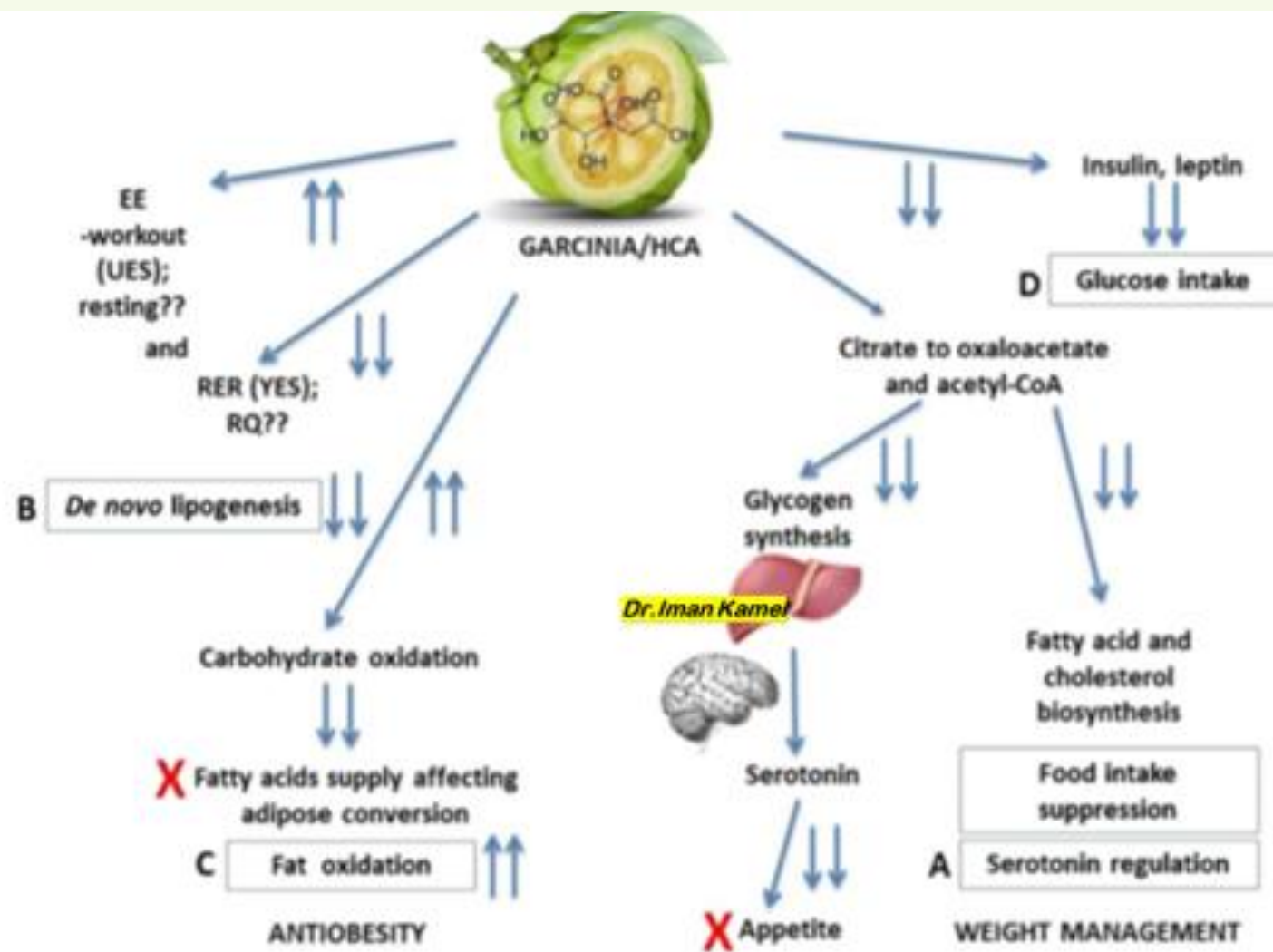


FIGURE 1: Possible multiple mechanisms that contribute to antiobesity effect of *Garcinia*/HCA. ↑ indicated increase or stimulation; ↓ indicated reduce or inhibition while ?? indicated that the effect is yet to be confirmed. (A) summary of Serotonin regulation and food intake suppression; (B) summary of reduction of *de novo* lipogenesis; (C) summary of stimulation on fat oxidation; (D) summary of reduce on glucose intake; (A) and (B) contribute to the weight management effect of *Garcinia*/HCA while (B) and (C) contribute to antiobesity of *Garcinia*/HCA.



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Thank You

