

Causes of Visceral Obesity

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Regulation of energy storage, intake and expenditure:

- Maintenance of body weight and energy homeostasis is related to food intake, appetite and energy expenditure ⁽¹⁾.
- Excess body fat storage can only result from disturbance in energy balance which is governed by diet, exercise and genes.
- Genetic differences modify metabolism appetite and also the will power that an individual exerts.
- Role of endocannabinoid system:(ECS):

In modulating energy homeostasis and metabolism ECS signaling occur in multiple peripheral sites including adipose tissue, the liver and the gastrointestinal track, as well as centrally within the brain (hypothalamous, forebrain and brain stem) Endocannabinoids modulate appetitive behavior through the activation of CB1 receptors ^(2,3)

Overweight and obesity in humans were found to be associated with a genetic malfunction of endocannabinoid inactivation system leading to atomically overactive ECS ⁽⁴⁾

Etiological classification of obesity:

- Hypothalamic & endocrine causes.
- Dietary / sedentary life style.
- Genetic
- Drug induced
- Idiopathic

Diet:

- Body fat distribution and hence abdominal obesity has a very significant genetic basis, however abdominal obesity will develop only in the presence of a positive energy balance.⁽⁵⁾
- Adopting the western life style leading to a toxic environment:
 - Sedentary life.
 - High caloric energy-dense refined food.
 - Increased portion size of food.
 - Increased fat content of food.^(6,7)

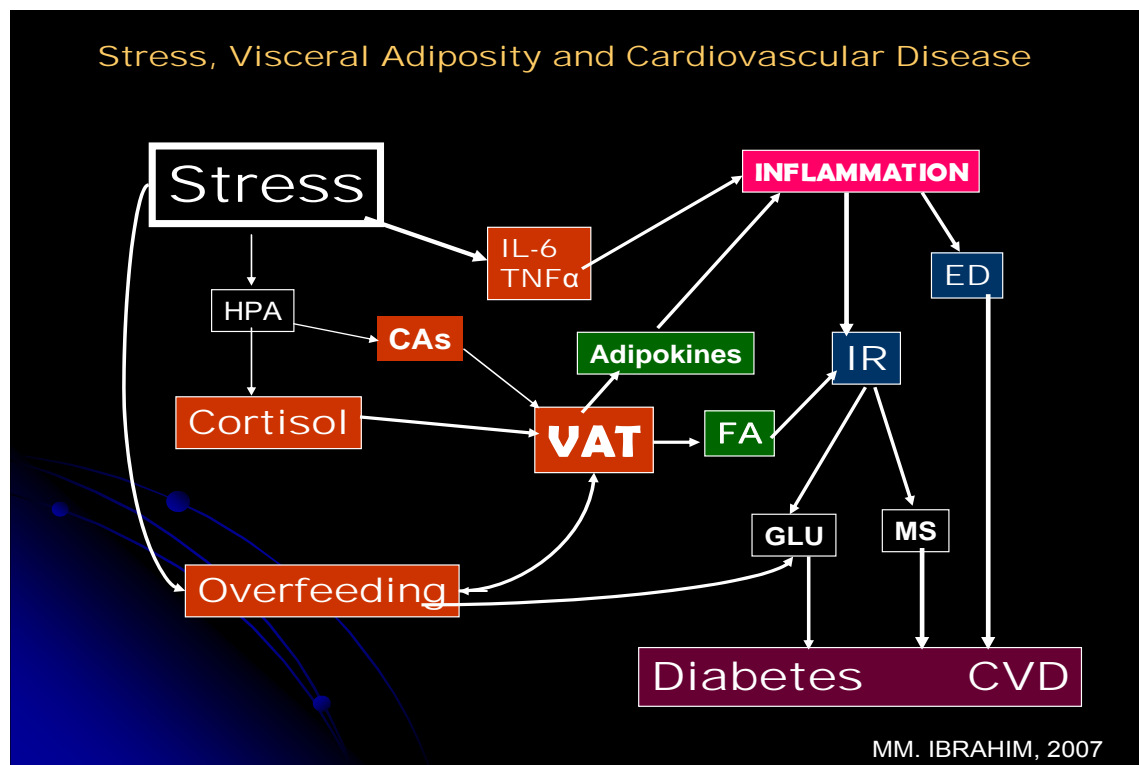
Genetic and ethnic factors:

- Thrifty gene hypothesis.
- Intrauterine deprivation.
- Central obesity as well as over all obesity is more common in African American, than Caucasians.

Aging:

People tend to gain weight as they age.

Stress⁽⁸⁾:



Hormones:

Hypothalamic and endocrine causes:

- Hypothyroidism.
- Cushing's.
- Hypothalamic injury.

- Weight gain associated with the menopause and following pregnancy. Not all women are susceptible.

Drugs associated with weight gain:

1. Psychiatric/Neurological
 - Antipsychotics
 - Antidepressants
 - Lithium.
 - Antiepileptics.
2. Diabetes treatment
 - Insulin
 - SU
 - TZDs ?
3. Others:
 - Oral contraceptives
 - Corticosteroids
 - Progestational agents
 - Antihistaminics
 - β -blockers
 - α -blockers

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