

MANAGEMENT OF DIABETES MELLITUS AND OBESITY WITH FOOD AND HERBS

Stephen Olaribigbe Majekodunmi
B. Pharm. (Ife), M.Sc., PhD (Ibadan)

FOOD AS MEDICINE

- **INTRODUCTION**

Food as medicine, determines how healthy you are. When you are not getting the best change your eating habit to get to your health altitude.

Pharm. Tech and Food Tech. are similar in concept and operation.

Differences: Former produces medicine designed to elicit some actions in the body, heavily guided and controlled – (prescription, dispensing, administration, efficacy, production, sales and marketing of drugs are strictly monitored.

INTRODUCTION CONTD.

Latter produces food to nourish the body and satisfy hunger. You do not take drug anyhow. So If food is medicine, do you guide or monitor what you eat?

Hardly do we know that that food we eat on daily basis is actually medicine. So watch what you eat because side-effects of bad eating attitude can occur much later in life.

Metabolism (FOOD) – chemical process body needs to transform food into fuel that keeps you alive.

Nutrition (food) consists of proteins, carbohydrates and fats. These substances are broken down by enzymes in your digestive system, and then carried to the cells to be used immediately or stored in the liver for later use.

INTRODUCTION CONTD.

- Metabolic disorder occurs when abnormal chemical reactions in your body disrupt this process. That is having too much or too little of some substances that you need to stay healthy.

WHAT IS DIABETES MELLITUS?

- Diabetes mellitus is a chronic disorder in which the blood sugar (glucose) levels are abnormally high (hyperglycemia) because either the body does not produce enough insulin or the insulin so produced cannot be used by the body.
- Affects over 30 million people worldwide.

WHAT IS INSULIN?

- Insulin is a hormone produced and released by the beta cells of the islet of Langerhans and controls the amount of sugar in the blood.
- Insulin allows sugar to be taken to the peripheral cells and be used immediately or stored for later use.

SUGAR AND DIABETES MELLITUS

- The body needs sugar to function in the cells and not in the blood. Anything that disturbs sugar from entering the cells will allow DM to occur.
- Variation in normal blood sugar is within a narrow range of 70 – 100 mg/dL.

TYPES OF DM

- Type 1-(Juvenile onset) Insulin dependent diabetes mellitus (IDDM)– Total beta cell destruction – prevalent in the white population
- Type 2- Non insulin dependent diabetes mellitus (NIDDM)-prevalent in the black population, Hispanics and native Americans

COMPLICATIONS OF DM

- Nephropathy (renal) – kidney damage
- Retinopathy (ocular) – Blindness (may be irreversible)
- Neuropathy – Loss of sensation
- Cardiovascular – due to obesity, hypertension and dyslipidemia (increased serum triglyceride and decreased HDL cholesterol).

ANTI-DIABETIC DRUGS

- Many types
- Direct insulin therapy for type I (usually injected because insulin is destroyed in the stomach.
- Oral anti-hyperglycemic drugs (Sulfonylureas, Biguanides, Meglitinides, Thiazolidinediones, Glucosidase inhibitors, etc., etc)
- All with side effects

USE OF HERBS FOR THE PREVENTION, MANAGEMENT AND TREATMENT OF DM

- Use of anti-diabetic herbs is recognized by the WHO
- (Even the Bible mentioned it: Ezekiel 47 v 12. Rev. 22 v 2.)

- Some of the plants are:

1-Momordica charantia L

- Yoruba - ejirin-weewe or igbole aja
- Igbo - akban ndene
- Hausa - daddagu

2- *Morinda lucida* (Brimstone tree)

- Yoruba – oruwo or erewo
- Igbo- eze-ogu or njisi igbo
- Hausa-

3-*Trigonella foenum gracum* (fenugreek)

Yoruba –

Igbo -

Hausa -

4- *Allium sativum* (Garlic)

Yoruba-

Igbo –

Hausa –

5- *Allium cepa* (Onion) (dried bulb)

Yoruba – Alubosa

Igbo –

Hausa –

6- *Musa sapientum* (Banana)

Yoruba – Ogede

Igbo –

Hausa -

7- *Mucuna pruriens* L

Yoruba – Werepe

Igbo – Agbara

Hausa – Karara

8- *Psidium guajava* (guava)

Yoruba – gurova

Igbo –

Hausa –

9- *Vernonia amigdalina* (Bitter leaf)

Yoruba – Ewuro

Igbo –

Hausa

MEAL PLANNING FOR DIABETIC PATIENTS

- Can help to control BGL
- Management of blood sugar is essential to avoid further complications such as blindness, amputations and kidney
- Whilst diabetes often requires medications for control, nutritional management in the form of a meal plan helps to maintain BGL as close to normal.

FOOD FOR DM PATIENTS OR PREVENTION OF DM

- Avoid carbohydrate completely as much as possible (strictly for diabetic patients)
- Take vegetables such as:
- bitter leaf, spinach, etc. etc, Onion, egg, fish, chicken, *lean meat*, avogadro, cheese, fruits (with caution), (bean)

- Little or no salt
- **Exercise is not negotiable**
- Lose weight
- If in doubt visit a dietitian.

YOU MUST EAT WELL AND
HEALTHILY TO AVOID
DIABETES MELLITUS AND
ITS COMPLICATIONS

EAT WELL,
LIVE WELL
AND
STAY HEALTHY

- **THANK YOU FOR LISTENING**