

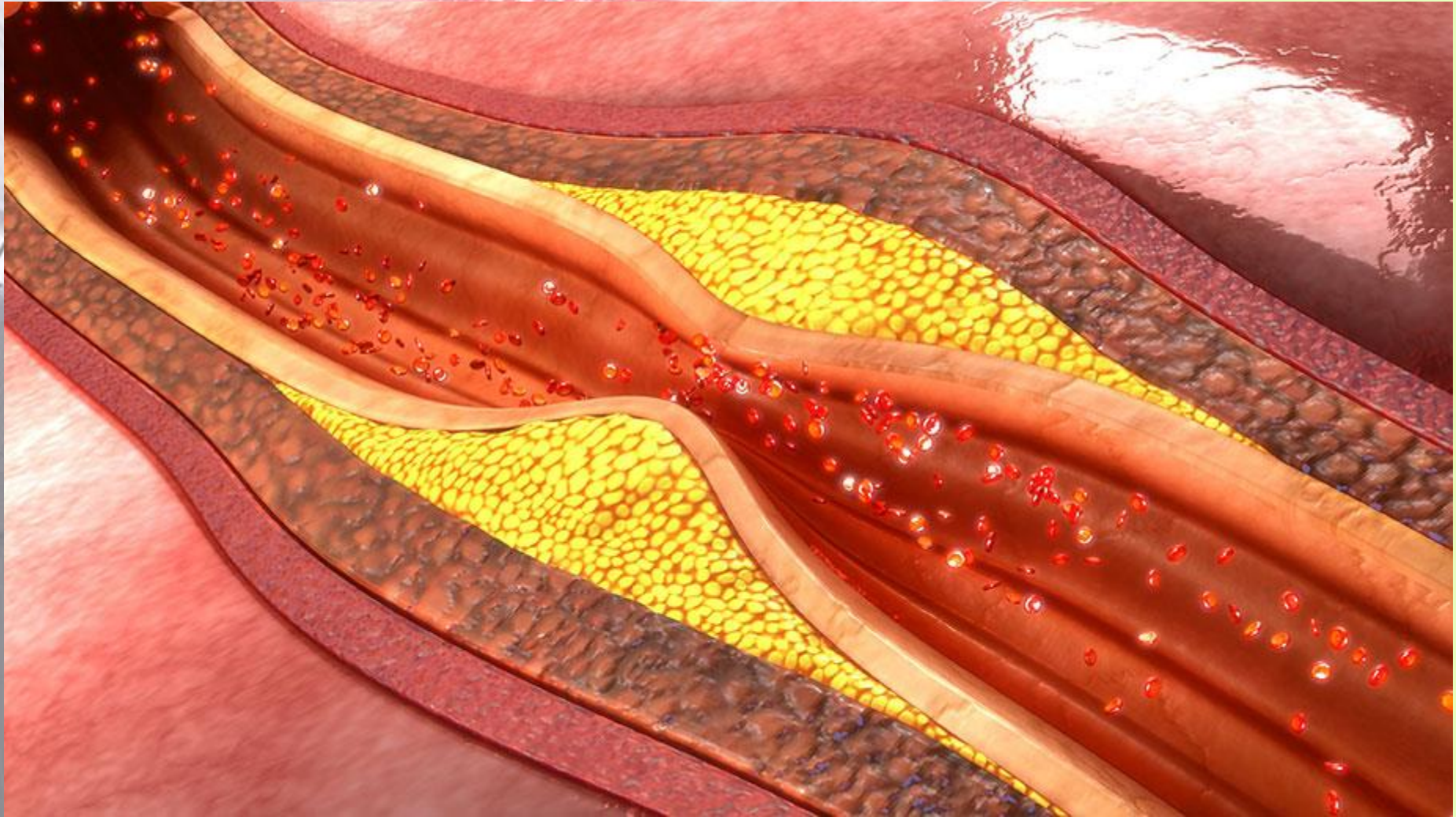
# **Diabetes Mellitus**

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# Introduction

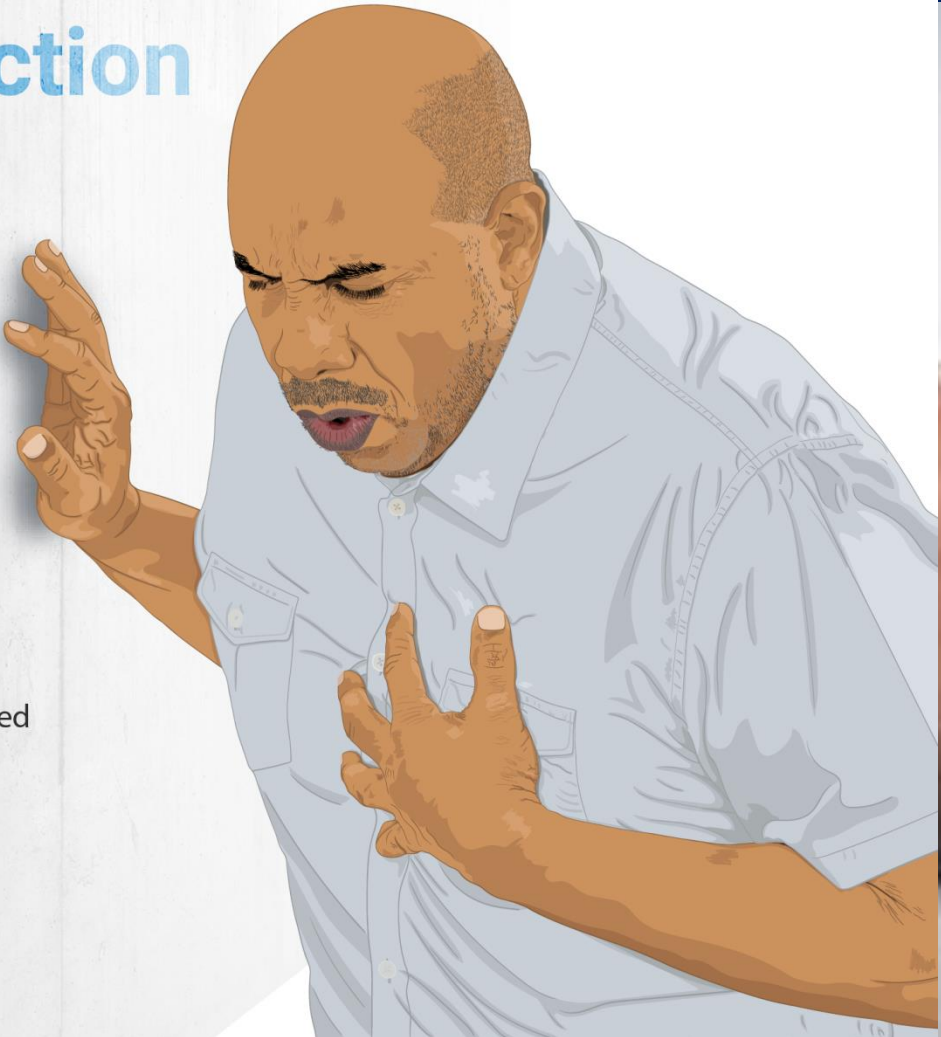
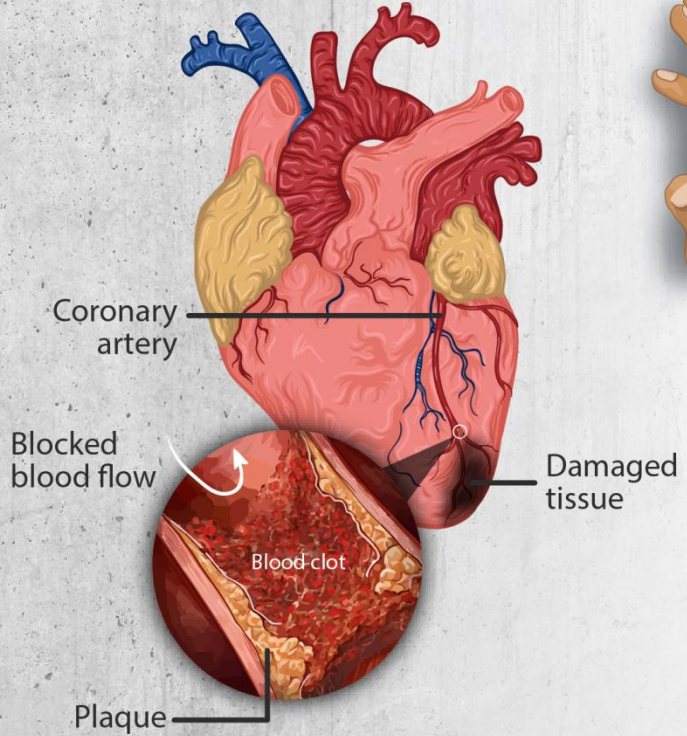


- Increase with age and obesity



# Incidence

## Myocardial Infarction (Heart Attack)



- Severity of these complications: dependent on the level of control of hyperglycemias
- most significant risk factors for type 2 diabetes: family history and obesity



# Etiology

- Genetic disorder
- Destruction of islet cells through inflammation, cancer or surgery
- Endocrine condition such as hyperthyroidism
- Steroids



- **Type 1:** lack of insulin
- **Type 2:** decreased of insulin receptors within target cells

Insulin: decrease of glucose

Increase of glucose: glucagon, GH, Thyroids hormone, cortisol, adrenal

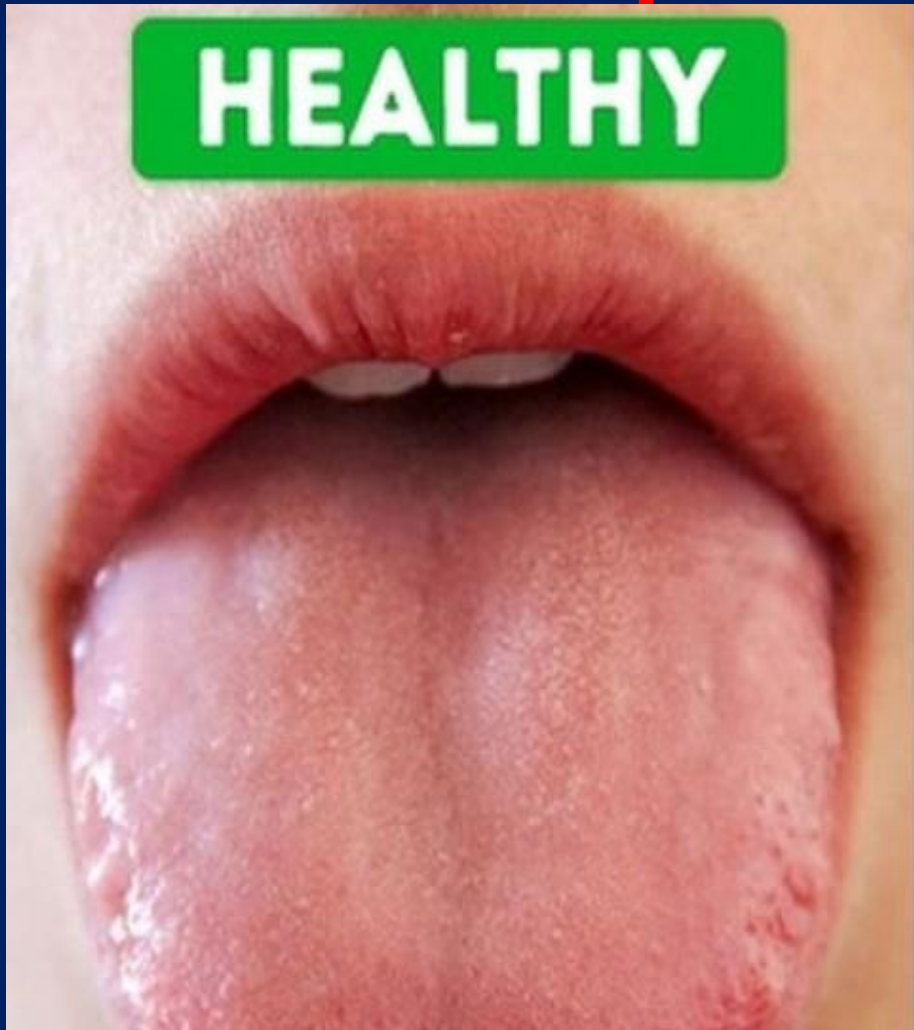




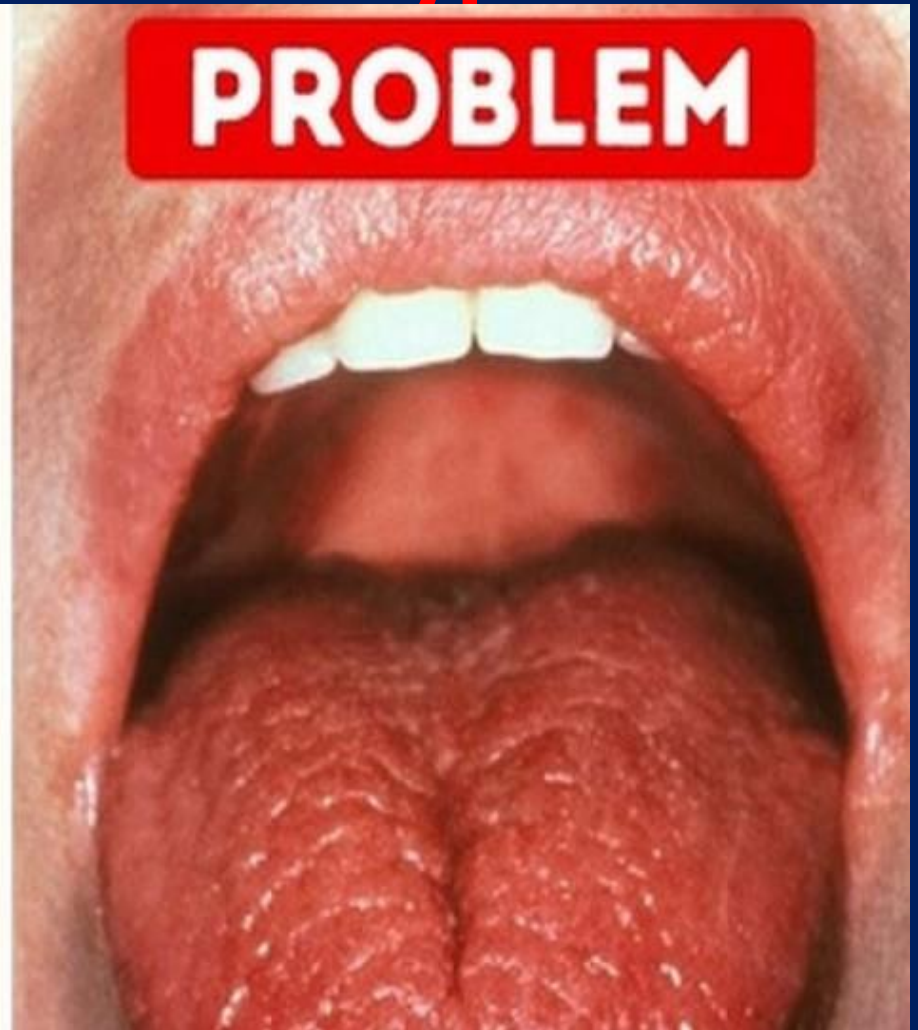
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# Clinical presentation type 1

**HEALTHY**



**PROBLEM**





# Clinical presentation type 2

- Onset of symptoms: insidious
- Usual symptoms: slight weight loss or gain, **gastrointestinal**, nausea, urination at night, pruritus, decreased vision, paresthesias, dry skin, loss of sensation, impotence
- Myocardial infarction

# Complication of diabetes

- Blindness
- Hypertension, chest pain(cardiovascular)
- Ulceration of feet
- ESRD
- Diabetic neuropathy



# Laboratory findings

- 1)FBS at or above 126mg/100ml
- 2)2 Hour postprandial(2hpp) after 75 g glucose:  
at or above 200mg/100 ml
- 3)Urinary glucose: limited value



# HbA1c test

- assessment of the long term
- Monitoring of the progress disease
- Well controlled: below 7%
- Do not fasting before test

# Oral hypoglycemic agents

- Biguanides(metformin): effect on liver, side effect(SE): lactic acidosis
- **Secretagogues(glipizide**, glyburide, glimepiride): effect on beta cell, SE: allergy, weight gain
- Alpha glucosidase inhibitors(acarbose, miglitol): effect on gut, SE: liver disease
- Glitazones(pioglitazone, rosiglitazone): effect on fat muscle, SE: congestive heart failure

# Sign and symptoms of insulin reaction

Mild stage: hunger, weakness, tachycardia, pallor, sweating

Moderate stage: poor orientation, uncooperativeness, lack of judgment

Severe stage: unconsciousness, tonic or clonic movements, hypotension, hypothermia, rapid thready pulse





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# Dental management

- If extensive surgery is needed:

consult concerning dietary needs during postoperative period

Antibiotic prophylaxis considered for unstable diabetes and taking high dose of insulin

# Not well controlled

- FBS < 70mg/dl or > 200mg/dl, Hb A1c  $\geq 8$
- any complications (post MI, renal disease, symptomatic angina, old age, cerebrovascular accident)
- Blood pressure  $\geq 180/110$  mmHg



FBS: 207-229 → 20% INFECTION

FBS:  $\geq 230$  → 80% INFECTION

# Not well controlled

- Provide appropriate emergency care
- Referral for medical evaluation

# Diabetes with acute oral infections

- consultation
- Insulin controlled: increased of insulin
- Treated of infection: warm intraoral rinse, incision and drainage, pulpotomy, antibiotics



# Antibiotics(Ab)

- Ab prophylactic: not required
- Excepts: not well controlled, brittle, poor oral health with high FBS, HbA1c
- For aggressive procedure
- Amoxicillin or Penicillin



- Avoid aspirin and NSAIDs in patients taking SU
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**Thanks**