

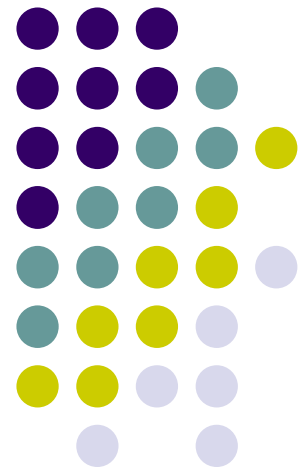
# Complications of Diabetes

**Tuesday 20th November 2007**

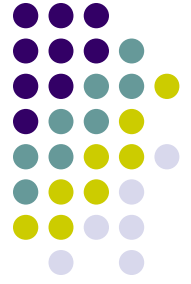
**The Cedars Inn**

**Jayne Fewings and Diana Piper**

**Diabetes Specialist Nurses**

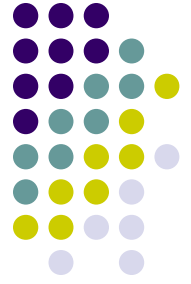


# Complications of Diabetes

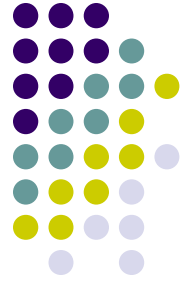


- Acute
- Chronic

# Acute Complications of Diabetes



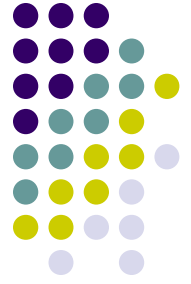
- Hypoglycaemia
- Hyperglycaemia



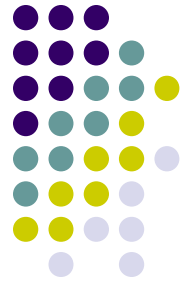
# Hypoglycaemia symptoms

- **Adrenergic and Autonomic**
- irritability
- hunger
- trembling
- anxiety
- palpitations
- pale/sweating
- **Neuroglycopenic**
- weakness
- dizziness
- difficulty concentrating
- headache
- drowsiness
- odd behaviour

# Hypoglycaemia signs



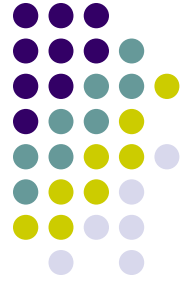
- Mild (3 – 4 mmol/l)  
adrenergic and autonomic symptoms
- Moderate (2 – 3 mmol/l)  
neuroglycopenic symptoms
- Severe (<2 mmol/l)



# Types of hypoglycaemia

- Mild hypoglycaemia - self-treatment and glucose levels easily restored.
- Moderate - reacts with warning symptoms (autonomic) and self-treatment possible
- Hypoglycaemic Unawareness - neuroglycopenic without autonomic - recognised by others
- Severe - requires assistance of another person

# Treatment of hypoglycaemia



Most episodes are mild and self-treated by:

Taking **10-20g** glucose in any form:

- 3 glucose tablets = 10gm (new glucotabs 4g each)
- tea with sugar-2 teaspoons = 10g
- lucozade - 50-55mls = 10gm
- coke - 90mls = 10gm
- milk - 200mls = 10gm

repeat after 10-15mins if ineffective

# Consider reasons for hypo



- Too little to eat
- delayed meal
- physical exercise
- too much insulin
- new injection site
- recent hypo - depleted liver stores
- not mixing insulin
- drinking alcohol
- Vomiting and diarrhoea



# Treatment by others

- Glucogel ( Hypostop)
- Glucagon injection
- Glucose - IV 50% glucose

Any treatment given should be followed up by giving a snack or meal (implications on life)

# Causes of Hyperglycaemia

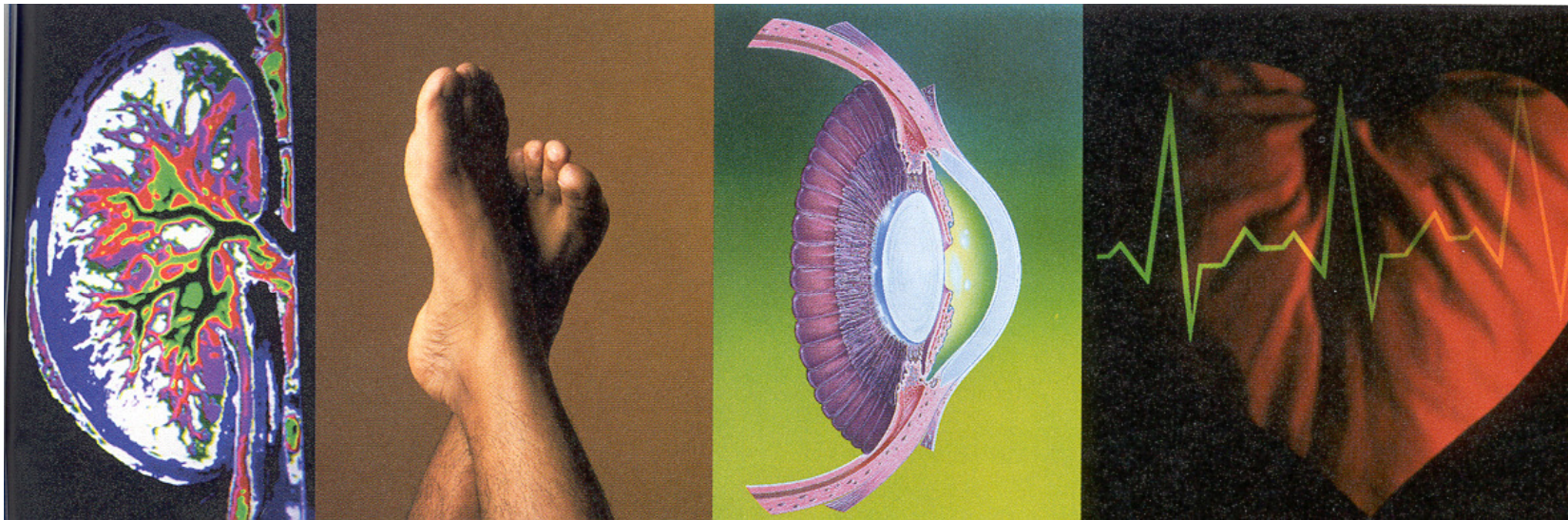


- Newly diagnosed diabetes
- Missed tablets or insulin
- Other drugs e.g. steroids
- Illness e.g. infections, trauma, myocardial infarction, stroke

# Chronic Complications of Diabetes



Due to microvascular and macrovascular disease:



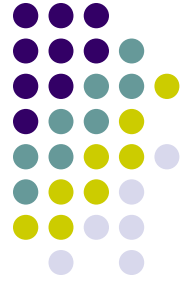
Nephropathy

Neuropathy and  
peripheral  
vascular  
disease

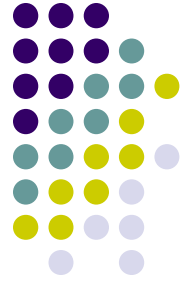
Retinopathy

Cardiovascular and  
Cerebrovascular  
disease

# Chronic complications



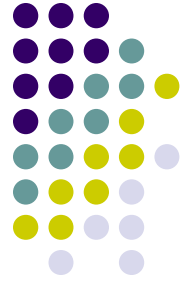
Risk of chronic complications is reduced if blood pressure, blood lipids and blood glucose levels are treated to target and if person does not smoke



# Treatment targets

- Fasting Blood glucose < 6 mmols
- HbA1c < 7%
- Blood Pressure < 140/80
- Total cholesterol <5.0 mmols (?lipids)

# Discussion



- How can we assist the person with diabetes achieve these targets?