



- Care pathway in diabetes:

- **Prevention:** by enhancing physical activity (thus maintaining weight) and improving the quality of food eaten by the patient (more fruits and vegetables, less sugar and junk food).
- **Early detection of the disease:** by routine screening at hospital-setting.
- **Disease management:**
 - ✓ There must be an annual screening for eye, cardiovascular disease and renal disease in patient with diabetes.
 - ✓ Monitoring: HbA_{1c}, lipids and renal profile (urea and creatinine).
 - ✓ Training and education for patients and professionals.
- **Management of complications:**
 - ✓ Link to vascular and cardiac surgery.
 - ✓ Renal Medicine.

- Self-Monitoring Blood Glucose (SMBG):

- **It is useful in:**
 - ✓ Diet.
 - ✓ Amount and type of medication.
 - ✓ Exercise prescription.
 - ✓ Preventing diabetic emergencies, through detecting and treating hypoglycemia and hyperglycemia.

Advantages	Disadvantages
Real-time feedback	Discomfort of finger-prick
Can detect glycemc excursions	Cost of supplies
May be used as educational and motivational tool	Requires training of patient and healthcare workers

- **Steps in SMBG:**
 1. Wash hands.
 2. Position site lower than heart.
 3. Gather supplies and turn on meter.
 4. Select site and cleanse.
 5. Position lancet firmly against site and pierce skin.
 6. Collect sample.
 7. Read results, record logbook.
- **Choice of glucometer depends on:**
 - ✓ Weight.
 - ✓ Sample size.
 - ✓ Test time.
 - ✓ Memory (number of readings).
- **Errors which can occur:**
 - ✓ Operational errors: improper sampling or dosing errors.
 - ✓ Environmental factors: altitude, temperature and humidity.
 - ✓ Exogenous interferences: non-glucose carbohydrates or drugs.
 - ✓ Endogenous changes: hematocrit, PO₂, triglycerides and uric acid.

- Evaluating hyper and hypoglycemia:

- **Determine timing of the event:**
 - ✓ Overnight: adjust basal insulin dose.
 - ✓ Before meals: adjust basal insulin dose.
 - ✓ After meals: adjust meal bolus insulin.
 - ✓ After Exercise: adjust basal and bolus insulin.
- **Insulin dosing must be highly individualized:**
 - ✓ Decrease insulin for hypoglycemia.



✓ Increase insulin for hyperglycemia.

- **Dawn Phenomenon:**

- Surge of secretion of catabolic hormones at 4:00 – 5:00 am.
- Fasting glucose will rise, since the body is making less insulin (in diabetic patients) and more glucagon (a catabolic hormone).
- **How can this phenomenon be prevented in diabetic patient?**
 - ✓ Eating dinner earlier in the evening.
 - ✓ Mild-moderate physical activity after dinner.

- **Physical activity:**

- Better response to insulin and better blood sugar control.
- Weight management.
- Increased confidence.
- Mental boost.

- **Counseling in type-I diabetes:**

- Talk to the patient in age-appropriate way.
- Always tell the truth (diabetes is a chronic condition and it will not go away! but it can be managed to reach a better quality of life).
- Encourage healthy lifestyle: physical activity and healthy diet.