Diabetes Therapy Cheat Sheet

by That__nurse via cheatography.com/154639/cs/33146/

Types of Insulin and Examples

Rapid-acting analogue	Lispro, Aspart, Glulisine
Short-acting (clear)	Regular (Humulin R)
Intermediate-acting (cloudy)	NPH
Extended Long-acting analogue (clear)	Lantus
Premixed	

Intermediate insulin is the only insulin that can be mixed with short or rapid insulin.
When preparing mixed insulin it is important to draw the short insulin first before the intermediate insulin to prevent contamination due to the cloudy nature.
Insulin is administered subcutaneously, insulin pen or IV with supervision.
Preferred site is the abdomen and should be rotated within that particular site.

Problems with Insulin Therapy

Hypoglycemia

Allergic reactions

Lipodystrophy: Hypertrophy or atrophy of subcutaneous tissue

Somogyi Effect: High blood glucose level in the morning which leads to an increased dose of insulin given and further decreases the blood glucose level due to too much insulin

Dawn Phenomenon: Hyperglycemia present when an individual wakes up in the morning. Seems to be severe with growth hormone present.

Common Oral Antihyperglycemic Agents

	Primary Function	Common examples
Insulin Secretagogues/ Sulphonylureas	Increase beta-cell insulin production from the pancreas	Gliclazide
Meglitinides	Increase insulin production from the pancreas	Repaglinide
Biguanides	Reduce glucose production by the liver. Increase the sensitivity at the tissue level and improves glucose transport.	Metformin (Only examples in this class)

Metformin does not lead to weight gain

Nutritional Therapy

Type 1 DM food intake is based on increasing caloric intake to ensure desirable body weight and restore body tissues.

Type 2 DM is more of weight loss.

Major points are to eating three meals per day at regular times and no more than 6 hours apart.

Limiting sugar, sweets, high fat food and eating more high fibre foods.

Drinking water if thirsty and more physical activity.

Glycemic Index and percentages of food classification should be considered

Exercise

Exercise increases insulin sensitivity and has a direct impact on decreasing blood glucose.

A total of 150 minutes of moderate intensity aerobic activity over 3 days

However, with patients on insulin there is an increased risk of hypoglycemia with exercise.

It can last for 48 hours. Exercise should be scheduled I hour after a meal or snack should be taking before exercise.

Acute Complications of DM

	Hyperglycemia	Hypoglycemia
Manifestations	Abdominal cramps, blurred vision, glycosuria, headache, increased appetite, polyuria, nausea, vomiting, progression to DKA or HHS, weakness and fatigue	Blood glucose less than 4.0, vision changes, cold and clammy skin, faintness, dizziness, headache, hunger, numbness of fingers, toes and mouth, rapid heart beat, seizures, coma, unsteady gait and slurred speech.

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Acute Complications of DM (cont)

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Causes	Corticosteroids, stress, illness, infection, poor absorption or lack of insulin, too much food, too little insulin.	Alcohol intake without food, diabetic medication taken at the wrong time, loss of weight, too little food, too much diabetic medication, too much exercise, use of beta adrenegic blockers.

Diabetic Ketoacidosis

Overview: This is an acute metabolic complication of DM. This is because of lack of insulin the body breaks down fat.