Disaccharides:- Two monosaccharides linked by glycosidic bound
maltose "malt sugar" consists of two α-glucose, it's released during the hydrolysis of the Strach.
Barely grains used for preparation of malt beverage during degradation of Starc
Glycosidic bond is type of covalent bond where sugar can condense with alcohol and is called: O-glycosidic bond.
N-glycosidic bond:- Between the anomeric carbon and an amine. E.g:- the bond that link D-ribose and D-deoxyribose * RNA, DNA respectively
Lactose "milk suger" consists of glucose and galactose " سكر حليب "
*Lactose intolerance: deficincy of lactase enzyme=GIT tract and disturbances: nausea, bloating, abdominal cramps and "intact" by bacteria fund in colon.
Sucrose: "Table sugar" consists of "glucose and fructose it's from cane or beet *sucrose is not a reducing sugar".
Cellobiose consists of Two D-glucose linked By β-glycosidic bond. it's released during Cellolose degradation . and cellobiose is an isomer of meHose.
Polysaccharides polymeric molecules consist of long chains of monosaccharide bound by:- glycosidic linkages . Polysaccharides composed of same type of monosaccharide call: "homePolysaccharides" and the homo consisting of more than one Type "heteroglycans"
they classified into { strong → starch and glycogen → starch is in Plants (*It is mixtur amylose and amylopectin)
structural → cellulose and chitin →
Digestion of starch:
① amylase enzyme ② Prancreatic amylase in small intestine ③ Further hydrolysis by α-glucos
④ absorbed by The intestine.
Glycogen: is storage polysaccharides in animal and human * glycogen is more highly branched with branch point occuring every 8-14 residues. We fund it in skeletal muscle and Liver cells.
Synthesis and Breakdown of Glycogen
① Some tissues Particularly the brain cells, supply of blood glucose to survival
② Some tissues Particularly the Liver and Skeletal muscles * rapidly mobilized e.g: glycogen.

*Synthesis and Breakdown of glycogen:-

③ glycogen in synthesized "glycogenesis" when blood glucose is high and releasing glucose into the blood stream when blood glucose is low

④ The balance between The need and availability is metabolic homeostasis.

-Storage Polysaccharides:-

① Starch and glycogen have reducing end

* Structural Polysaccharides:-

Cellulose: Primary structural of Plant cell walls

* A linear Polymer of D-glucose residues β-1-4 glycosidic bonds

* "hollow helix" due to its β-linkages

*cellulose rich food is used Patints who have Constipation

Chitin: structural component of the exoskeletons, like Spider, Fungi,

*along chain polymer N-acety-D-glucosamine residues joined by β-(1-4) bonds

Chitosan → Commercially produced → "The medical uses" → weight loss, obesity treatment Plans

= Cause it can reduce fat absorption"

*Heteropolysaccharides: Two or more different monosaccharide and associated with Lipid or Protein. we fund it in Connective tissues. Hyaluronic acid

hyaluronic acid is linear polymer of disaccharides. it's major component of joint Fluid → major component of skin

*sulfated heteroglycans, consist of sulfated disaccharide unit such as: Chondroitin, dermatan, Keratan. Chondroltin-4-sulfate and chondroitin-6-sulfate are Unbranched. The major component of cartilages is Chondroitin sulfate. The dermatan sulfate is linear Polymer of disaccharides. Keratan sulfate is found in bone and is highly hydrated molecules Heparin is the most charged Polymer. heparin is stored almost exclusively within the secretory granules of most cell and it inhibits blood clotting