

ملخص احياء الفاينل ٦-٨

هذي السنينُ ستنقضي وستفرحين
وستضحكين وتسعدين
ستودعين الحزن يا روح إصبري
فالله ياروحي يحبُ الصابرين ❤️

Dr.Afnan Alharbi 🌻

دعواتكم



scattering cells throughout
(ECM)

Connective Tissue

connect and separate different organs.

Fibrous

- densely packed parallel bundles of collagen fibers.

Lose

Strong rope of collagen under skin

tendons between muscle and bones.

ligament between joints (bone to bone)

Cartilage

- Rubbery material
- in the ends of bones
- strong, flexible
- absorbs shocks
- ear, nose, between vertebrae.

Adipose

- Fats droplets
- insulates your body, storing energy, body fuel.

Blood

- transport substances throughout body

Plasma

↓
Water + Salts + protein

RBC carry O₂

WBC defense

platelets

↓
aid in blood clotting

Bones

- Very hard due to minerals like (Ca, Mg, P)

دكتورونى بالذعاء
Af nam Alharb

building unit
is Neuron

Nervous Tissues

Cell body

- contain cytoplasm and organelles, nucleus.

Slender extensions

- dendrites

Axon

- Nervous cells sense stimuli and ~~transport~~ transmit signals.
- in every where in body specifically in the brain, spinal cord

وما جزاء الإحسان إلا الإحسان

@Alman-D-22

Epithelial Tissues

- Line organs and cavities
- Cover the body and glands

- Surface for exchange of fluid and air

↓ flat like floor tiles or fried eggs
Squamous
"عروشية"

↓ like dice, tall = wide.
Cuboidal

↓ like bricks
Columnar
عمودية

Simple → capillaries, air sacs

Stratified → esophagus, mouth, outer skin

Simple → Kidney tubes, sperms, ovaries

Stratified → Salivary glands

Simple → small intestines, stomach, nose

pseudo stratified → Lungs, Respiratory tract

• Squamous and cuboidal both have a function of secretion and absorption.

* وما جزاء الإحسان إلا العطاء
Dr. Nan

Muscle Tissue

long cells called muscle fibers

contractile fibers proteins

* the most abundant tissue in most Animals

Support, protect and Move

Skeletal muscle (voluntary)

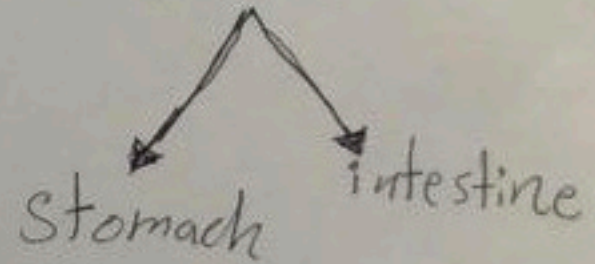
- Striated cells attached to bones.

Cardiac (involuntary)

- are branched interconnecting at specialized junctions that rapidly relay heartbeats signals.
- (in heart only)

Smooth muscle (involuntary)

- Lack striations
- in internal organs.
- digestive tract



• The skeletal muscle tissue stronger than the smooth muscle but smooth muscle has longer work than skeletal muscle.

دعواتكم
Abnan.

• Connective tissue → sparse number of cells surrounded by extracellular matrix.

• Epithelial tissue → Flat sheets of cells that cover the body and line organs and cavities

• Nervous tissue → Cells with branching extensions that form a communication network all over the body.

• Muscle tissue → Cells with contractile proteins that function mainly in movement.

cholesterol

(HDL)

high density

- Reduce blocked blood vessels.

(LDL)

Low density

- blocked blood vessels and caused blood pressure.

Animals

Herbivores

(plant eaters)

- Cattles, بقر
- Snails, حلزونيات
- Sea urchins, قنفذ البحر

Carnivores

(meat eaters)

- Lions,
- hawks, صقور
- Spiders

omnivores

(eat both)

- humans,
- Toaches, فواكه
- Yaccous, غزال
- Crows, طيور

Animals obtain and ingest their food :-

Substrate

- live in, on their food
- Caterpillar, اليرقة على ورقة الشجر
- inside oak leaf

suspension

- filtering particles from water.
- tube worm
- humpback whale.

fluid

- mosquito absorbing blood
- mosquito

Bulk

- Swallow large piece of food
- grey heron
- human.

ingestion

"1"

Digestion

"2"

Absorption

"3"

Elimination

"4"

*Organs of Gas exchange :-

- Earth worms → moist body. ~ Dr. Afnan Alharbi
- Fish → Gills
- insects → tracheal system
- Amphibians → Small lungs.
- Reptiles → simple lungs.
- Birds and mammals → complex lungs.

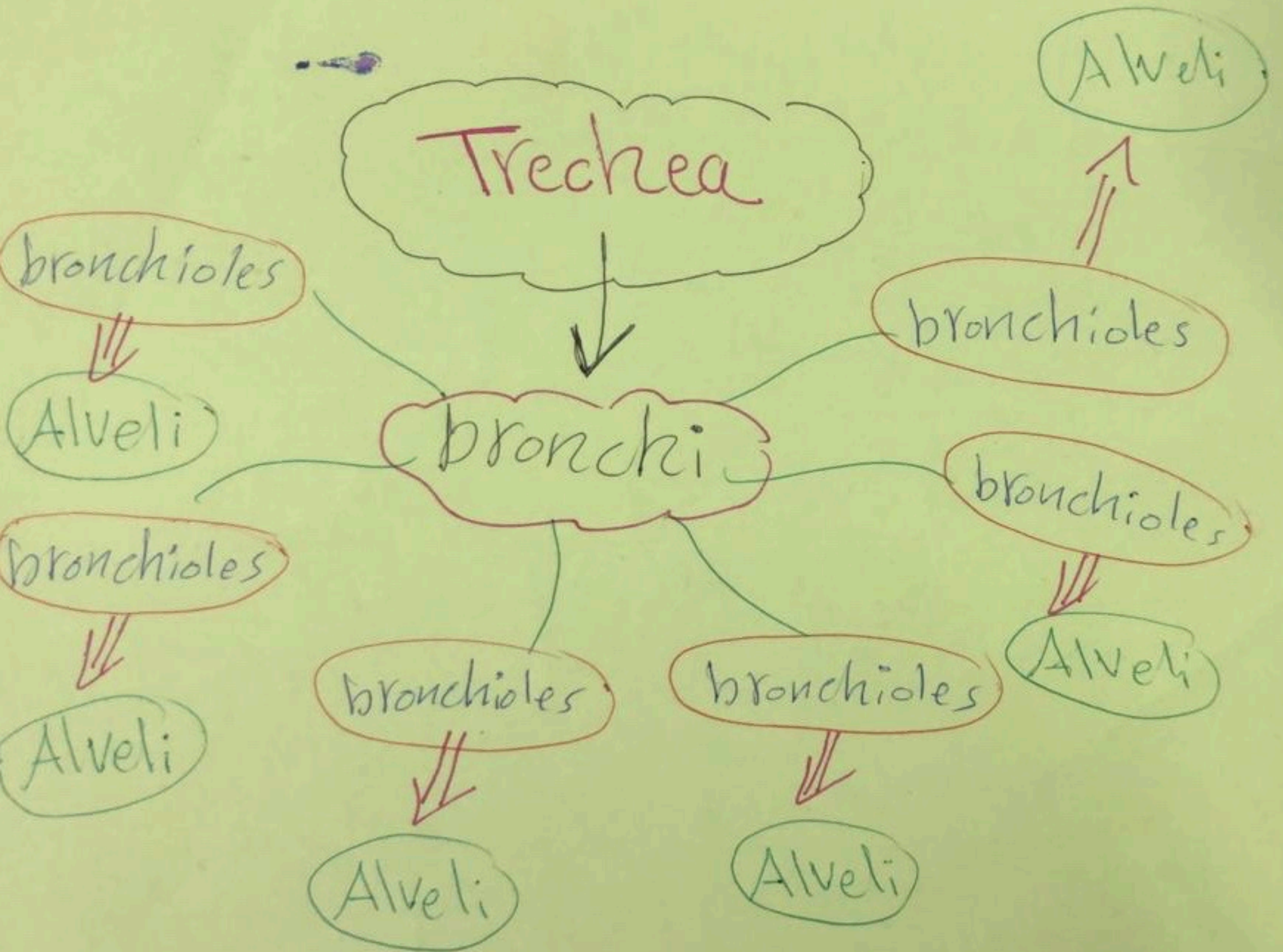
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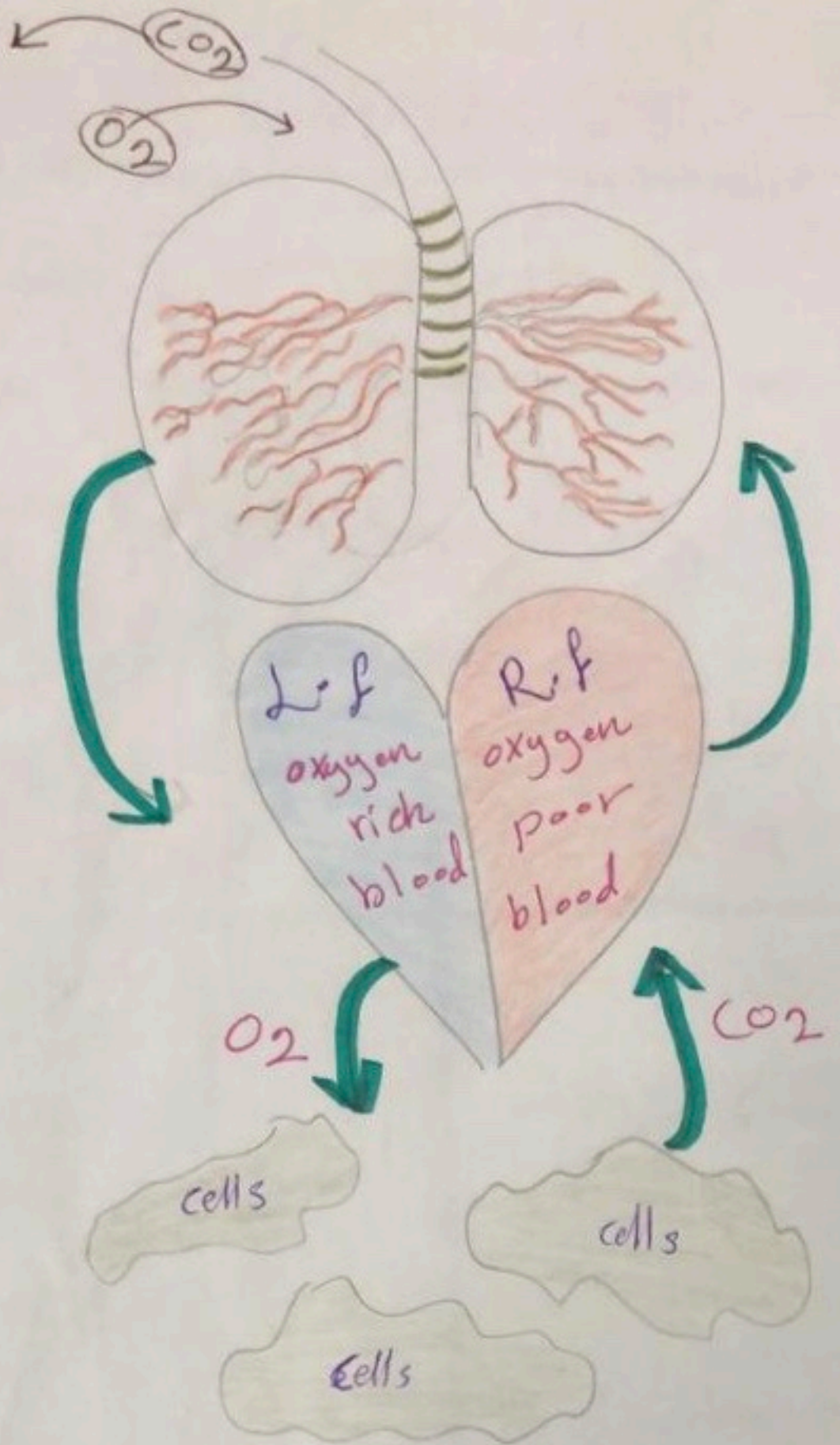
Inhalation

- Active process
- chest expand
- pressure decrease around lungs.
- diaphragm moves down.
- air enter O_2 .

Exhalation

- Passive process
- chest contract
- pressure increase around lungs.
- diaphragm moves UP.
- air outer CO_2 .





Dr. Afnan
Afnan-D-22