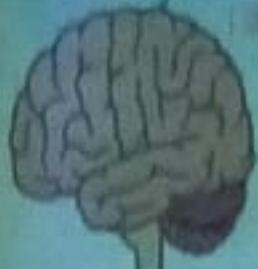


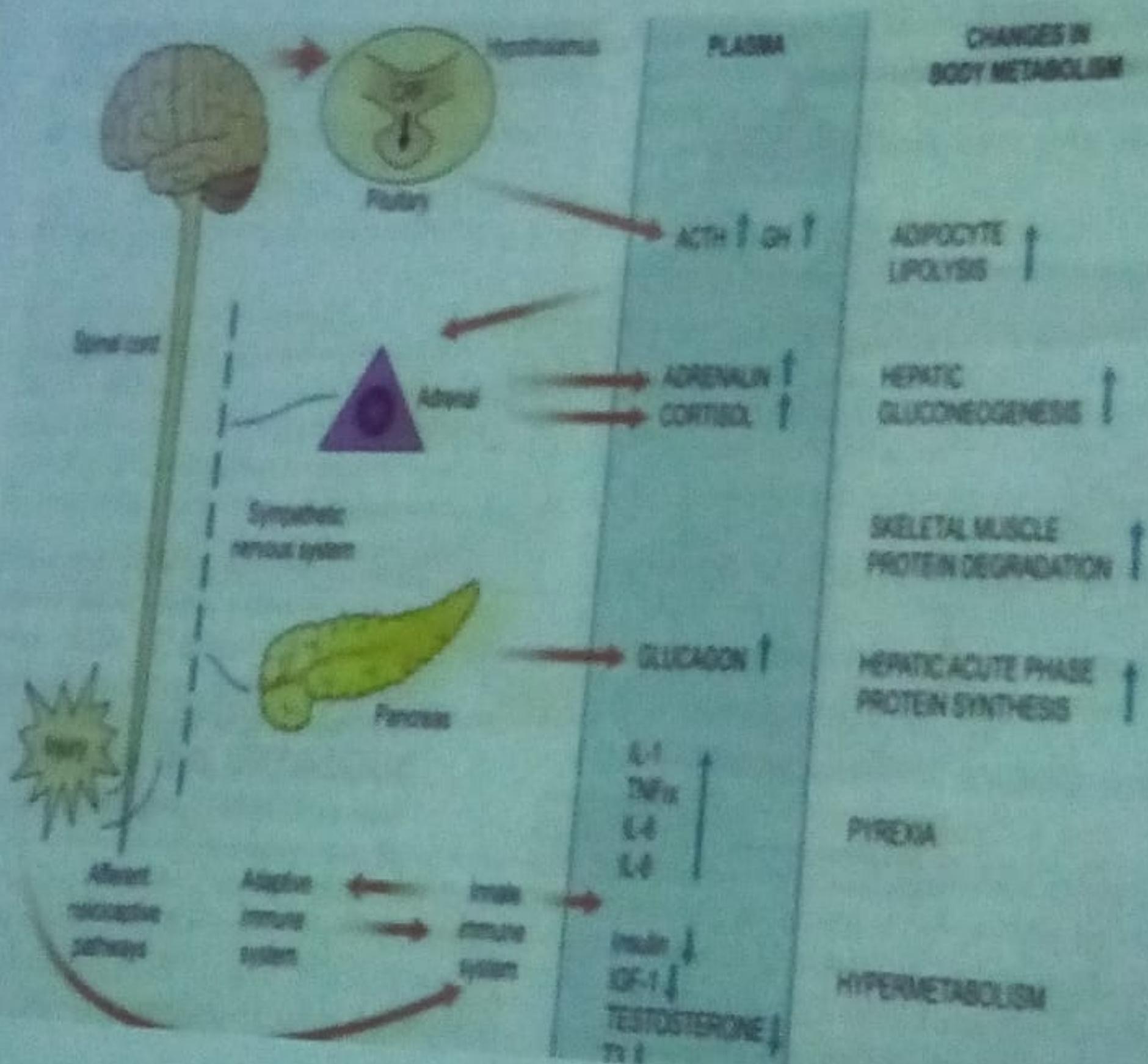
PHYSIOLOGICAL RESPONSE TO TRAUMA AND HOMEOSTASIS

HUMA SABIR KHAN
SENIOR REGISTRAR
SURGICAL UNIT II

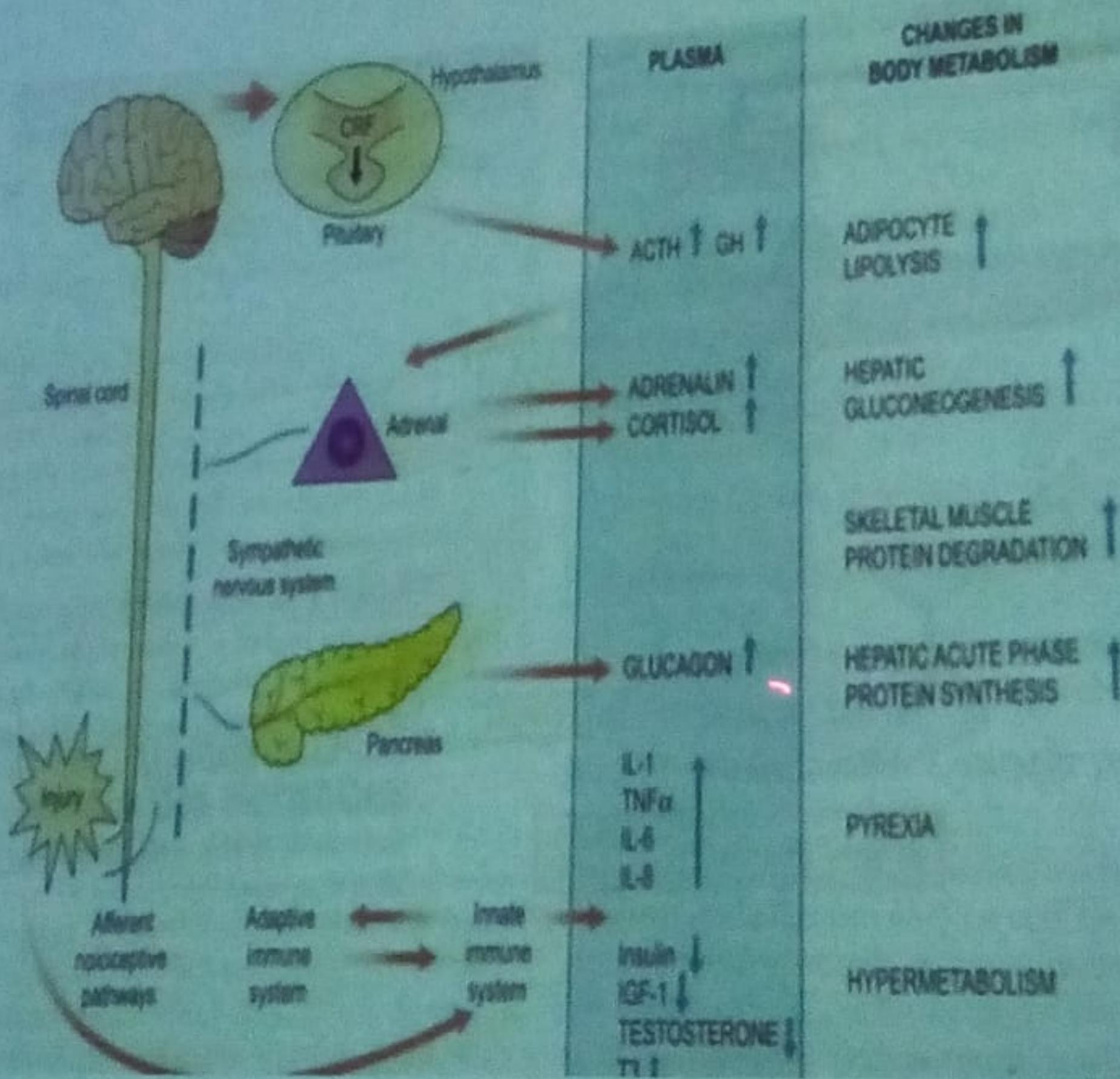
**The stress
response is a
neuroendocrine
process.**



Hormonal



Hormonal

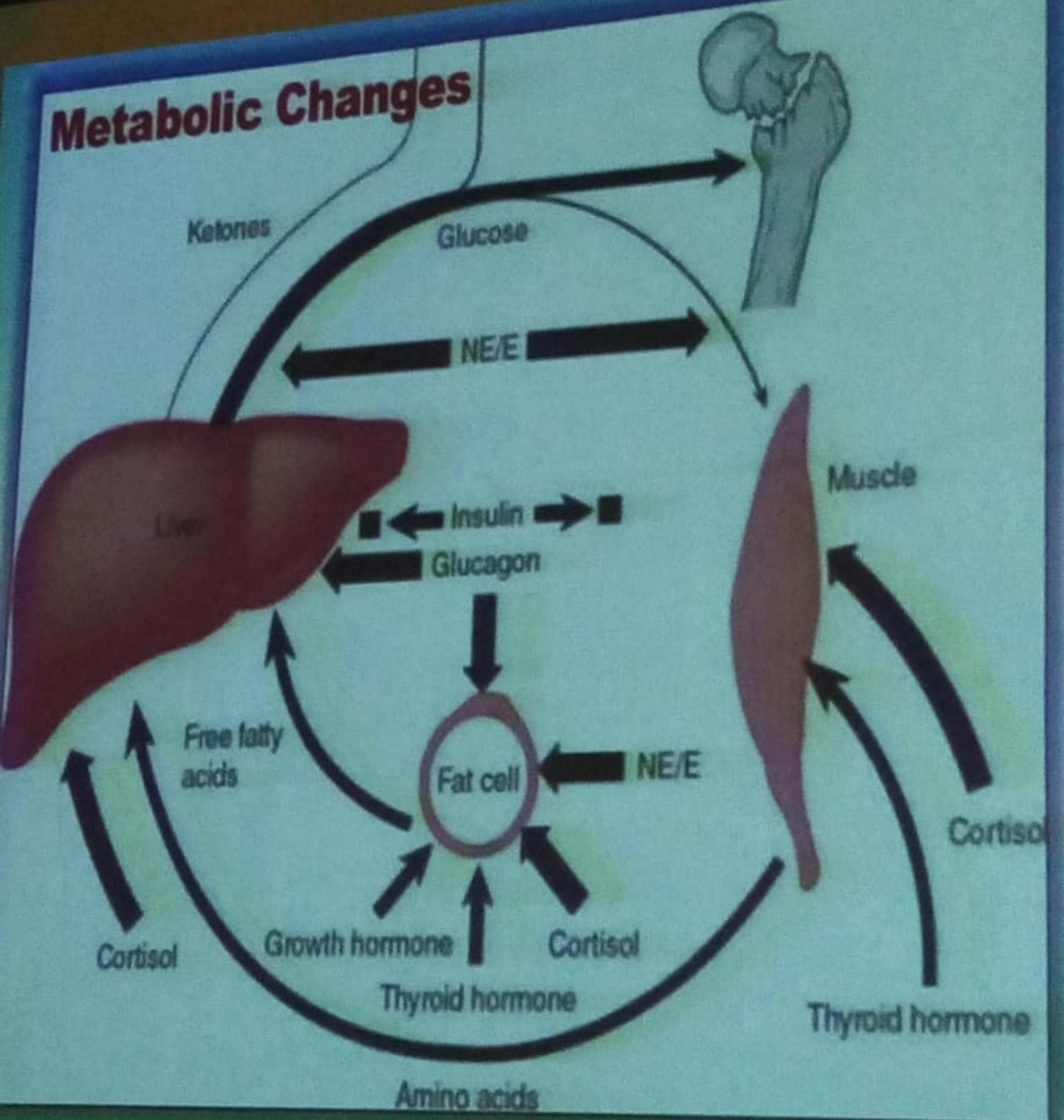


Physiological response to injury

The natural response to injury includes

- 1. Immobility**
- 2. Anorexia**
- 3. Catabolism**

Metabolic Changes



**Pathophysiology of Metabolic
Effects**

Proteolysis

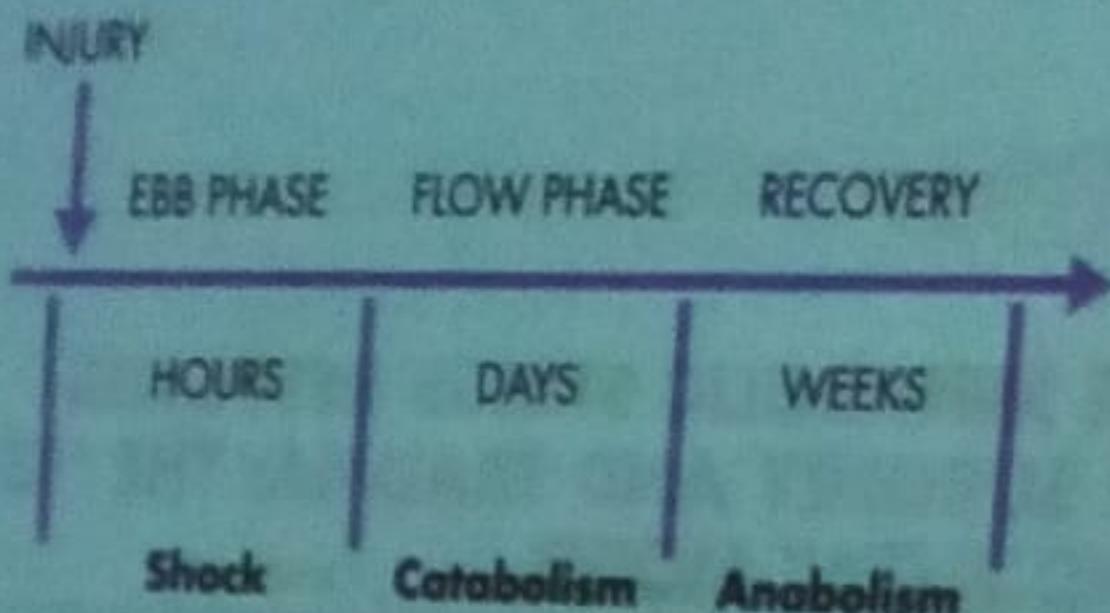
Lipolysis

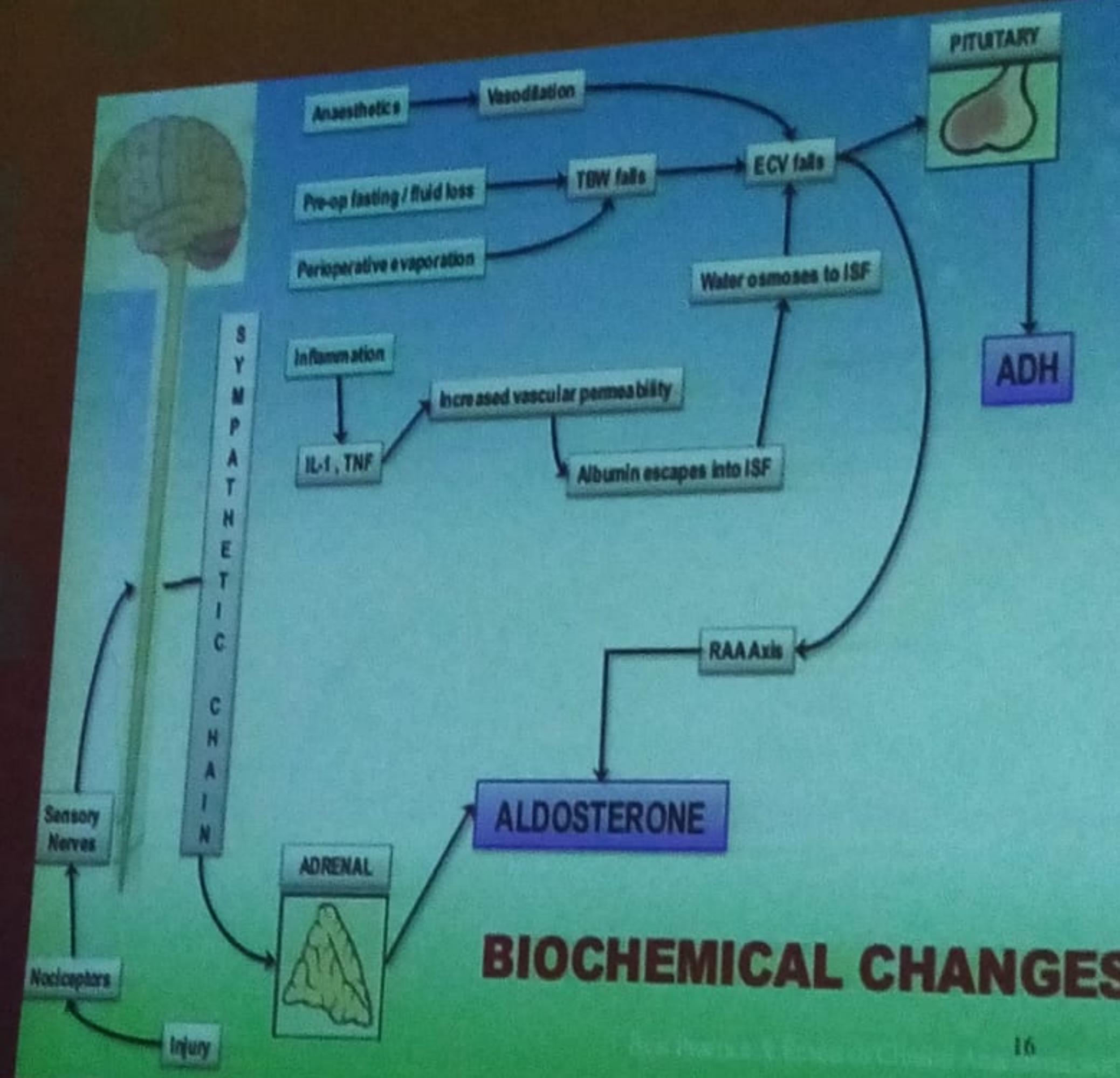
Glycogenolysis

**Decreased peripheral
glucose uptake
(insulin resistance)**

Hypoglycemia

- In 1930, Sir David Cuthbertson derived the metabolic response to injury in humans into "ebb" and "flow" phases

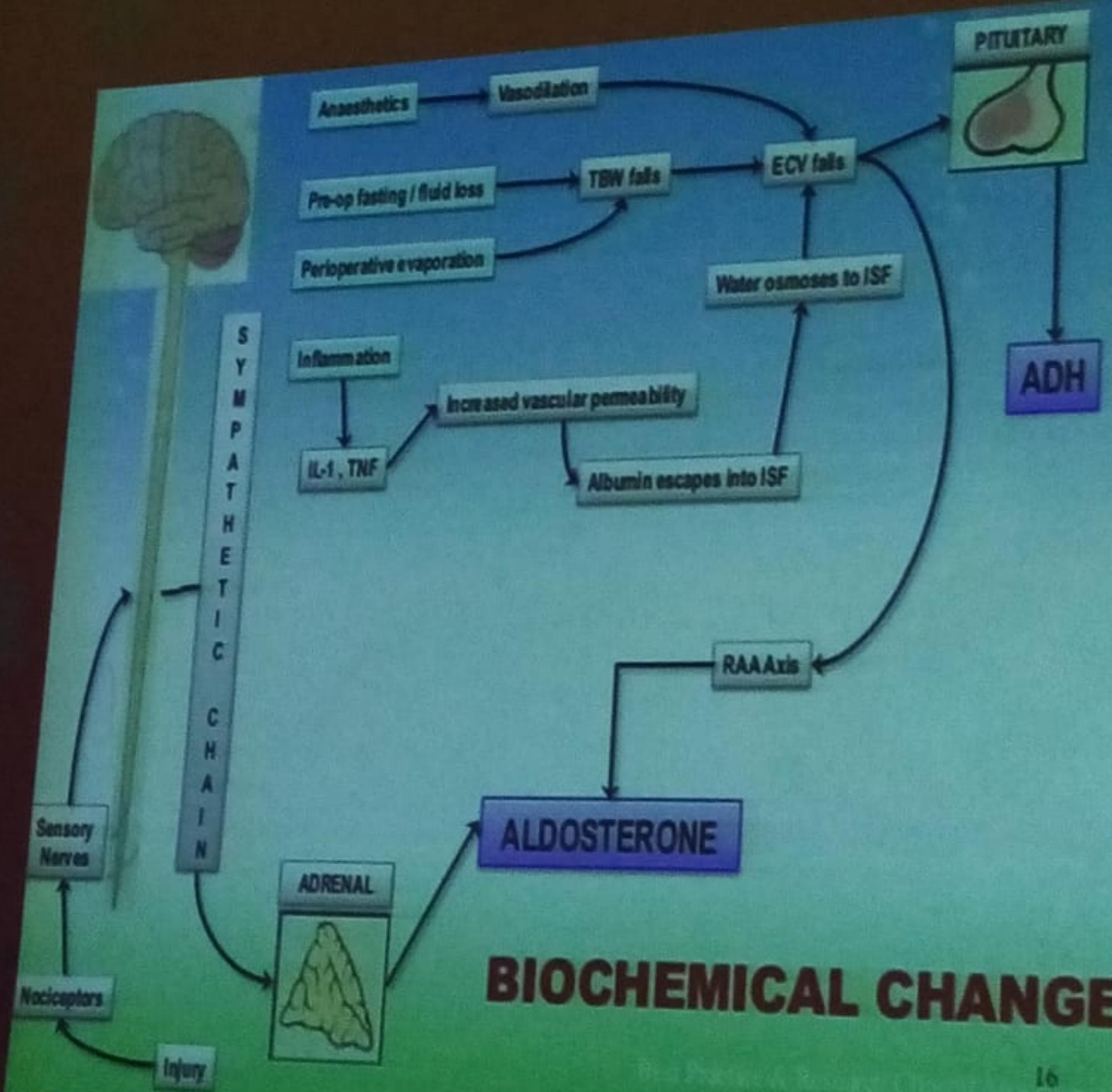


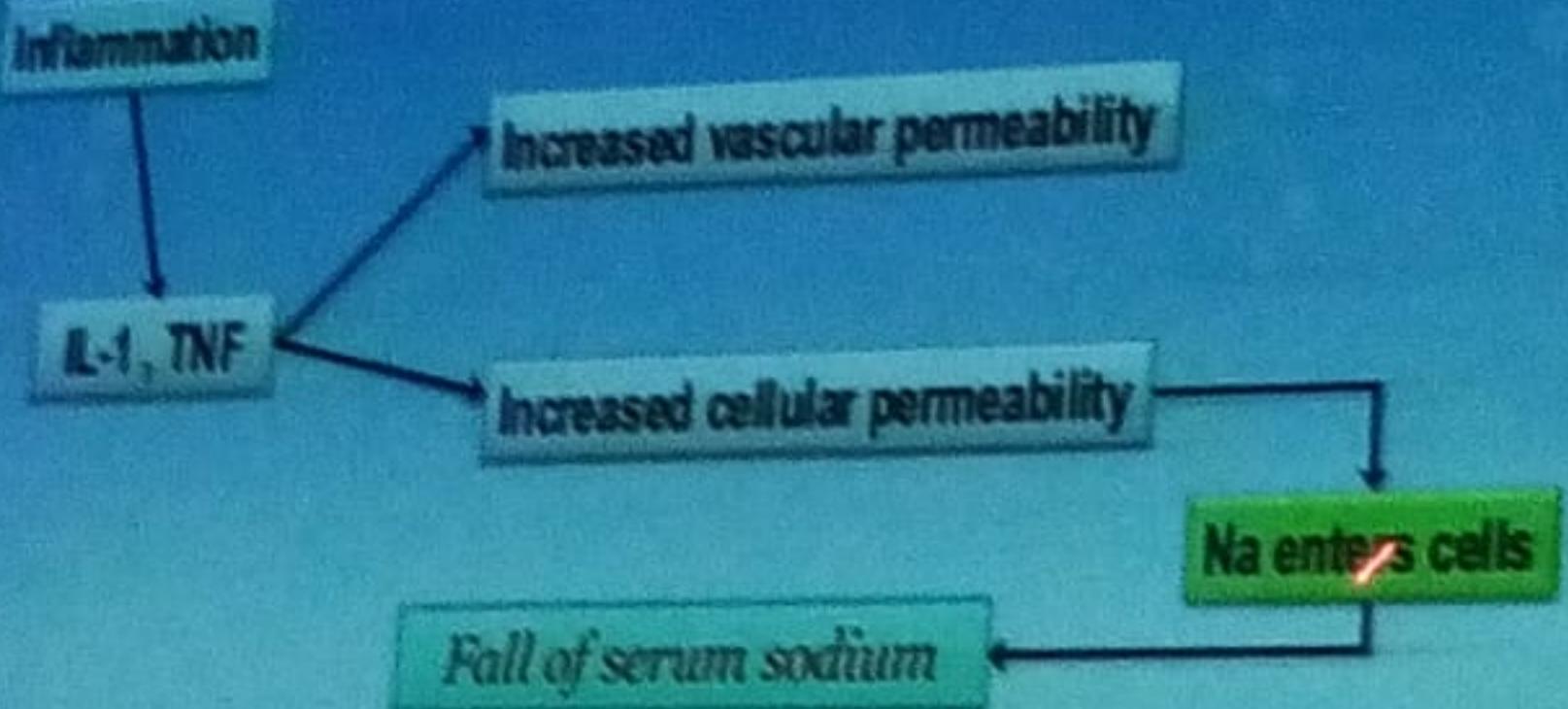


Therapeutic implications

The catabolic response to injury is always a major concern in postoperative care. Three types of interventions were tried to reduce this. These are:

- Nutritional
- Hormonal
- Biologic





In reality, total body sodium is conserved or even overloaded, but serum sodium level appears low.

So, this is called *pseudohyponatraemia*.

Proteins maintain the intracellular negative charge.



Loss of proteins from the cell creates an electrical imbalance . . .

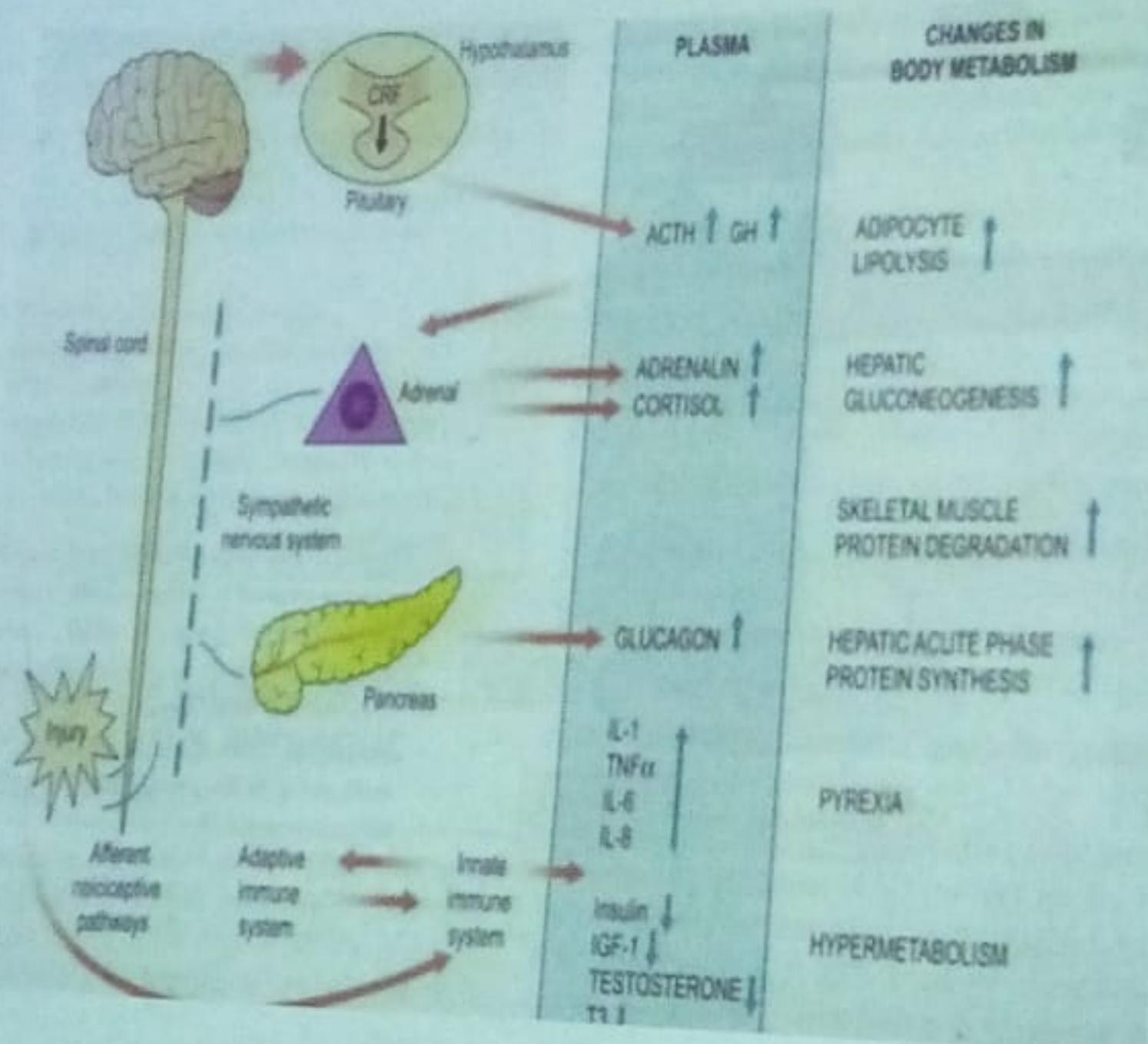


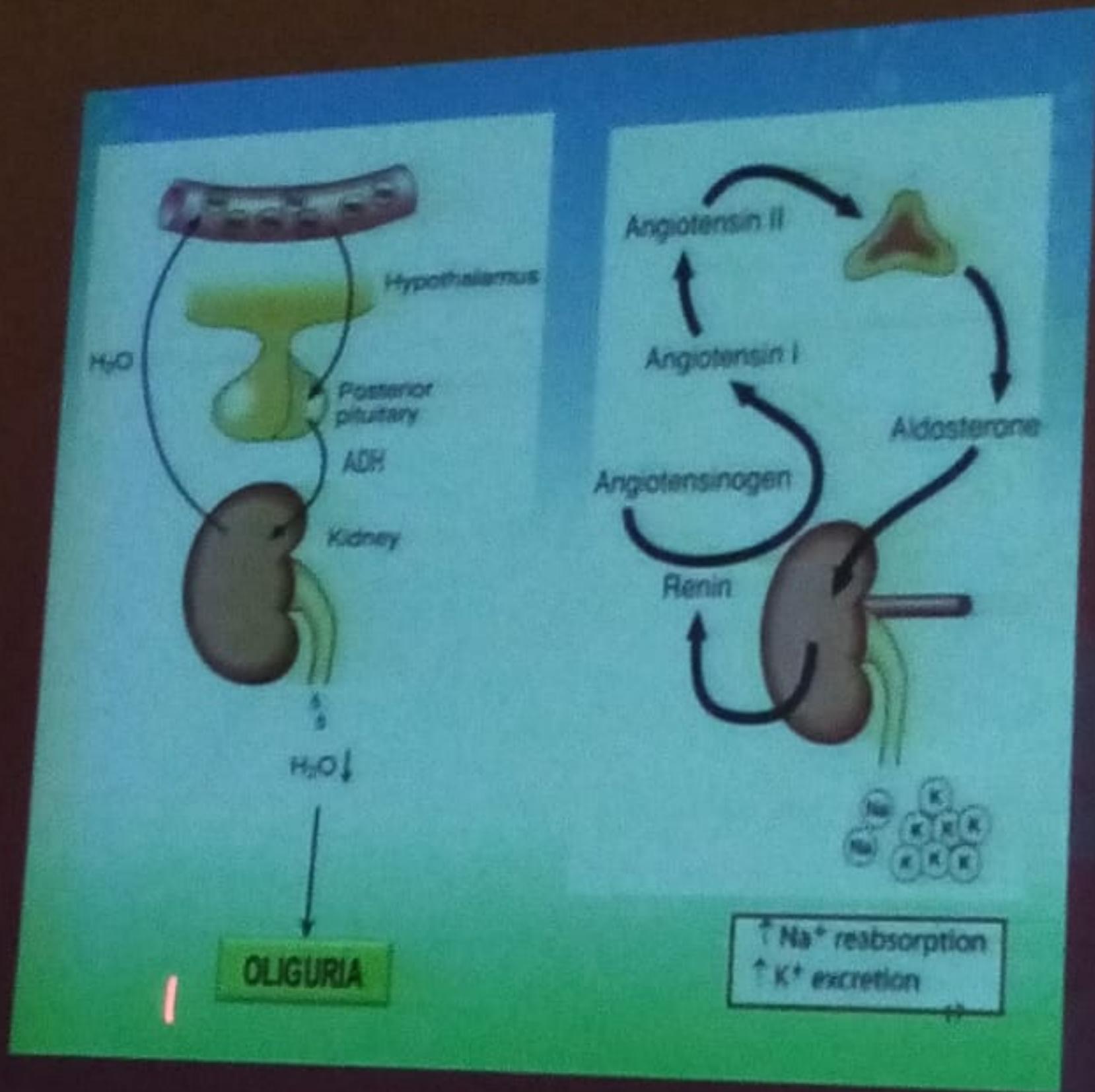
. . . which is balanced by potassium efflux. This *may* result in hyperkalaemia.



This potassium is lost in exchange of sodium during the sodium retention phase.

Hormonal





**Hence, no extra sodium is
needed in the first 24 - 48
hours.**

19.00

19.00

19.00

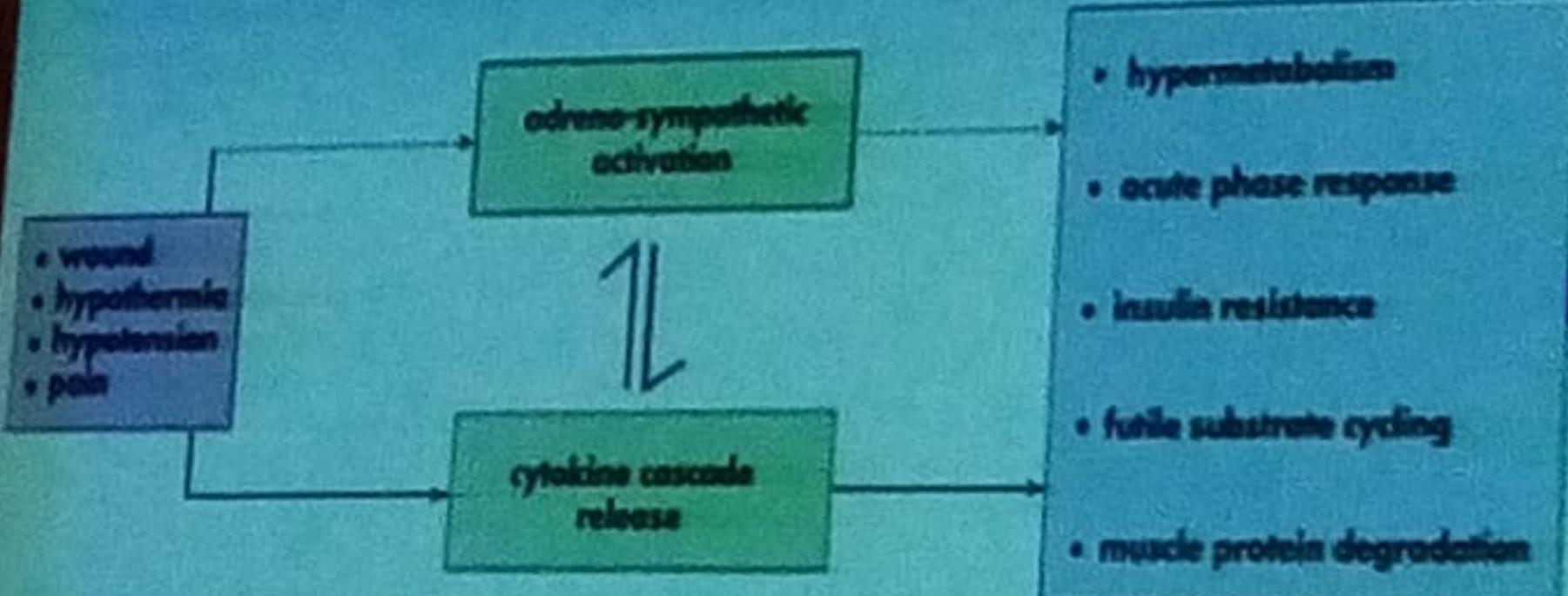
for reading, which today continues to
be associated with top fashion, technological, and
cultural influences based upon new types.

See, this is English pronunciation practice.

- The medical members have to be Pakistani national, residing in the country and can participate in the council either as:
- Elected members
- Nominated members
- Term of office For elected members-five years
- For nominated members-two years

Factors of Stress

STARVATION



IMMOBILISATION

C
A
T
A
B
O
L
I
S
M

**During the anabolic phase,
glycogen and protein are
resynthesized.**

**This causes rapid reuptake of
 K^+ .**

**This may lead to *hypokalaemia*
unless carefully supplemented.**

Avoidable factors that compound response to injury

1. Continuing hemorrhage
2. Hypothermia
3. Tissue edema
4. Tissue under perfusion
5. Starvation
6. Immobility

