

## HOMEOSTASIS

	HOMEOSTASIS is the maintenance of nearly (constant)
	conditions listable envisoment in the body of the
	organism, so that enzymes control metabolism.
1	Homeostatis includes:
→	pH & concentration of water
·	Body temperature
·	Blood glucose
	NEGETIVE FEEDBACK:
La Berrally	Negetive beedback acts to ensure that:
	temperature
	blood glucose concentration
	water content in blood
	blood ph
	0, 9 CO2 concentrations
	are as close to pre-set levels as possible
$\Rightarrow$	CONTROLLING BLOOD GLUCOSE:
	Cells need glucose for energy & therefore need
	a constant supply from the blood.
111	And the first of the state of t
→ ·	2 Hormones - insulin 4 glucagon, control blood
	quicose levels. Both these hormones are
	secreted by pancreas & are transported to liver
	by bloodstream
	The state of the s
→ <b>→</b>	when there is a high glucose concentration in blood.
	This change is detected by pancreas.
~~~	The cells of pancreas release a hormone-insulin
	into the blood



_	Insulin stimulates to absorb glucose from blood q
Alt.	convert it into glycogen - the storage compound
42.3	
_	Que to absorption, concentration of glucose falls in the blood
	consequences of high glucose level > due to high glucose concentration in the blood, water moves out of the cells
	quinto the blood by osmosis. Cell is left insufficient
	water to carry out normal metabolic processes.
$\rightarrow$	when there is low glucose concentration in blood:
	other cells in the pancreas detect this change
	They are a set of the test of the second of
	They secrete the hormone-glucagon into the bloodstream
_	glucagon stimulates liver cells to break glycogen to glucose.
	Glucose diffuses into the blood so the blood glucose concentration increases to normal
15	of science was class successful the set of
$\rightarrow$	Consequences of low glucose level - cells cannot release
	enough energy. Brain cells are especially depended on
	glucose for respiration & die quite quickly it they are
Tables.	deprived of 16th in manifer and of the second
1	- I de la lange manifest
	THE SKIN:
	largest organ in the body
	protects the body from damage
	stops pathogens from entering
	prevents too much water loss.
<u></u>	detects changes in temperature.

- - OF PREMIER PRINTERS SECTIONS



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1.00 <u> </u>	
~··>	detects pressure (touch) 4 pain
	loses heat by conduction, convection, radiation & evapouration
****	The Call of the Ca
· <del>)</del>	CONTROLLING BODY TEMPERATURE:
· →	Normal body temperature is 37°C for warm blooded
<u> </u>	animals
1 1 1 1	A long of the contract of the
<u> </u>	The hypothalamus in the brain moniters the temperature
	of the blood sunning through it.
	Nerves bring information to the brain about the
T	temperature of the sun
-, <u>-</u>	
	IN THE INEAT:
	The hypothalamus detects an increase in temp.
	of the blood flowing through it.
h carel	The second of the second ated low
	Temperature sensors in skin are stimulated by the high temperature q send information to the brain.
	The high temperature of some infortreement to
<u></u>	The hypothalamus sends rerve impulses to
	shuctures in the skin
	Space of the second of the sec
	ARTERIOLES:
	They widen to allow an increase in blood flow through
	capillaries just beneath the skin surface
	This is ralled VASDAILATION.
1-	More heat is lost to the surroundings by convection
A-10-10-10-10-10-10-10-10-10-10-10-10-10-	a sadiation

1 181	
1.0	SWEAT GLANDS:
. 6	They produce lots of sweat
13-	The sweat on the skins surface evapourates q this cools
	the body.
	- The record of the stable of
6	MAIR on the body lays flat
	a more to the first to the trace of the total to the total to the total to the total total total total total to
->	IN THE COLD: I VAN AND AND AND AND AND AND AND AND AND A
	The hypothalamus detects the decrease in temperature.
L	
_	It sends herve impulses to structures in the skin
	the state of the s
o	ARTERIOLES: 1000 yil & large & man . 21 100 11 11 11 11 11
6 V.	They become narlower to reduce the blood flow through
	capillaties near the surface of the skin.
	This is called VASOCONSTRICTION
	Less heat is lost by radiation in roul is the following -
	school paint Break D. Dailorg David - tearly morning
	SWEAT GLANDS: OF CONTROL OF THE CONT
	They stop producing sweat.
	The state of the s
•	SHIVERING:
	Stimulated by hypothalamus
	Muscles contract quelax sport areously quelease heat
	from respirations where any gold forth with the server
	blood flows through the muscles gib warmed by this heat.
	METABOLISM increases.
O	HAIR stands up. This acts as an insulator as it maps a
	thick layer of warm air next to skin preventing it
	from waing warmin.