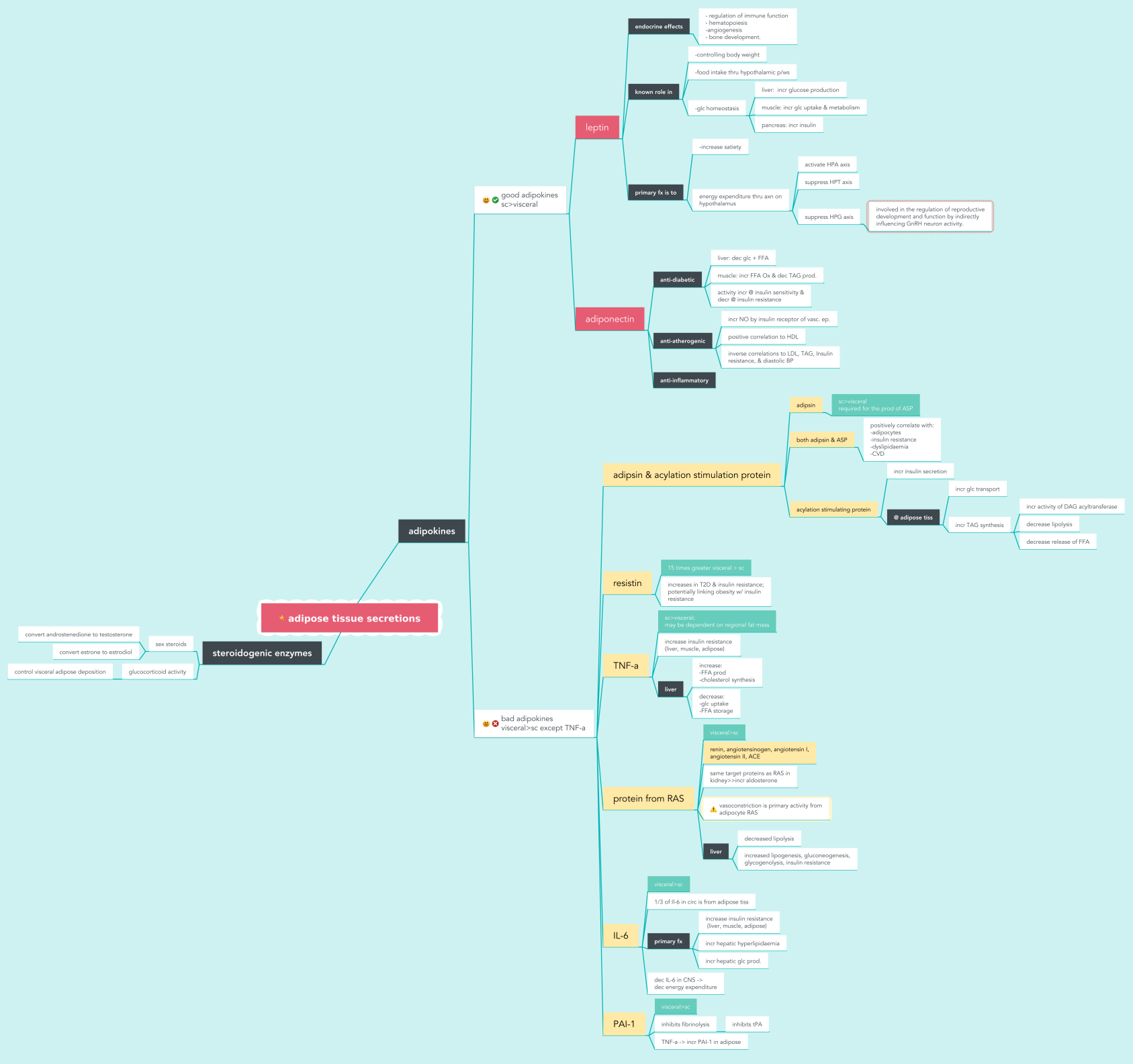
adipose tissue secretions
adipokines
good adipokines
sc>visceral
leptin
endocrine effects
- regulation of immune function
- hematopoiesis
-angiogenesis
- bone development.
known role in
-controlling body weight
-food intake thru hypothalamic p/ws
-glc homeostasis
liver: incr glucose production
muscle: incr glc uptake & metabolism
pancreas: incr insulin
primary fx is to
-increase satiety
energy expenditure thru axn on hypothalamus
activate HPA axis
suppress HPT axis
suppress HPG axis
involved in the regulation of reproductive development and function by indirectly influencing GnRH neuron activity.
adiponectin
anti-diabetic
liver: dec glc + FFA
muscle: incr FFA Ox & dec TAG prod.
activity incr @ insulin sensitivity & decr @ insulin resistance
anti-atherogenic
incr NO by insulin receptor of vasc. ep.
positive correlation to HDL
inverse correlations to LDL, TAG, Insulin resistance, & diastolic BP
anti-inflammatory
bad adipokines
visceral>sc except TNF-a
adipsin & acylation stimulation protein
adipsin
sc>visceral
required for the prod of ASP
both adipsin & ASP
positively correlate with:
-adipocytes
-insulin resistance
-dyslipidaemia
-CVD
acylation stimulating protein
incr insulin secretion
@ adipose tiss
incr glc transport
incr TAG synthesis
incr activity of DAG acyltransferase
decrease lipolysis
decrease release of FFA
resistin
15 times greater visceral > sc
increases in T2D & insulin resistance; potentially linking obesity w/ insulin resistance
TNF-a
sc>visceral;
may be dependent on regional fat mass
increase insulin resistance (liver, muscle, adipose)
liver
increase:
-FFA prod
-cholesterol synthesis
decrease:
-glc uptake
-FFA storage
protein from RAS
visceral>sc
renin, angiotensinogen, angiotensin I, angiotensin II, ACE
same target proteins as RAS in kidney>>incr aldosterone
vasoconstriction is primary activity from adipocyte RAS
liver
decreased lipolysis
increased lipogenesis, gluconeogenesis, glycogenolysis, insulin resistance
IL-6
visceral>sc
1/3 of Il-6 in circ is from adipose tiss
primary fx
increase insulin resistance (liver, muscle, adipose)
incr hepatic hyperlipidaemia
incr hepatic glc prod.
dec IL-6 in CNS -> dec energy expenditure
PAI-1
visceral>sc
inhibits fibrinolysis
inhibits tPA
TNF-a -> incr PAI-1 in adipose
steroidogenic enzymes
sex steroids
convert androstenedione to testosterone
convert estrone to estrodiol
control visceral adipose deposition
glucocorticoid activity