

# Chap 11: Cell Signaling

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How is Paracrine, Endocrine and Autocrine signaling different?

What kind of signaling do neurotransmitters belong to? Why?

What is a hormone?

What are the 3 stages of cell signaling?

What is a ligand?

What are 3 main plasma membrane reception protein complexes?

Know how these 3 main reception methods work.

How is an intracellular receptor different than a membrane receptor?

How does a cascade transduction pathway work?

How does phosphorylation and dephosphorylation fit into transduction?

What is a second messenger?

Know the main second messenger examples.

Know cyclic AMP (cAMP) we will see it again later in gene regulation.

How can transcription be controlled by signaling?

Know the cascade reaction for Epinephrine.

What is signal amplification?

How does a cell maintain specificity of responses for signals?

What is apoptosis?

Why is apoptosis invaluable during development of organisms?