


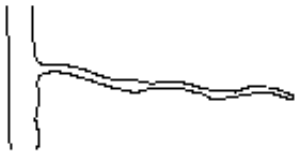










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Some types of synaptic specializations of dendrites.

(Adapted from [Fiala and Harris, 1999](#).)

Pattern	Characteristics	Examples
Varicosity 	An enlargement in a thinner dendrite associated with synaptic contacts	Retinal amacrine cells
Filopodium 	A long, thin protrusion with a dense actin matrix and few internal organelles	Normally only seen during development
Simple Spine: Sessile 	Synaptic protrusions without a neck constriction Stubby spine Crook thorn	Pyramidal cells of cortex Cerebellar dentate nucleus
Simple Spine: Pedunculated 	Bulbous enlargement at tip Thin spine Mushroom spine Gemmule	Pyramidal cells of cortex Pyramidal cells of cortex Olfactory bulb granule cell
Branched Spine 	Each branch has a unique presynaptic partner and each branch has the shape characteristics of a simple spine	CA1 pyramidal cells Granule cells of dentate gyrus Cerebellar Purkinje cells
Claw Ending 	Synaptic protrusions at the tip of the dendrite associated with one or more glomeruli	Granule cells of cerebellar cortex and dorsal cochlear nucleus
Brush Ending		

	<p>Spray of complex dendritic protrusions at the end of dendrite that extends into glomerulus and contains presynaptic elements</p>	<p>Unipolar brush cells of cerebellar cortex and dorsal cochlear nucleus</p>
<p>Thorny Excrescence</p> 	<p>Densely lobed dendritic protrusion into a glomerulus</p>	<p>Proximal dendrites of CA3 pyramidal cells and dentate gyrus mossy cells</p>
<p>Racemose Appendage</p> 	<p>Twig-like branched dendritic appendages that contain synaptic varicosities and bulbous tips</p>	<p>Inferior olive Relay cells of lateral geniculate nucleus</p>
<p>Coralline Excrescence</p> 	<p>Dendritic varicosity extending numerous thin protrusions, velamentous expansions and tendrils</p>	<p>Cerebellar dentate nucleus Lateral vestibular nucleus</p>

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