Activation Reward System Microscopic View

So, here's what it looks like on a microscopic level. This is the end of a nerve. Do you remember those nerves that have all the little filaments coming off of it? This is just one filament. At the end of the filament, it's going to have vesicles that hold different types of transmitters. Now, this is how amazing God is right here. You got this vesicle holding dopamine, but that same nerve may also have other neurotransmitters. It has to know which one to release at the right time. So, on this particular occasion, we're going to release dopamine. It comes all the way to the end of that particular nerve and when it does dopamine is released. It has to cross the cell wall, bilipid membrane cell wall. Molecules of dopamine are now in this intercellular space. You see how three-dimensionally specific that is? No, that's an artist's interpretation. It's not the real structure of dopamine, but they did it on purpose so you can see that fits perfectly right here, right? So, it fits perfectly on these guys and what that does is it tells this, “Hey, keep on sending the signal, because now I've bound to this receptor” the receptor says, “Okay, I'm supposed to be sending a signal”. Here's the important part. See these things are here the purple deals? What they are supposed to do is clear the dopamine out after it is landed here told this guy send the signal, then it clears out so it can reuse that dopamine. Incredible system, microscopic.