

# THE BIOLOGY OF ADDICTION

Addiction is a disease - not a moral choice. The opioid medication you have taken has physically changed your brain. Let's take a quick look at the biology of addiction.

## BEGINNINGS



### **You begin to take opioids...**

In response, your brain begins to decrease the production of its endorphins (natural pain relievers) and also begins to decrease its number of opioid receptors.

## PROGRESSION



### **Due to these brain changes...**

You now require more opioids to eliminate withdrawal symptoms. However, as you take more opioids, your brain decreases its natural endorphins and opioid receptors. The number of opioids needed to prevent withdrawal symptoms increases and behaviors associated with getting opioids become more expensive, dangerous, and time-consuming.

## FEAR



### **You want to stop...**

We are all born with natural endorphins and opioid receptors that are tied into our primitive survival pathways, such as hunger and thirst. Your brain responds to a lack of opioids and signals that this is a life or death situation.

## DESPERATION



### **The result of attempts to stop...**

Your brain sends signals to your body that causes withdrawal symptoms: anxiety, agitation, insomnia, cramping, diarrhea, nausea, sweating, muscle aches, and vomiting as an attempt to make you take more opioids to survive.

## CHOICES



### **In the end...**

The signals from your brain that cause you to have withdrawal symptoms will virtually lead to relapse. Ultimately, there are only three possible outcomes:

**Death | Jail | Recovery**

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