Ecstasy and Depression

Many people report feeling depressed after taking ecstasy. Most often this depression is mild and lasts only a day or two. However, some regular users report feeling depressed for much longer periods of time after taking E, particularly if they use it frequently or take large doses. At the same time, most people who use Ecstasy do not report experiencing depression. What’s this all about?

A Possible Physiological Explanation

MDMA works by releasing from certain brain cells large amounts of the brain chemical, serotonin. This release of serotonin is what causes Ecstasy’s mood elevation effect, as well as the feelings of empathy, self-acceptance, and emotional closeness with others that so many people find valuable and rewarding about the drug.

But in releasing large amounts of serotonin, MDMA also depletes the brain’s supply. It then takes some time for the brain to replenish what was released. How long does it take for serotonin levels to be fully restored after someone takes Ecstasy? This depends on the individual’s diet, general heath, genetic make-up, how much ecstasy the person took, and other random factors. There’s no way to tell for sure, but based on animal studies, scientists say that it could take anywhere from 48 hours to an entire week. The mild depression some people feel after taking E could be related to this temporary depletion of serotonin.

Another Possible Physiological Explanation

The release of serotonin, however, also causes serotonin receptors in the brain to down-regulate, which basically means turn themselves off for a while. The up-and-down regulation of receptors is one of the primary ways the brain tries to achieve homeostasis, or balance. These receptors work in conjunction with the amount of serotonin around and are just as important in the regulation of mood as serotonin itself. In trying to maintain a balanced mood, these receptors respond to the amount of serotonin around by turning themselves on and off (up-regulation and down-regulation). When they are flooded with serotonin as a result of taking Ecstasy, many of them down-regulate.

The majority of these receptors will up-regulate again as soon as the excess serotonin is metabolized away. However, some of these receptors may stay down-regulated longer, perhaps days, weeks, or even months. The depression some people feel after taking ecstasy may be a result of these serotonin receptors staying down-regulated too long. Whether, how much, or how often this
It happens may largely be a genetic factor unique to the individual. Some people may simply be genetically pre-disposed towards Ecstasy-related depression.

**It Could be Preexisting Depression**

Some ecstasy users who experience depression might have been depressed before they started using ecstasy. Depression is a common illness that often goes undiagnosed and untreated. This is particularly true for teenagers and young adults who suffer from mild to moderate depression. It is likely that many compulsive ecstasy users are unconsciously trying to self-medicate their depression. (Of course, Ecstasy is not an effective daily antidepressant and may actually exacerbate symptoms of depression.)