Addicts in Art and Life

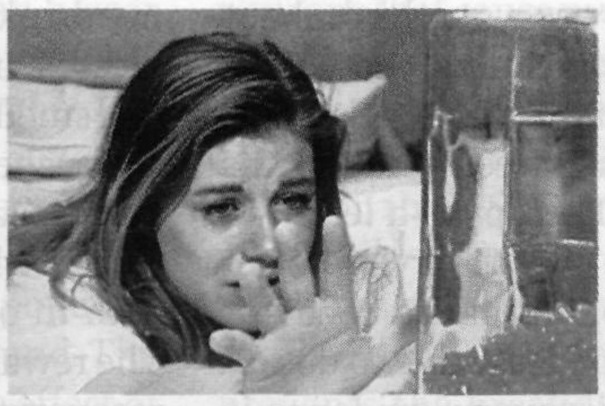
Addiction has always been the stuff of drama, both on the screen and in the lives of the privileged and famous

THE ICONS

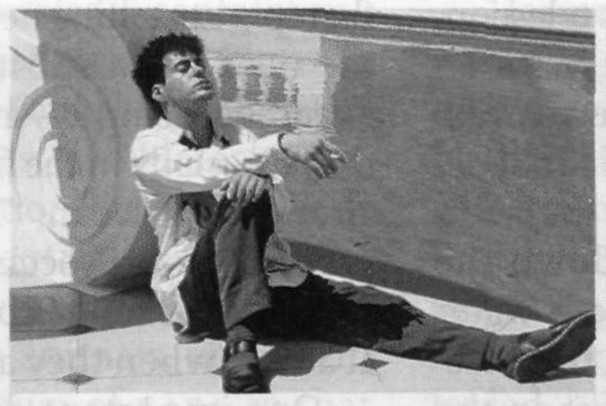
Drugs, drink and fame *Addiction victims, clockwise from left: Kurt Cobain, Marilyn Monroe, Jimi Hendrix, Betty Ford, Sid Vicious, Billie Holiday, artist Jean-Michel Basquiat, Edie Sedgwick (actress in Andy Warhol films), W.C. Fields*

THE MOVIES

The Man with the Golden Arm, 1955 *Frank Sinatra as a heroin addict*



Valley of the Dolls, 1967 *Patty Duke struggles with pills—nicknamed dolls*



Less Than Zero, 1987 *Robert Downey Jr., addicted onscreen and in real life*

Requiem for a Dream, 2000 *Jennifer Connelly faces heroin, pills and despair*

familiar odor while the fMRI did its work.

Even if the smells triggered a strong desire to drink, I had long since learned ways to talk myself out of it—or find someone to help me do so. Like the 90-day drying-out period that turns out to parallel the brain's recovery cycle, such a strategy is in line with other new theories of addiction. Scientists say extinguishing urges is not a matter of getting the feelings to fade but of helping the addict learn a new form of conditioning, one that allows the brain's cognitive power to shout down the amygdala and other lower regions. "What has to happen for that cue to extinguish is not for the amygdala to become weaker but for the frontal cortex to become stronger," says Vocci.

While such relearning has not been studied formally in humans, Vocci believes it will work, on the basis of studies involving, of all things, phobias. It turns out that phobias and drugs exploit the same struggle between high and low circuits in the brain. People placed in a virtual-reality glass elevator and treated with the antibiotic D-cycloserine were better able to overcome their fear of heights than those without benefit of the drug. Says Vocci: "I never thought we would have drugs that affect cognition in such a specific way."

Such surprises have even allowed experts to speculate whether addiction can ever be cured. That notion goes firmly against current beliefs. A rehabilitated addict is always in recovery because *cured* suggests that resuming drinking or smoking or shooting up is a safe possibility—whose downside could be devastating. But there are hints that a cure might not in principle be impossible. A recent study showed that tobacco smokers who suffered a stroke that damaged the insula (a region of the brain involved in emotional, gut-instinct perceptions) no longer felt a desire for nicotine.

That's exciting, but because the insula is so critical to other brain functions—perceiving danger, anticipating threats—damaging this area isn't something you would ever want to do intentionally. With so many of the brain's systems entangled with one another, it could prove impossible to adjust just one without throwing the others into imbalance.

Nevertheless, says Volkow, "addiction is a medical condition. We have to recognize that medications can reverse the pathology of the disease. We have to force ourselves to think about a cure because if we don't, it will never happen." Still, she is quick to admit that just contemplating new ideas doesn't make them so. The brain functions that addiction commandeers may simply be so complex that sufferers, as 12-step recovery programs have emphasized for decades, never lose their vulnerability to their drug of choice, no matter how healthy their brains might eventually look.

I'm probably a case in point. My brain barely lit up in response to the smell of beer inside the fMRI at McLean. "This is actually valuable information for you as an individual," said Scott Lukas, director of the hospital's behavioral psychopharmacology research laboratory and a professor at Harvard Medical School who ran the tests. "It means that your brain's sensitivity to beer cues has long passed."

That's in keeping with my real-world experience; if someone has a beer at dinner, I don't feel a compulsion to leap across the table and grab it or even to order one for myself. Does that mean I'm cured? Maybe. But it may also mean simply that it would take a much stronger trigger for me to fall prey to addiction again—like, for example, downing a glass of beer. But the last thing I intend to do is put it to the test. I've seen too many others try it—with horrifying results. ■