was a prime suspect. And when researchers in Ireland cut the vagus nerve in mice, they no longer saw the brain respond to changes in the gut.Ċ”The vagus nerve is the highway of communication between what's going on in the gut and what's going on in the brain," says John Cryan of the University College Cork in Ireland, who has collaborated with Collins.ĊGut microbes may also communicate with the brain in other ways, scientists say, by modulating the immune system or by producing their own versions of neurotransmitters.Ċ"I'm actually seeing new neurochemicals that have not been described before being produced by certain bacteria," says Mark Lyte of the Texas Tech University Health Sciences Center in Abilene, who studies how microbes affect the endocrine system. "These bacteria are, in effect, mind-altering microorganisms."ĊThis research raises the possibility that scientists could someday create drugs that mimic the signals being sent from the gut to the brain, or just give people the good bacteria âĢĶ probiotics âĢĶ to prevent or treat problems involving the brain.ĊOne group of scientists has tested mice that have behaviors similar to some of the symptoms of autism in humans. The idea is that the probiotics might correct problems the animals have with their gastrointestinal systems âĢĶ problems that many autistic children