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What Are Beta Blockers, How Do They Work, And How Are Beta Blockers Used In The Treatment Of Anxiety Disorders?



Brian Brennan, M.D., Associate Director, Translational Neuroscience Research, McLean Hospital
April 16, 2008

Question: What are beta blockers, how do they work, and how are beta blockers used in the treatment of anxiety disorders?

Answer: Beta blockers are a family of medicines that are actually used in a variety of fields of medicine, including psychiatry. In fact they're most frequently used as medications to treat high blood pressure. They work by binding to and blocking the beta adrenergic receptor, which is the receptor found in different parts of the body that is intrinsically activated by epinephrine and norepinephrine.

There are two different types of beta receptors. The beta-1 receptor which is found in the brain but also in the heart, and the beta-2 receptor which is found in the brain but also in the lungs and on blood vessels. So there are a variety of different types of beta receptors. The differences stem from selectivity in which beta receptor these drugs block, whether it's the beta-1 or beta-2 or both receptors. And there are clinical situations where one might want to have that selectivity.

In psychiatry the most commonly used beta blocker is propranolol, or inderol, which is a non-selective beta blocker, so it blocks both beta-1 and beta-2 receptors.

And beta blockers tend to be used most frequently in situations where there is performance anxiety or public speaking anxiety situation and they work primarily by actually blocking the physical manifestations of anxiety, so they have very little effect on the emotional sense of

anxiety. But what they do do is help with things like tremors and palpitations and shortness of breath, and sweating and the physical symptoms people experience when they're in anxiety inducing situations. So in that way they can actually make people much more functional, much more able to tolerate these types of situations that cause a lot of anxiety for them.



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S.A.M.9
6:58 PM EDT
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