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Time needed to complete: 55m

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The Etiology of CV Issues in Patients with Narcolepsy

#### Announcer:

Welcome to CME on ReachMD. This episode is part of our MinuteCME curriculum.

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## Dr. Thorpy:

This is CME on ReachMD, and I'm Dr. Michael Thorpy. Here with me today is Dr. Clete Kushida. Clete can you tell us a little bit about why patients with narcolepsy tend to have an increased cardiovascular risk? And what should we do about it once we know that they have this increased risk?

#### Dr. Kushida:

Mainly there's two factors that have been clearly associated with the higher risk of individuals that have narcolepsy in developing cardiovascular disease. One of them is the sleep fragmentation, and the sleep fragmentation that's associated with narcolepsy, as well as other sleep disorders such as obstructive sleep apnea and periodic limb movement disorder, can be associated with atherosclerosis. When they've studied mice that are subject to sleep fragmentation, it can produce things like more monocytes and also larger atherosclerotic lesions and also result in less hypocretin, and the decrease in hypocretin is the second factor. It can also lead to accelerated atherosclerosis. So, the sleep fragmentation plus the lowered hypocretin are definitely associated factors for the risk of myocardial infarction as well as obesity and accelerated atherosclerosis. Now, additionally, sleep fragmentation has also been associated with the development of congestive heart failure.

One of the positive aspects about the treatment of narcolepsy is drugs can improve the sleep fragmentation. So, they can improve the disrupted nocturnal sleep, particularly those related to sodium oxybate.

#### Dr. Thorpy:

Well, thank you for that, Clete. So, disrupted sleep is an important part of narcolepsy and can contribute to the cardiovascular risk in these patients. And can you tell us a little bit more about how we would go about dealing with that issue of disrupted sleep in our patients?

### Dr. Kushida:

Thanks, Michael. So a new product that's been FDA approved is once-nightly sodium oxybate, and that allows less disruption of sleep because a patient with narcolepsy doesn't have to awaken themselves in the middle of the night to take a second dose of sodium oxybate. So, the once-nightly oxybate the patient would take it at the beginning of the night, and that should allow more continuous sleep and preservation of their natural sleep-wake cycle resulting in less disruption of the night, and in doing so will reduce the association of narcolepsy with cardiovascular disease particularly with the relationship of the sleep fragmentation with elements like accelerated atherosclerosis.

### Dr. Thorpy:

Good. Well, thank you for that, Clete. There are a number of factors that contribute to this cardiovascular issues in these patients with narcolepsy, and you've mentioned some of the comorbidities that are important in that – the sleep apnea, the obesity – and also

mentioned about the hypocretin loss. But one of the areas that a lot of people don't realize is that it's the disrupted sleep at night which is a major factor in contributing to cardiovascular risk in patients with narcolepsy, and as you mentioned, we now have medications that can improve nocturnal sleep, in particular, oxybate, which is really the only medication that is FDA approved for dealing with nighttime sleep in patients who have narcolepsy, and this can help reduce the disrupted sleep at night, which, again, will reduce the cardiovascular risk in our patients with narcolepsy. So, it's really important when we look at the treatment of narcolepsy to consider all these factors and consider the medications that we have available because, you know, we also know that many of the alerting and weight promoting medications tend to exacerbate cardiovascular risk, whereas a medication such as oxybate, which improves nocturnal sleep, may not have those adverse effects on cardiovascular risk.

Well, this was a brief but great discussion. Unfortunately, our time is up, but thank you for listening.

# Announcer:

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