How Hormones Influence Parkinson’s Disease Progression And Treatment Transcript

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Introduction to Hormones and Parkinson's

Welcome to the Parkinson's Solutions Summit 2.0. Together, we'll explore the. Relationship between hormones and brain health. Particularly. Focusing on the impact on Parkinson's disease.

Our discussion will cover six key hormones testosterone. Estradiol. Progesterone. DHEA s. Thyroid hormones, and insulin, and each influences brain function and Parkinson's progression.

Testosterone and Dopamine Support

So let's start with testosterone. It's a vital hormone that plays a significant role in supporting dopamine production. Dopamine is a neurotransmitter essential for regulating movement and emotional responses.

In Parkinson's disease. The progressive loss. Of dopamine producing neurons. Leads to the characteristic. Motor symptoms. Studies have shown that men with Parkinson's often have.

Lower levels of testosterone. This reduction may contribute to the worsening symptoms and overall neurodegeneration. Testosterone has also been found to.

Have protective. Effects against. Oxidative. Stress and inflammation. Both of which are key players. In the pathogenesis of Parkinson's. By supporting dopamine production and reducing oxidative damage.

Testosterone may help in slowing the progression of Parkinson's and improving the. Quality of life for patients. Estradiol is a. Form of estrogen, and it's known for its neuroprotective.

Properties. It. It possesses.

Estradiol's Neuroprotective Effects

Anti-Inflammatory and. Antioxidant of effects. Which can be. Particularly. Beneficial in preventing neurodegenerative diseases like Parkinson's. Research indicates that females who naturally.

Have higher levels of estradiol. The experience of delayed. Onset of Parkinson's symptoms compared to males. This delay is thought to be due to estradiol, its ability.

To modulate inflammatory responses and reduce. Oxidative stress. In the brain. Additionally, estradiol. Has been shown to promote the. Survival of. Dopaminergic neurons, the neurons that are lost in Parkinson's.

While more research is needed, the potential for. Estradiol to serve as. A neuroprotective agent offers a promising avenue. For therapeutic strategies.

In managing Parkinson's. Progesterone, another key hormone, also plays a role in brain health and Parkinson's disease. Progesterone influences dopamine regulation.

Which is crucial. For maintaining motor function.

Progesterone and Neuronal Protection

Research suggests that progesterone. May have. Neuroprotective properties that could. Benefit individuals with

part with neurodegenerative diseases. For example, progesterone has been found to reduce inflammation, promote myelination, and protect against.

Cytotoxic processes that. Contribute to the new route to neuronal injury and death. By modulating these pathways, progesterone could help preserve neuronal integra and function in Parkinson's patients.

Understanding progesterone role in neuro protection opens new. Possibilities for. Developing hormone based therapies to mitigate. The. Effects of Parkinson's.

Moving on to. DHEA s dihydrate. And Austrian sulfate is another hormone that has potential implications in brain health. DHEA is involved in neuroplasticity, which is the brain's.

Ability to. Reorganize itself by forming new connections.

DHEA and Brain Plasticity

Lower levels of DHEA are correlated with. Cognitive decline and may impact Parkinson's symptoms. DHEA has been shown to enhance the synaptic. Plasticity.

Support neuronal survival, and reduce inflammation in the brain. These properties are particularly. Relevant for Parkinson's patients, as maintaining synaptic health and reducing neuro inflammation.

Are critical to disease progression. By boosting DHEA levels, we might be able to support the. We might be able to. Support brain function and improve outcomes for those living with Parkinson's.

Thyroid hormones also. Play a critical role. In maintaining overall brain. Health. Proper thyroid. Function is essential for cognitive function, mood regulation, and neuronal.

Metabolism. Research has shown that hypothyroidism, a condition characterized. By low thyroid.

Thyroid Hormones and Brain Health

Hormone levels, is. Associated. With an increased risk of developing Parkinson's. Thyroid hormone influences the development and survival of dopaminergic neurons, and their deficiency may contribute to the vulnerability of these neurons in Parkinson's.

Ensuring adequate thyroid hormone. Levels is therefore vital. For brain health, and may help. To reduce the risk. Of Parkinson's onset and progression.

Monitoring thyroid function and addressing any deficiencies can be an important aspect of managing brain health in Parkinson's patients. Finally, we examine the role of insulin in brain health and its connection to Parkinson's.

Insulin is well known for its role in regulating blood sugar levels. But it also has. Significant significant effects on neuronal function. Insulin resistance in diabetes has been linked to the increased risk of Parkinson's in the brain.

Insulin Resistance and Parkinson's Risk

Insulin signaling is crucial for neuronal survival. Synaptic plasticity, energy metabolism, and impaired signaling can lead to neuroinflammation. Oxidative stress.

And mitochondrial dysfunction, all of which have been implicated in Parkinson's. Furthermore, insulin resistance can. Exacerbate. The accumulation of alpha synuclein, a protein that forms and.

Toxic aggregates. In Parkinson's patients, by addressing insulin resistance and improving overall insulin sensitivity.

We may. Be able to reduce the overall risk.

And progression of Parkinson's. Lifestyle interventions like diet and exercise, along with medications that enhance insulin sensitivity. Could play a crucial role.

In managing brain health for individuals with Parkinson's and conclusion. The relationship between hormones and brain health is complex and multifaceted.

Each hormone we've discussed testosterone. Estradiol, DHEA, thyroid. Hormones, and insulin play a unique role in maintaining neuronal function and protecting against neurodegeneration.

Understanding these roles opens new.

Conclusion and Key Takeaways

Possibilities for therapeutic. Interventions. That could slow the progression. Of Parkinson's disease and improve the quality of life for Parkinson's patients.

I encourage. You to explore further. And engage. With health care. Professionals to learn more about how these hormones can be managed to support brain health.

Thank you for joining us at the Parkinson's Solutions Summit 2.0. Together, we can continue to make strides in understanding and combating Parkinson's disease.

I'm your host, Dr. Ken Sharlin. It's been my. Great pleasure to speak with you today.