Parkinson's Disease Protocol

Clinical Protocol to Support Brain Health and Cognitive Function*

designs for health®

The Pathophysiology of Parkinson's Disease

Parkinson's disease (PD) is the most common motor disorder and the second most common neurodegenerative disorder (after Alzheimer's disease) in the U.S.[1,2] PD involves the accumulation of alpha-synuclein in neuronal cell bodies (Lewy bodies) and neuronal cell processes (Lewy neurites) in various parts of the brain — primarily the substantia nigra. This leads to the degeneration and loss of dopaminergic neurons in the basal ganglia, which control muscle tone and movement.[1] PD risk factors include environmental toxins, lifestyle choices, and genetics.[1,3] Neuroinflammation, mitochondrial dysfunction, and oxidative stress may be potential pathways in the development of PD.[3,4] PD affects at least 1% of the population 60 years of age and older, and it is more common in men than women.[1]

PD has a slow but progressive onset. It affects almost every organ in the body. Currently, PD has no cure. Motor symptoms of PD include resting tremor (typically an early symptom), bradykinesia (slow movement), physical rigidity, postural instability, and gait disturbance (typically a later symptom). Non-motor associated symptoms of PD may include sleep dysfunction, mood disorders, fatigue, cognitive dysfunction, constipation, orthostatic hypotension, excess salivation, urinary retention, dysphagia, erectile dysfunction, and loss of smell. PD may severely impact quality of life.[1]

This clinical protocol is designed to support patients with PD through evidence-based lifestyle techniques, diet, and specific nutrients shown to promote brain health and cognitive function.*

Diagnostic Biomarkers and Clinical Indicators of Parkinson's Disease

- A clinical history and physical examination are considered sufficient for a formal diagnosis. There are no specific laboratory or image studies for a PD diagnosis.[1]
- If the patient responds positively to PD pharmacological treatment, this helps to establish a PD diagnosis.[1]
- It is vital to rule out other neurodegenerative conditions, which can be done with an MRI or DaTscan, if warranted.[1]

Therapeutic Diet and Nutritional Considerations

- Consider a Mediterranean diet or a low-glycemic dietary approach.[3,5] Dysregulated blood sugar is associated with PD risk, and while further research is needed, it may further PD progression.[6,7] Polyphenols in fruits and vegetables have been shown to support brain health and healthy inflammatory and oxidative stress responses in those with PD.[2,8,9]
- Encourage dietary intake of probiotics (such as yogurt, kefir, and miso), prebiotics (such as garlic and onion), and dietary fiber to support the gut. PD progression and development are associated with an imbalanced gut microbial environment and gastrointestinal disorders.[10-12]
- Consider education on healthy dietary and nutritional needs. Although PD patients tend to be overweight or obese, the prevalence of malnutrition is high.[3,5,13]

Lifestyle Interventions

- Recommend creative, mind-body physical programs that have been shown to promote balance, stability, flexibility, motor function, social outcomes, speech, and cognitive health in patients with PD.[14] Music therapy is also encouraged.[15-17] Consider one or more of the following:
    - Dance,[14,18,19] pilates,[20] aquatic movements,[21], yoga, qigong, or tai chi.[22]
- Optimize sleep hygiene practices. Sleep disturbance is common in patients with PD.[1]
- Recommend patients avoid chemical stressors through food or environmental exposure, such as pesticides and herbicides.[1]

Supplement Protocol

Primary Support:

DopaBoost™

Dose	4 capsules per day	**Duration**	Ongoing as needed
Formula Highlights	DopaBoost™ features *Mucuna pruriens*, a botanical that naturally contains L-Dopa that can cross the blood-brain barrier, along with EGCg, L-tyrosine, quercetin, and vitamin B6, to support the production of dopamine.*		

GPC Liquid

Dose	2 dropperfuls per day	**Duration**	Ongoing as needed
Formula Highlights	GPC Liquid may support brain health in those with PD as it is a critical building block for membrane phospholipids and a precursor to acetylcholine, which is involved in memory, attention, and arousal within the brain.*		

Q-Evail® 200

Dose	2 softgels per day	**Duration**	Ongoing as needed
Formula Highlights	200 mg of bioavailable CoQ10 (ubiquinone) in easy-to-swallow softgels that uses a proprietary Evail™ emulsification technology for superior absorption.*		

CannabOmega™

Dose	2 softgels twice daily with meals	**Duration**	Ongoing as needed
Formula Highlights	Features EPA and DHA in a 1:1 ratio and standardized phytocannabinoids from hemp oil to support neurological health. Contains <0.3% THC.		

Curcum-Evail® 200

Dose	1 softgel twice per day	**Duration**	Ongoing as needed
Formula Highlights	Features 200 mg of three highly bioavailable and bioactive curcuminoids in 1 softgel to support a healthy response to oxidative stress and inflammation.*		

S-Acetyl-Glutathione Synergy

Dose	2 capsules per day	**Duration**	Ongoing as needed
Formula Highlights	S-Acetyl Glutathione Synergy features the body's most powerful antioxidant, along with N-acetyl-cysteine and vitamin B6, both of which support glutathione synthesis.*		

For a list of references cited in this document, please visit:
https://www.designsforhealth.com/api/library-assets/literature-reference---parkinsons-disease-support-protocol-references

Dosing recommendations are given for typical use based on an average 150 pound healthy adult. Health-care practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage. Any product containing botanical substances has the potential for causing individual sensitivities, appropriate monitoring, including liver function tests (LFT) is recommended.

For considerations regarding herb-drug and nutrient-drug interactions, please refer to reliable, evidence-based resources such as the Natural Medicine Database or Stargrove MB, Treasure J, McKee DLHer. *Herb, Nutrient, and Drug Interactions: Clinical Implications and Therapeutic Strategies*. St. Louis, MO: Mosby-Elsevier; 2008.

***These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.**