

# Neurological Protocol: Restoring Neurological Function

## Introduction

Chronic degenerative neurological concerns are being reported more frequently in everyday clinical practice, including Parkinson’s disease, multiple sclerosis, and dementia.

## Assessment

For neurological damage or degenerative risk:

1. Thorough clinical neurological workup, potentially including CT scan, electromyography, MRI, and PET when diagnosis is uncertain.<sup>1</sup>
2. Potential laboratory considerations:
  - a. Insulin resistance assessment, such as an oral glucose tolerance test
  - b. Hemoglobin A1c
  - c. Fasting glucose
  - d. Hs-CRP
  - e. Homocysteine
  - f. Methylmalonic acid (B12)
  - g. 25-OH vitamin D levels
  - h. Anti-myelin antibodies
  - i. AST (aspartate aminotransferase)
  - j. Markers for oxidative damage and genetic risk, such as urinary levels of 8-hydroxy-deoxyguanosine and APOE gene testing, respectively

## General Recommendations

1. Monitor progress of patients using:
  - a. Standardized Mini-Mental State Examination at <https://bit.ly/2BLAFGU>
  - b. Unified Parkinson's Disease Rating Scale at <https://bit.ly/2VXwleB>
  - c. Standardized neurological exam and EDSS for multiple sclerosis at <https://bit.ly/3ffjOpS>

## Specific Treatment Plan

	Mild	Moderate	Severe
<b>Week 1:</b> Initiation Phase	<ul style="list-style-type: none"> <li>• Mediterranean-style diet<sup>2,3</sup></li> <li>• Aerobic and resistance exercise training<sup>4,5</sup></li> <li>• Calligraphy therapy<sup>6,7</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Mediterranean-style diet<sup>2,3</sup></li> <li>• Goal of 10,000 steps per day as assessed by pedometer, with individualized targets<sup>8</sup></li> <li>• Age-appropriate yoga: Three 55-minute sessions per week<sup>9,10</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Mediterranean-style diet<sup>2,3</sup></li> <li>• Tai chi: 60 minutes twice weekly<sup>11,12</sup></li> </ul>
<b>Week 2–7:</b> Intensive Therapy Phase	<ul style="list-style-type: none"> <li>• Mito AMP®: 1 softgel per day<sup>13–15</sup></li> <li>• PQQ-10: 1 softgel per day<sup>16,17</sup></li> <li>• OptiMega-3®: 1 softgel BID with meals<sup>18–20</sup></li> <li>• Vitamin D3: 1000 IU QD<sup>21,22</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Mito AMP: 2 softgels per day<sup>13–15</sup></li> <li>• PQQ-10: 2 softgels per day<sup>16,17</sup></li> <li>• OptiMega-3: 1 softgel BID with meals<sup>18–20</sup></li> <li>• Theracurmin® 2X: 1 capsule BID<sup>23</sup></li> <li>• Vitamin D3: 2000 IU QD<sup>21,22</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Mito AMP: 3 softgels per day<sup>13–15</sup></li> <li>• PQQ-10: 3 softgels per day<sup>16,17</sup></li> <li>• OptiMega-3: 1 softgel BID with meals<sup>18–20</sup></li> <li>• Theracurmin 2X: 1 capsule BID<sup>23</sup></li> <li>• Vitamin D3: 2000 IU QD<sup>21,22</sup></li> <li>• N-Acetyl-L-Cysteine: 1 capsule TID<sup>24</sup></li> <li>• Melatonin: 3–5 mg at night<sup>25,26</sup></li> </ul>
<b>Week 8:</b> Maintenance Phase	<ul style="list-style-type: none"> <li>• Mediterranean-style diet<sup>2,3</sup></li> <li>• Aerobic and resistance exercise training<sup>4,5</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Mediterranean-style diet<sup>2,3</sup></li> <li>• Aerobic and resistance exercise training<sup>4,5</sup></li> <li>• Mito AMP: 1 softgel per day<sup>13–15</sup></li> <li>• PQQ-10: 2 softgels per day<sup>16,17</sup></li> <li>• OptiMega-3: 1 softgel BID with meals<sup>18–20</sup></li> <li>• Theracurmin 2X: 1 capsule QD<sup>23</sup></li> <li>• Vitamin D3: 1000 IU QD<sup>21,22</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Mediterranean-style diet<sup>2,3</sup></li> <li>• Aerobic and resistance exercise training<sup>4,5</sup></li> <li>• Mito AMP: 2 softgels per day<sup>13–15</sup></li> <li>• PQQ-10: 2 softgels per day<sup>16,17</sup></li> <li>• OptiMega-3: 1 softgel BID with meals<sup>18–20</sup></li> <li>• Theracurmin 2X: 1 capsule BID<sup>23</sup></li> <li>• Vitamin D3: 1000 IU QD<sup>21,22</sup></li> <li>• N-Acetyl-L-Cysteine: 1 capsule BID<sup>24</sup></li> </ul>

QD: daily; BID: two times per day; TID: three times per day.

## Re-assessment

Repeat clinical and laboratory measurements.

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