

# Rheumatoid Arthritis Protocol: Restoring Joint Function

## Introduction

It is estimated that nearly 1.5 million Americans have rheumatoid arthritis (RA).<sup>1</sup>

## Assessment

1. Thorough physical exam focusing on:
  - a. Mild-to-moderate joint swelling.
  - b. Crepitus on movement.
  - c. Pain with movement of joint and in particular at the end of its range of motion.
  - d. Joint tenderness.
  - e. Mild inflammation and warmth over the joint.
  - f. See American College of Rheumatology Guidelines for RA diagnosis.<sup>2</sup>
  - g. Patients may also present with fatigue, weight loss, and anemia on initial presentation. Additionally, many non-joint signs/symptoms may be overlooked, including accelerated atherosclerosis (leading cause of death among individuals with RA), episcleritis, neuropathy, vasculitis with severe RA, etc. (See Wasserman 2018 for a complete list of extra-articular manifestations).
2. Laboratory – the target population for testing are patients with at least one joint with definite clinical synovitis, not better explained by another disease:
  - a. High-sensitivity CRP (hs-CRP) and ESR.
  - b. Rheumatoid factor and anti-citrullinated protein antibody.
    - Upon initial diagnosis, CRP is elevated in 39%, rheumatoid factor (IgM) in 44%, and anti-citrullinated protein antibody in 39%.<sup>3</sup>
  - c. Vitamin D: 1,25-(OH)<sub>2</sub> Vitamin D levels have been shown to be inversely associated with disease activity.<sup>4</sup> Meta-analysis of 25 (OH) vitamin D levels has also been shown to be inversely related to disease activity.<sup>5</sup> Polymorphisms within the vitamin D receptor (VDR) gene also appear to influence risk, even in the presence of normal vitamin D serum levels.<sup>6</sup>
  - d. Radiological assessment: X-ray, MRI. Note that radiography may be helpful if the typical erosions are present, but rheumatoid nodules and radiographic erosive changes are no longer criteria for diagnosis, as they are less likely to be present in early disease.
  - e. Joint aspiration of synovial fluid.

## General Recommendations

1. Monitor progress of patients using:
  - a. RA activity score using DAS 28 at <http://www.das-score.nl/das28/en/contact.html> or <http://www.4s-dawn.com/DAS28/>
  - b. Clinical Disease Activity Index for RA at <https://bit.ly/2X5gXNV>

## Specific Treatment Plan†

	Mild	Moderate	Severe
<b>Rheumatoid Arthritis</b>	<ul style="list-style-type: none"> <li>Tai chi<sup>7,8</sup></li> <li>Yoga<sup>9,10</sup></li> <li>Mediterranean<sup>11,12</sup> and/or vegetarian/vegan diet<sup>13,14</sup></li> <li><b>Theracurmin® 2X:</b> 1 capsule QD<sup>15,16</sup></li> <li><b>BioFoundation-G®:</b> 1 tablet TID<sup>17</sup></li> </ul>	<ul style="list-style-type: none"> <li>Tai chi<sup>7,8</sup></li> <li>Yoga<sup>9,10</sup></li> <li>Mediterranean<sup>11,12</sup> and/or vegetarian/vegan diet<sup>13,14</sup></li> <li><b>OptiMega-3®:</b> 5 softgels per day<sup>18,19</sup></li> <li><b>Theracurmin 2X:</b> 1 capsule QD<sup>15,16</sup></li> <li><b>BioFoundation-G:</b> 1 tablet TID<sup>17</sup></li> <li><b>Ubiquinol:</b> 100 mg QD<sup>20,21</sup></li> <li><b>Vitamin D3:</b> 1000 IU QD (up to 5000 IU QD in those with low serum levels) OR Calcitriol 500 IU per day<sup>22</sup></li> <li><b>PEA:</b> 1 capsule TID<sup>23</sup></li> </ul>	<ul style="list-style-type: none"> <li>May require the use of prescription medications as part of the integrated protocol</li> <li>Tai chi<sup>7,8</sup></li> <li>Yoga<sup>9,10</sup></li> <li>Mediterranean<sup>11,12</sup> and/or vegetarian/vegan diet<sup>13,14</sup></li> <li><b>OptiMega-3:</b> 130 mg/kg QD (6-8 softgels per day, based off weight)<sup>24</sup></li> <li><b>Theracurmin 2X:</b> 1 capsule BID<sup>15,16</sup></li> <li><b>BioFoundation-G:</b> 1 tablet TID<sup>17</sup></li> <li><b>Ubiquinol:</b> 100 mg QD<sup>20,21</sup></li> <li>Vitamin D3 plus calcium, especially for patients using corticosteroid therapy<sup>25</sup></li> <li><b>PEA:</b> 1 capsule TID<sup>23</sup></li> </ul>

QD: daily; BID: two times per day; TID: three times per day; QID: four times per day; PEA: Palmitoylethanolamide

†Caution: Contraindications exist for patients taking warfarin.

## Re-Assessment

Repeat clinical and laboratory measurements as indicated.

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