

# Dietary and Nutritional Interventions for Chronic Pain: Exploring the Behavioral Perspective

Nisha Rani Jamwal\*, Kumar Senthil P.\*\*

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## Abstract

Chronic pain was globally recognized as a condition with multifactorial etiology, multidimensional clinical presentation and multidisciplinary therapeutic delivery. The objective of this short communication was to throw light on dietary and nutritional supplementation as a management option for people with chronic pain. Although goal-directed healthcare and multidisciplinary rehabilitation dictated a comprehensive biopsychosocial approach to management, dietary interventions such as therapeutic fasting, oral cannabis, and oral tryptophan were reported to be effective dietary treatment options for people with chronic pain. The evidence however is too insufficient to provide any recommendation for practice.

**Keywords:** Analgesic Dietetics; Nutritional Analgesia; Dietetic Rehabilitation; Pain Management.

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## Introduction

Chronic pain was framed as a complex adaptive system with paradoxical beliefs and experiences being a part of the core characteristics of pain experience [1]. The implementation of Goal-Directed Health Care (G-DHC) involves a shift in process from the usual focus on disease-related goals such as relief of pain, titrating narcotic refills, and working on condition management to broader, long-term, personal goals along a model of patient-centered care [2].

Mainline therapy in the management of people with chronic pain involves medical/pharmacological therapy [3] whilst recent scientific developments and evidence-informed paradigm shift directed a rational integration of pharmacologic, behavioral and rehabilitation strategies in the treatment of chronic pain [4].

Multidisciplinary rehabilitation involves a team of skilled professionals employing multiple therapies and a structured treatment plan to address all the dimensions of chronic pain such as physical, emotional and social-role dysfunction [5]. An integrative medicine approach including complementary and alternative medicine therapies such as nutrition, supplements and herbs, manual medicine, acupuncture, yoga, and mind-body approaches is growing in popularity and use among chronic pain patients [6].

### *Therapeutic Fasting*

Recent evidence from clinical trials shows that medically supervised modified fasting (200-500 kcal nutritional intake/day) with periods from 7 to 21 days is efficacious in the treatment of rheumatic diseases and chronic pain syndromes [7].

### *Cannabis*

Martín-Sánchez et al [8] in their systematic review and meta-analysis of double-blind randomized controlled trials through search of Medline/Pubmed, Embase, and The Cochrane Controlled Trials Register (TRIALS CENTRAL) databases and identified 18 trials which concluded that cannabis treatment is moderately efficacious for treatment of chronic pain, but beneficial effects may be partially (or completely) offset by potentially serious harms.

Dietary supplementation using L-tryptophan:

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**Author's affiliation:** \*PG Student,\*\*Professor & Principal, Maharishi Markandeshwar Institute of Physiotherapy and Rehabilitation (MMIPR), Maharishi Markandeshwar University (MMU), Mullana University Road, Mullana, Ambala, Haryana-133207

**Corresponding Author: Senthil P Kumar**, Professor & Principal, Maharishi Markandeshwar Institute of Physiotherapy and Rehabilitation (MMIPR), Maharishi Markandeshwar University (MMU), Mullana University Road, Mullana, Ambala, Haryana- 133207

E-mail: [senthilparamasivamkumar@gmail.com](mailto:senthilparamasivamkumar@gmail.com)

Haze [9] explained that oral L-tryptophan administration decreased the perception of pain, drugs acting synergistically with the enkephalins and endorphins. Thus, use of drugs that either increased the serotonin level or block reuptake were associated with decreased pain perception, increased pain threshold, and improved sleep.

Anecdotally, chronic pain patients were managed using a traditional “patient and treatment uniformity myths” and the ensuing evidence recommends an individualized comprehensive treatment by subgrouping biophysical, psychosocial and behavioral measures that influence chronic pain and its experience [10].

Mechanism-based classification of chronic pain is essential for understanding and evaluating chronic pain as a condition with multifactorial etiology; multidimensional clinical presentation and multidisciplinary therapeutic delivery [11]. Such approaches not only facilitate symptom control but also improve quality of life in people with chronic pain [12].

From a therapeutic standpoint, dietary modification appears to be attractive, due to its low economic basis, decreased risk of addiction and dependence, as well as simplicity. Healthcare professionals need to shift their focus from a biomedical dimension to a behavioral dimension, [13] when they encounter people with chronic pain a lumping-to-splitting paradigm shift in clinical decision making is essential for successfully combating the chronic pain epidemic [14] along a ‘think-out-of-the-box’ perspective [15].

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