



# AUTOIMMUNITY: AN AYURVEDIC PERSPECTIVE WITH SPECIAL EMPHASIS ON PATHOGENESIS

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## **Abstract**

Autoimmune diseases are chronic disorders in which the body's immune system mistakenly targets its own tissues, leading to persistent inflammation and progressive damage. These conditions are rising globally, with post-pandemic data revealing a surge in autoimmune markers, particularly in developing nations like India. Despite advancements in immunology and biotechnology, the complexity of autoimmunity demands an integrative and individualized approach. Ayurveda, the ancient Indian system of medicine, offers a profound understanding of immune regulation through its core concepts of Agni (digestive/metabolic fire), Ama (toxic metabolic residue), Ojas (vital immunity essence), and Vyadhikshamatva (natural disease resistance).

This review explores autoimmune diseases through both biomedical and Ayurvedic lenses. Modern etiological factors such as genetic predisposition, environmental triggers, hormonal influences, and immune dysregulation are compared with Ayurvedic Nidana such as Mandagni, Ama, Dosha Prakopa, and Oja-Kshaya. The article highlights how Ayurvedic pathophysiology Dosha-Dushya Sammurchana correlate with immune hyperreactivity and tissue damage.

Furthermore, a comprehensive Ayurvedic management protocol is proposed, involving Panchakarma, Rasayana Chikitsa, Achara Rasayana, and herbal immunomodulators like Ashwagandha and Guduchi. Emphasis is laid on rejuvenating Ojas, restoring Agni, and removing Ama to arrest the autoimmune cascade. Integrating classical Ayurvedic wisdom with modern diagnostics may lead to more sustainable, personalized, and holistic outcomes in managing autoimmune disorders. This article encourages further research and clinical validation of integrative therapies for long-term remission and improved quality of life in patients with autoimmunity.

**Keywords:** Autoimmune Disorders, Autoimmunity, Ojas, Agni, Ama, Vyadhikshamatva

## 1. Introduction

Autoimmune diseases have emerged as a major global health burden in the 21st century. Characterized by immune-mediated destruction of the body's own tissues, these conditions manifest in varied forms, ranging from organ-specific disorders like Type 1 Diabetes and Hashimoto's thyroiditis, to systemic conditions such as Systemic Lupus Erythematosus (SLE), Rheumatoid Arthritis (RA), and Multiple Sclerosis (MS)<sup>(1)</sup>. The rising incidence of these disorders especially in younger populations and women has sparked concern among clinicians and researchers worldwide.

In recent years, several factors have been identified as contributors to autoimmune pathogenesis, including genetic susceptibility (HLA variants), exposure to infections, environmental toxins, hormonal imbalances, and psychological stress<sup>(2)</sup>. However, despite the growing understanding of immunological mechanisms and advancements in biologic therapies, the current standard of care in modern medicine remains largely symptomatic, involving long-term immunosuppression that may carry significant side effects.<sup>(3)</sup>

According to Indian epidemiological data, autoimmune diseases are on a concerning rise. A study by Metropolis Healthcare (2023) revealed a nearly 30% increase in ANA positivity post-COVID-19,<sup>(4)</sup> indicating heightened immune reactivity in the population. The pandemic, with its profound impact on immune function, stress, and environmental exposures, may have acted as a major trigger.

Amid this backdrop, Ayurveda offers a time-tested, holistic, and individualized approach to understanding and managing autoimmunity. Unlike modern biomedicine, which focuses on molecular targets and immune cells, Ayurveda emphasizes the balance of Doshas, the strength of Agni, the presence or absence of Ama, and the integrity of Ojas concepts that provide a deeper, systems-level understanding of health and disease.

In this article, we aim to bridge the gap between classical Ayurvedic principles and contemporary immunology. Through comparative analysis of disease etiology, pathogenesis (Samprapti), and management approaches, this review highlights how integrative strategies can lead to more effective and sustainable outcomes for patients suffering from autoimmune disorders.

## 2. Aims and Objectives

- To understand the concept of Autoimmunity in *ayurveda*.
- To comprehensively analyse and correlate autoimmunity with *ojas and concept of vyadhikshamatva*.

## 3. Materials and methods

Various sources like classical Ayurvedic books, medical literature, research updates, scientific publications, online articles, and websites were consulted and examined to explore the possible relation of ojas and autoimmunity.

## 4. Modern View of Autoimmunity

Autoimmune diseases are driven by a loss of immunological self-tolerance, leading to an attack on the body's own tissues by its immune system. From a modern medical perspective, several interconnected mechanisms and risk factors are recognized.

### 4.1. Genetic Factors

A strong genetic predisposition is observed in autoimmune diseases. Specific HLA (human leukocyte antigen) types are associated with increased susceptibility. For example, HLA-DR3 and DR4 are linked with Type 1 Diabetes and SLE. Genome-wide association studies (GWAS) have identified polymorphisms in immune-related genes such as CTLA4, PTPN22, and STAT4 that modulate immune responses.<sup>(2)</sup>

## 4.2. Environmental Triggers

External agents such as viral or bacterial infections (e.g., Epstein-Barr virus, *Helicobacter pylori*), environmental toxins (e.g., heavy metals, pesticides), and certain drugs can act as antigens or modify self-antigens, breaking immune tolerance and initiating autoimmunity.

## 4.3. Hormonal Influences

Autoimmune disorders have a markedly higher prevalence in women, suggesting that hormonal factors, particularly estrogen, modulate immune responses. This is evident in diseases like SLE, which commonly manifest during reproductive years.

## 4.4. Immune Dysregulation

Malfunction of T-regulatory cells, hyperactivation of B-cells, and chronic inflammatory cytokine production (e.g., TNF- $\alpha$ , IL-6, IL-17) are central features. Autoantibodies such as ANA (antinuclear antibodies), RF (rheumatoid factor), and anti-dsDNA serve as key diagnostic and pathogenic markers.

## 4.5. Psychological Stress

Chronic stress and trauma can alter neuroendocrine-immune interactions, compromising immune tolerance. Cortisol dysregulation and sympathetic overdrive may trigger or worsen autoimmune flare-ups.

## 4.6. Clinical Spectrum

Autoimmune diseases are broadly categorized as:

Organ-specific: e.g., Type 1 Diabetes (pancreas), Graves' Disease (thyroid), Vitiligo (skin)

System-specific: e.g., Rheumatoid Arthritis (joints), SLE (multi-organ), Scleroderma (connective tissue)

Common symptoms include fatigue, joint pain, muscle stiffness, skin rashes, fever, alopecia, and cognitive disturbances.

## 5. Diagnosis

Diagnosis is based on clinical criteria, serological markers (ANA, RF, Anti-CCP, Anti-dsDNA), inflammatory indicators (ESR, CRP), imaging (X-ray, MRI), and exclusion of mimicking conditions. Advances in immunophenotyping and molecular diagnostics are refining autoimmune classification and enabling precision medicine approaches.<sup>(3)</sup>

## 6. Ayurvedic Nidana and Samprapti of Autoimmunity

Ayurveda attributes autoimmune conditions to the vitiation of Doshas, the accumulation of Ama, and disturbances in Agni and Ojas. These imbalances disturb the natural homeostasis of the body, leading to diseases where the immune system misidentifies tissues and mounts an internal attack. The causative factors (Nidana) and disease pathway (Samprapti) reflect the body's progressive deviation from equilibrium.<sup>(5)</sup>

## 6.1. Nidana (Etiological Factors)

The following are commonly implicated in the development of autoimmune diseases according to Ayurvedic principles:<sup>(6)</sup>

- Mandagni (Impaired Digestive Fire): Weak Agni fails to metabolize food properly, leading to the formation of Ama (metabolic toxins), which triggers Dosha vitiation.
- Ama Utpatti (Toxin Formation): Undigested food and metabolic residues accumulate, becoming antigenic and obstructing bodily channels (Srotorodha).
- Viruddha Ahara (Incompatible Food): Improper combinations, such as fish with milk or fruits with dairy product, disturb the Doshas and impair immunity.
- Vega Dharana (Suppression of Natural Urges): Ignoring natural physiological urges such as urination, defecation, sneezing, or crying leads to Dosha imbalance and obstructs proper bodily function.
- Manasika Nidana (Psychological Stressors): Negative emotions like grief, fear, and anxiety disturb mental balance and, through the mind-body connection, influence physical health and immunity.
- Dushta Vayu and Vishaprabhava (Environmental Factors): Exposure to toxins, chemicals, and polluted air aggravates Doshas and contributes to the onset of disease.

## 6.2. Samprapti (Pathogenesis)

The Ayurvedic pathogenesis of autoimmune disorders follows a logical sequence:

1. Nidana Sevana (Exposure to Etiological Factors)
2. Dosha Utklesha (Excitation of Doshas)
3. Ama Utpatti and Srotorodha (Toxin Formation and Channel Obstruction)
4. Dosha-Dushya Sammurchana (Interaction of Vitiated Doshas with Susceptible Tissues)
5. Oja Kshaya or Oja Vyapad (Depletion or Derangement of Ojas)

This process leads to various clinical manifestations depending on the Srotas (body channels) and Dhatus (tissues) involved. For example, in Rheumatoid Arthritis (Aamavata), the primary involvement of joints occurs due to Ama and Vata association, while in Psoriasis (Ekakushtha), there is predominant Kapha and Pitta imbalance affecting the skin.

The displacement or deterioration of Ojas (Oja-Kshaya or Vishramsa, Vyapad) signifies a compromised immune defense, correlating with the loss of self-tolerance seen in modern immunopathology. Ayurvedic classical texts like Charaka Samhita describe this phenomenon clearly, highlighting the derangement of Ojas leads to vulnerability to diseases and hypersensitive reactions.

## 7. Vyadhikshamatva and the Role of Ojas in Autoimmunity

As per Ayurveda, the body's innate capacity to resist disease is termed Vyadhikshamatva, a comprehensive concept encompassing both immunity and resilience. It includes the body's ability to prevent disease onset (Vyadhi-utpada-pratibandhakatva) and to mitigate disease severity when it occurs (Vyadhi-bala-virodhitva). Ojas, the essence of all Dhatus (tissues), plays a pivotal role in establishing this defense mechanism.

## 7.1. Concept of Ojas

“Ojastu tejo dhātuṇām śukraāntānām param smṛtam.” (A.H. Su. 11/37)

Ojas is described as the supreme essence formed from the essence of all the seven Dhatus. It is the substratum of Bala (strength), Sattva (mental clarity), and Ayu (longevity). Classical texts describe Ojas as having a Snigdha (unctuous), Shukla (white), Madhura (sweet) nature and residing primarily in the Hridaya (heart).

## 7.2. Types of Ojas Impairment in Autoimmunity

Oja Visramsa – Displacement of Ojas

In this state, Ojas becomes unstable and displaced from its normal location due to the obstruction of Udana Vata by vitiated Pitta, leading to clinical manifestations such as syncope (Murchcha), burning sensation (Daha), chest and umbilical fatigue (Ura-Nabhi Klama), and general body ache (Angasada). This reflects systemic inflammatory states and immune dysregulation.<sup>(7)</sup>

Oja Vyapad – Qualitative Derangement of Ojas

Here, the functional integrity of Ojas is compromised. Ojas becomes one of the Dushyas (vitiating components) in disorders such as Prameha (urinary diseases). Charaka Samhita links Madhumeha (diabetes)—now associated with autoimmune Type 1 diabetes—to Ojas displacement by vitiated Vata, leading to impaired immunity, hyperglycemia, and microvascular complications. This condition is considered asadhya (incurable) due to its severity and complex pathogenesis.<sup>(8)</sup>

Oja Kshaya – Depletion of Ojas

Oja Kshaya refers to the loss or exhaustion of Ojas, due to the Ojas Kshaya Vata Prakopa occurring and causing obstruction of Samana Vata by Vyana Vata (Samana-Avrita-Vyana). Symptoms include syncope (Murchcha), drowsiness (Tandra), delirium (Pralapa), fatigue (Angasada), and loss of digestive and immune strength (Agni-Oja-Bala Kshaya). Management includes a light diet (Laghu Bhojana) and moderate exercise (Vyayama) to restore systemic balance.<sup>(9)</sup>

## 7.3. Vyadhikshamatva and Immune Surveillance

The strength of Vyadhikshamatva directly depends on the quality and quantity of Ojas. When Ojas is robust, the immune system effectively identifies and neutralizes foreign pathogens without reacting against self-tissues. However, in autoimmune disorders, disturbed Agni and Doshas impair the formation and stability of Ojas, leading to the breakdown of self-tolerance.

Improving Ojas through rejuvenation therapies (Rasayana)<sup>(10)</sup> is therefore central to Ayurvedic management of autoimmunity. Measures include: - Enhancing Agni (Deepana-Pachana) - Eliminating Ama (via Langhana and Shodhana) - Restoring Ojas through Rasayana herbs and lifestyle regulation

## 8. Ayurvedic Management of Autoimmune Disorders (Shamana, Shodhana, and Rasayana)

Management of autoimmune diseases in Ayurveda is focused on breaking the pathogenesis at various stages removing Ama, pacifying vitiated Doshas, rejuvenating Dhatus, and enhancing Ojas. The approach is comprehensive and personalized, guided by the patient's Prakriti (constitution), Vikriti (imbalance), involved Srotas, and disease stage.

### 8.1. Shamana Chikitsa (Palliative Therapy)

Shamana aims at pacifying the aggravated Doshas and relieving symptoms without purification. Key measures include:

Deepana-Pachana: Use of herbs like Trikatu, Chitraka, and Musta to kindle Agni and digest Ama.

Dosha-specific formulations:

- Vata-predominance: Dashamoola, Rasna, Eranda Taila
- Pitta-dominance: Amalaki, Sariva, Guduchi
- Kapha-dominance: Trikatu, Vacha, Pippalimula

Herbal combinations: Kaishora Guggulu, Simhanada Guggulu, Mahatiktaka Ghrita, and Arogyavardhini Vati are often used in conditions like Aamavata and Psoriasis.

## 8.2. Shodhana Chikitsa (Purificatory Therapy)

This includes Panchakarma procedures tailored to eliminate deep-seated Ama and restore Dosha equilibrium:

- Snehana: Internal and external use of medicated oils or ghee, e.g., Tiktaka Ghrita for skin conditions.
- Swedana: Fomentation therapies using Patra Pinda Sweda or Nadi Sweda to liquefy Ama and facilitate its removal.
- Vamana: For Kapha-predominant disorders with skin involvement.
- Virechana: For Pitta disorders, liver detox, and inflammatory manifestations.
- Basti: The most effective for Vata disorders like Aamavata. Niruha and Anuvasana bastis are used in alternation.

## 8.3. Rasayana Chikitsa (Rejuvenation Therapy)

Rasayana enhances Ojas, nourishes Dhatus, and builds Vyadhikshamatva. Both Aushadha Rasayana (herbal) and Achara Rasayana (lifestyle) are employed:<sup>(11)</sup>

Herbal Rasayana:

- Ashwagandha (*Withania somnifera*): Adaptogen and immunomodulator
- Guduchi (*Tinospora cordifolia*): Anti-inflammatory and Rasayana
- Amalaki (*Emblica officinalis*): Rich in antioxidants and rejuvenative
- Shatavari (*Asparagus racemosus*): Especially beneficial in autoimmune disorders in women
- Shilajit: Rejuvenates tissues and improves metabolism
- Medhya Rasayana: Mandukaparni, Yashtimadhu, and Brahmi to improve mental resilience and modulate stress-related immune dysfunction<sup>(12)</sup>

## 8.4. Achara Rasayana (Behavioral Rejuvenation)

Classical texts emphasize ethical, emotional, and social conduct as crucial for health:

- Dincharya and Ritucharya: Maintaining daily and seasonal regimens
- Sadvritta: Righteous conduct and ethical living<sup>(13)</sup>
- Mental balance: Managing Chinta (anxiety), Krodha (anger), Shoka (grief) is essential for controlling disease triggers and flares

The integrative application of these therapies aims to re-establish Agni, remove Ama, stabilize Doshas, and restore Ojas. Periodic Shodhana, long-term Rasayana, and lifestyle correction can provide sustained remission in autoimmune disorders.

## 9. Discussion

The increasing global prevalence of autoimmune diseases highlights the limitations of a one-dimensional biomedical approach. Modern medicine, with its focus on immunosuppressive therapies and molecular targeting, often provides symptomatic relief but fails to address the root cause or ensure lasting remission. In contrast, Ayurveda approaches disease as a multidimensional disruption of balance, offering individualized solutions that address not only physical pathology but also lifestyle, diet, mental health, and environmental factors.

### 9.1. Complementary Strengths

Modern immunology offers advanced diagnostic precision through serology, molecular genetics, and immunophenotyping. These tools can help map out the extent and activity of autoimmune diseases. Ayurveda, on the other hand, offers a systems-level model grounded in Dosha theory, Agni, and Ojas, which parallels immune regulation, metabolism, and vitality. For instance, the Ayurvedic concept of Ama as a toxic by-product of impaired metabolism finds resonance in modern descriptions of molecular mimicry and neo-antigen formation. Similarly, the decline in Ojas reflects immune dysfunction and chronic fatigue often seen in autoimmune patients.

### 9.2. Toward Integrative Protocols

A collaborative protocol might include: - Using modern diagnostics (e.g., ANA, CRP, ESR, IL-6) to track disease activity - Employing Ayurvedic interventions such as Panchakarma to detoxify and reset immune function - Administering Rasayana herbs for immune modulation and tissue rejuvenation - Following Achara Rasayana for stress management, lifestyle regulation, and psychosocial well-being

## 10. Conclusion

Autoimmune diseases present a formidable clinical challenge due to their chronic, relapsing nature and complex pathophysiology. While modern medicine offers diagnostic accuracy and targeted therapies, Ayurveda provides a broader, systemic understanding rooted in the balance of Agni, Doshas, Ama, and Ojas. This review underscores the potential of integrative management strategies that combine the strengths of both paradigms. By correcting impaired digestion, eliminating metabolic toxins, and rejuvenating the immune essence (Ojas), Ayurveda addresses the root cause of autoimmunity rather than only its manifestations. Interventions like Panchakarma, Rasayana therapy, and ethical-lifestyle adherence (Achara Rasayana) enhance Vyadhikshamatva and support long-term remission. Future healthcare models must embrace evidence-based integrative approaches, fostering interdisciplinary research and patient-centric care. With rigorous validation, Ayurvedic principles can significantly enrich global autoimmune disease management.

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