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Beyond Alzheimer's Drugs: China's Prevention Medicine Awakening

An Orthomolecular Systems Medicine Perspective on Cognitive Health and Chronic Disease Prevention

By Patrick Holford and Richard Z. Cheng, MD, PhD

If there is one country that urgently needs effective strategies to prevent Alzheimer's disease and cognitive decline, it is China.

China's rapidly aging population now exceeds 310 million people over the age of 60, representing more than one-fifth of the nation's population. The number is expected to continue rising substantially over the coming decades [1, 2]. Recent projections suggest that China may have approximately 20 million people living with Alzheimer's disease and related dementias by 2030 [3].

The potential economic and social burden is enormous.

Yet what is striking is not simply the scale of the challenge-but the seriousness with which prevention is now being discussed.

In China, older adults are increasingly referred to not as "elderly," but as the "silver-haired population," reflecting a more positive and active view of aging. Prevention-focused public health initiatives targeting this population are expanding rapidly.

At the recent **2nd Silver-Haired Healthy Lifestyle Science Popularization Conference** in Nanjing, China, attended by approximately 2,500 participants, with broader public outreach through television and digital media. Physicians, nutrition experts, gerontology specialists, and public health officials gathered to discuss practical prevention strategies for cognitive decline and chronic disease.

The overall message was remarkably consistent:

- Improve nutrition
- Reduce sugar intake
- Stop smoking
- Improve sleep
- Maintain physical activity
- Support brain health early rather than waiting for disease progression

Dr. Zhang Lei, a well-known physician and public health advocate involved in the conference, summarized the philosophy succinctly:

"Prevention is the cure."

This prevention-oriented approach contrasts sharply with the increasingly pharmaceutical-centered strategy dominating much of the Western Alzheimer's discussion.

At the conference, there was substantial interest in nutrition-based and lifestyle-based approaches to cognitive resilience, including the role of omega-3 fatty acids, phospholipids, B vitamins, exercise, sleep, and personalized behavioral interventions.

Patrick Holford emphasized the essential biological interdependence of omega-3 fatty acids, phospholipids, and B vitamins in brain structure and function. These nutrients are not isolated "supplements," but fundamental building blocks required for neuronal integrity, membrane function, methylation, neurotransmission, and long-term cognitive resilience [4-7].



Figure 1. Patrick Holford speaking at the *2nd Silver-Haired Healthy Lifestyle Science Popularization Conference in Nanjing, China (May 2026)*.

Importantly, Chinese public health experts also showed strong interest in scalable digital prevention tools, including cognitive assessment platforms and personalized prevention strategies delivered through smartphones and digital health networks.

This reflects an important shift toward systems-level prevention medicine-combining nutrition, lifestyle, behavioral science, and personalized risk assessment rather than relying exclusively on late-stage pharmaceutical intervention.

One of the most striking themes throughout the conference was the openness toward nutrition and preventive medicine.

Unlike in many Western settings, there appeared to be little hostility toward nutritional supplementation or lifestyle-based prevention approaches.

Traditional Chinese perspectives that view food and lifestyle as foundational to health may partially explain this openness.

Beyond Alzheimer's Disease

The implications extend far beyond Alzheimer's disease.

Cognitive decline, metabolic dysfunction, cardiovascular disease, diabetes, obesity, and many chronic degenerative disorders increasingly appear interconnected through shared biological pathways involving nutrition, inflammation, vascular integrity, metabolic health, mitochondrial function, toxicological burden, microbiome disruption, sleep impairment, and lifestyle-related factors [\[8-14\]](#).

While omega-3 fatty acids, phospholipids, and B vitamins represent important nutritional foundations, an Integrative Orthomolecular Systems Medicine (IOM Systems Medicine) perspective suggests that cognitive decline rarely results from a single nutrient deficiency or isolated pathway.

Rather, Alzheimer's disease and related neurodegenerative disorders may emerge from the cumulative effects of multiple upstream disturbances—including metabolic dysfunction, nutrient insufficiency, chronic inflammation, toxicological burden, sleep disruption, microbiome imbalance, hormonal dysregulation, psychosocial stress, and loss of metabolic resilience.

An important implication of this systems-oriented framework is what IOM Systems Medicine describes as the Nutrient Demand Principle [\[15-17\]](#). Biological stressors—including aging, chronic inflammation, metabolic dysfunction, toxicological burden, infection, psychological stress, and neurodegeneration itself—may substantially increase the body's demand for essential nutrients. Under such circumstances, nutrient requirements necessary to restore optimal physiological function may exceed conventional dietary recommendations. This principle helps explain why some individuals may benefit from higher intakes of nutrients such as omega-3 fatty acids, vitamin D, vitamin C, magnesium, thiamine, and other orthomolecular interventions when guided appropriately by clinical assessment and monitoring.

From an IOM Systems Medicine perspective, preservation of cognitive function may also depend on maintaining metabolic resilience—the capacity to efficiently generate and utilize energy under conditions of physiological stress. Loss of metabolic resilience may contribute not only to obesity and type 2 diabetes, but also to age-related cognitive decline and neurodegenerative disease.

From this perspective, Alzheimer's disease may be viewed not simply as a disorder of the brain, but as a downstream manifestation of broader systems dysfunction affecting the entire organism (Fig. 2).

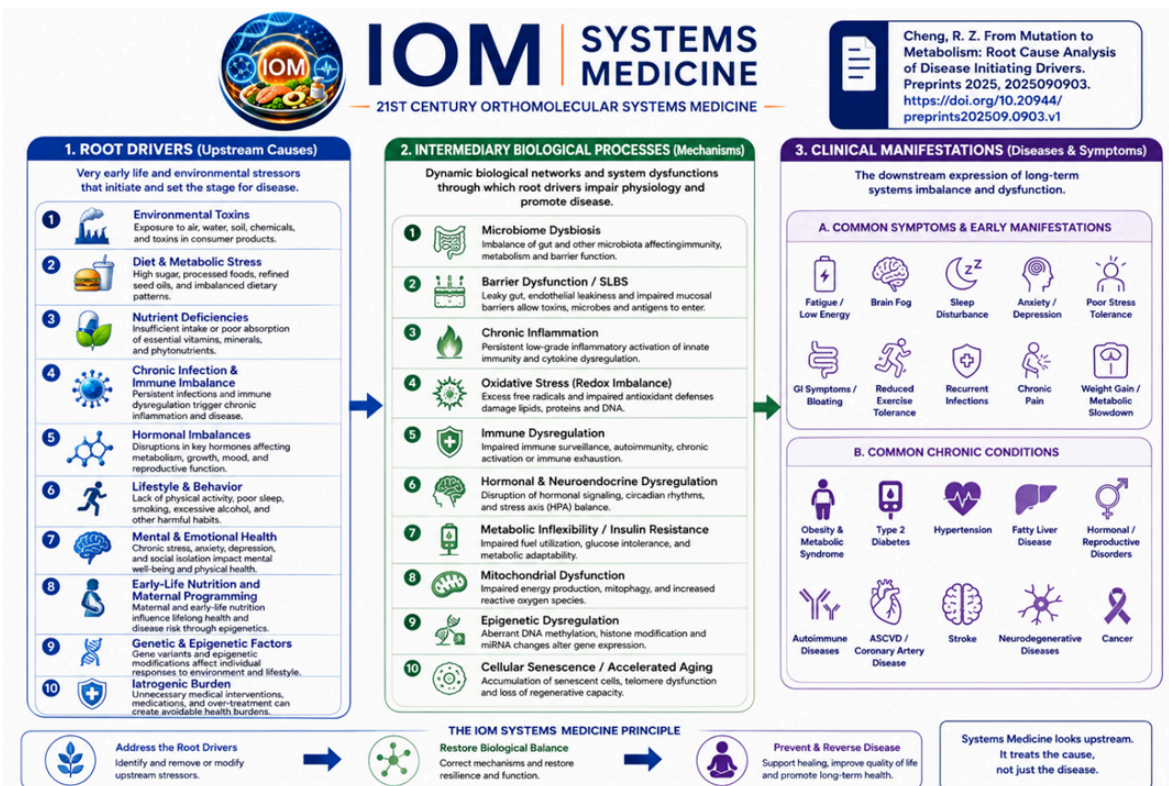


Figure 2. IOM Systems Medicine Framework illustrating upstream root drivers, intermediary biological processes (mechanisms), and downstream clinical manifestations of chronic disease. Developed by Richard Z. Cheng, MD, PhD.

This systems-oriented framework shifts the focus from late-stage disease treatment toward earlier identification and correction of upstream biological disturbances before irreversible degeneration occurs.

Barrier dysfunction may represent a particularly important and underappreciated contributor to chronic disease. The IOM Systems Medicine framework describes this broader phenomenon as Systemic Leaky Barrier Syndrome (SLBS) [13], in which disruption of the intestinal barrier, blood-brain barrier, vascular endothelium, and other biological barriers may contribute to chronic inflammation, immune dysregulation, and progressive tissue dysfunction throughout the body.

Within this framework:

Upstream Root Drivers

- Environmental toxicological burden
- Dietary and metabolic stress
- Nutrient insufficiency
- Chronic infections and immune imbalance
- Hormonal and endocrine dysregulation
- Lifestyle-related factors
- Psychosocial stress and emotional burden
- Early-life nutrition and developmental programming
- Genetic and epigenetic susceptibility
- Iatrogenic influences

Intermediary Biological Processes

- Chronic inflammation
- Oxidative-reductive imbalance
- Barrier dysfunction
- Microbiome disruption
- Immune dysregulation
- Mitochondrial dysfunction
- Metabolic inflexibility
- Accelerated biological aging

Clinical Manifestations

These disturbances may ultimately contribute to:

- Alzheimer's disease and dementia
- Cardiovascular disease
- Type 2 diabetes
- Obesity
- Autoimmune disorders
- Cancer
- Other chronic degenerative conditions

In this sense, prevention is not merely about avoiding one disease. It is about preserving systemic resilience.

A Global Question

The challenge now facing all nations is whether healthcare systems will continue emphasizing late-stage disease management, or whether they will seriously invest in upstream prevention, public education, and systems-oriented health strategies.

China's emerging "silver-haired" prevention movement may represent one of the earliest large-scale public experiments in this direction.

If successful, it could provide important lessons for the rest of the world.

The ultimate goal is not merely the prevention of Alzheimer's disease. It is the preservation of the body's capacity to generate energy, maintain structural integrity, repair damage, adapt to stress, and sustain cognitive function throughout life. In this sense, healthy aging is fundamentally a systems-level process.

The future of healthcare may depend less on finding the next Alzheimer's drug-and more on understanding how to preserve the biological systems that keep the brain healthy in the first place.

Patrick Holford is founder of the Food for the Brain Foundation and author of *Alzheimer's: Prevention is the Cure*.

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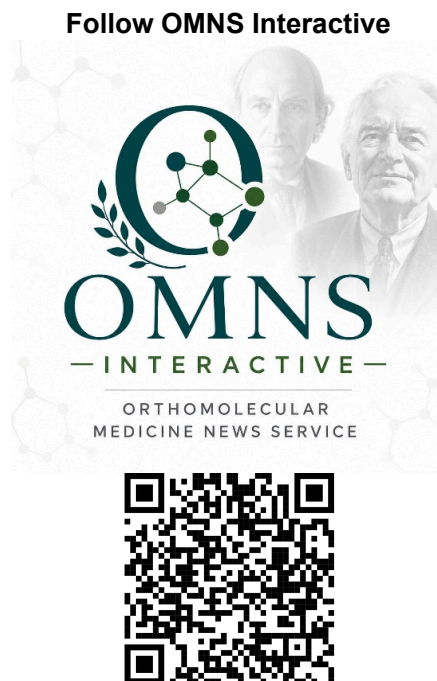
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