BioNatural Healing College

2018

Cultivating knowledge, skills, and character of students.

Hope, Education and Healing

BNHC E-Magazine – April Issue #85

Online Diploma/MS Degree

Contact: info@bionaturalhealingcollege.org

Contents

Message: from the President of BioNatural Healing College (BNHC)

Greetings,

Spring is one of the blessed seasons of the year to reflect on the wisdom and perfect design of our Creator (Almighty God), who fashioned the beautiful rhythms of the plant kingdom, living organisms, and our planet Earth through the cycle of four seasons. Through His provision of water that sustains life, He beautifies our environment and blesses humanity with nourishment, energy, and healing.

BioNatural Healing College (BNHC Online), a nonprofit institution based in Pomona, California, is pleased to present the April 2026 edition of the BNHC E-Magazine. We welcome this new season with hope and with a renewed commitment to advancing our mission and vision of sharing education, hope, and healing. We extend our heartfelt appreciation to all contributors, supporters, and to our dedicated researchers, faculty, staff, students, and engaged readers for their invaluable feedback and steadfast support.

This magazine is designed as an educational resource, offering diverse insights and expert perspectives from around the world. All content is intended solely for informational and educational purposes, and the views expressed are those of the individual authors and do not necessarily represent an official position of BNHC. We hope that this edition will be a rich source of knowledge and inspiration, supporting your ongoing journey of learning, healing, and sharing wisdom throughout life's seasons.

On behalf of the entire BNHC team, we wish you continued health, happiness, and prosperity.

Warmest regards,

Dr. M. Nadir Sidiqi, Ph.D.

BioNatural Healing College

BioNatural Healing College

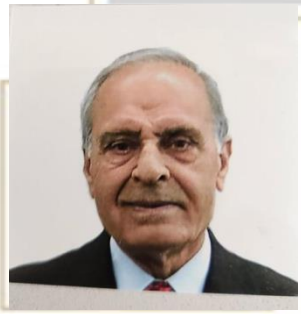
2018

Cultivating knowledge, skills, and character of students.

(BNHC Online) – Leadership, Faculty, and Staff

President **BNHC**

Dr. Nadir Sidiqi Ph.D.



Prof. M. Nabi Aslamy

Dr. Rebecca Anklam

Dr. Bera Dordoni

Dr. Azza Mahmoud

FACULTY

Dr. Mehdi Kamali

Dr. Vivek Sharma

Dr. Tanveer Alam

Dr. Maryam Ekramzadeh

Dr. Pamir Momand

Dr. Pratibha Sharma

Dr. Imranulla Shah

Dr. Bushra Shaida

Dr. Mona Salem

Mrs. Zarghuna Bashary

Mrs. Lima Nadri

Mr. Wais Seddiqi

Dr.. Shivani Sharma

BioNatural Healing College

Stands on 7 Core Pillar Foundations as follows

3. A series of complex chains involved with food production from the field to the mouth of the human body desperately needs scientific research to maximize healthy, nutritionally food production and end malnutrition and food insecurity.

2. No harm to public health and environmental health (Biodiversity) including pollinators, surface water, groundwater, soil, and air

1. All living organisms ar made from water. This beautiful connection connects us to praise the Creator of Creation for the provision of feeding, fueling, and healing to humanity.

4. Harmful pests such as insects, and pathogens causing to human and plant health and loss of economic problems. BioNatural chemicals from plants, microorganisms, and ocean-living organisms exist and need further research to discover along with safety to utilize for the health improvement of humans as well as BioNatural Pest Management (insects, fungi, bacteria, viruses, nematodes, weeds, rodents, etc.).

5. Listen, love, appreciate, and respect with deep conscience and subconscious the connection between the genes of your body and beautifully ecologically in sense of feeling, feeding,

6. The brilliant human mind can be irrigated with balanced drinking clean water as a whole-body system to detoxify the toxicant from their body systems as well as to detoxify the soil, water, and environment from harmful chemicals, particularly pesticides through collaboration, and dedication from the individual, family, community, and scientific community locally and globally.

7. BNHC provides a high-quality science-based foundation through online education to fit and accommodate the needs of each prospective student for the sustainability and prosperity of his or her own, family, community, and humanity.

BioNatural Healing College

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BNHC Online

1

Water is Life's Foundation

All living organisms are connected through water. We praise the Creator for provision, fueling, and healing.

2

Environmental Harmony

Protecting public and environmental health, including biodiversity, pollinators, soil, and water.

3

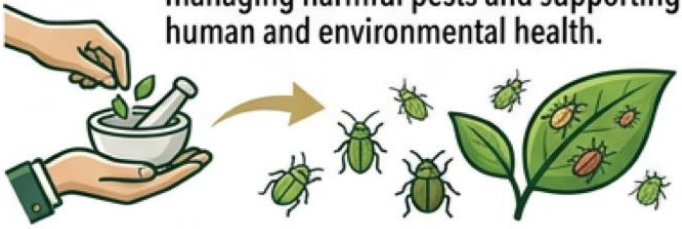
Food Systems & Health

Scientific research is crucial to maximize healthy food production and reduce malnutrition.

4

BioNatural Pest Management

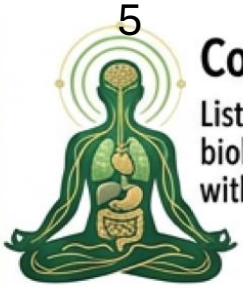
Researching plant-based solutions for managing harmful pests and supporting human and environmental health.



5

Conscious Connection

Listen, love, appreciate, and respect the biological and spiritual connection within ourselves.



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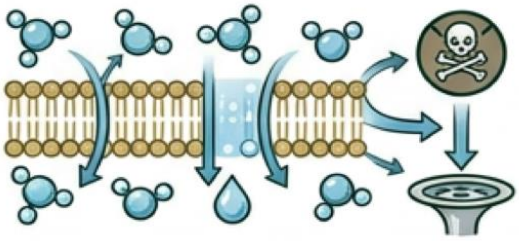
Water & Detoxification

Clean water detoxifies the body. Online science-based education supports protection from harmful chemicals through collective effort.



7

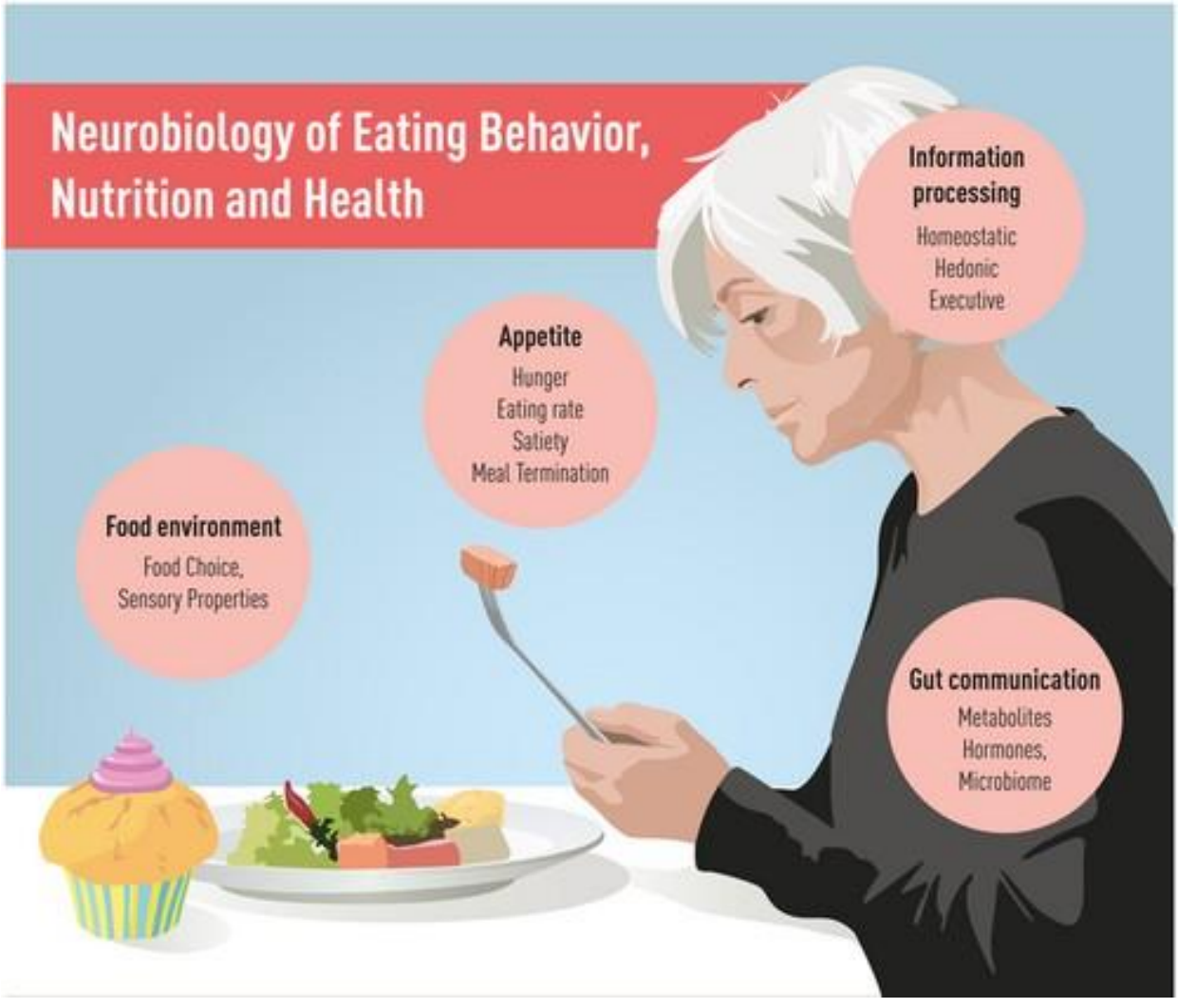
Education for Sustainability

BNHC provides high-quality science-based education for personal, family, community, and environmental prosperity.

Neurobiology of Eating: How the Brain Regulates Appetite and Metabolism

By Ahmad Walid Fazil, Student Nutrition and Brain Function Consultant at BNHC, Guiding Mentors: Dr. Tanveer Alam, Prof. at BNHC, Dr. Mohammad Amin Arshad, Histology Prof. at Balkh Medical University.

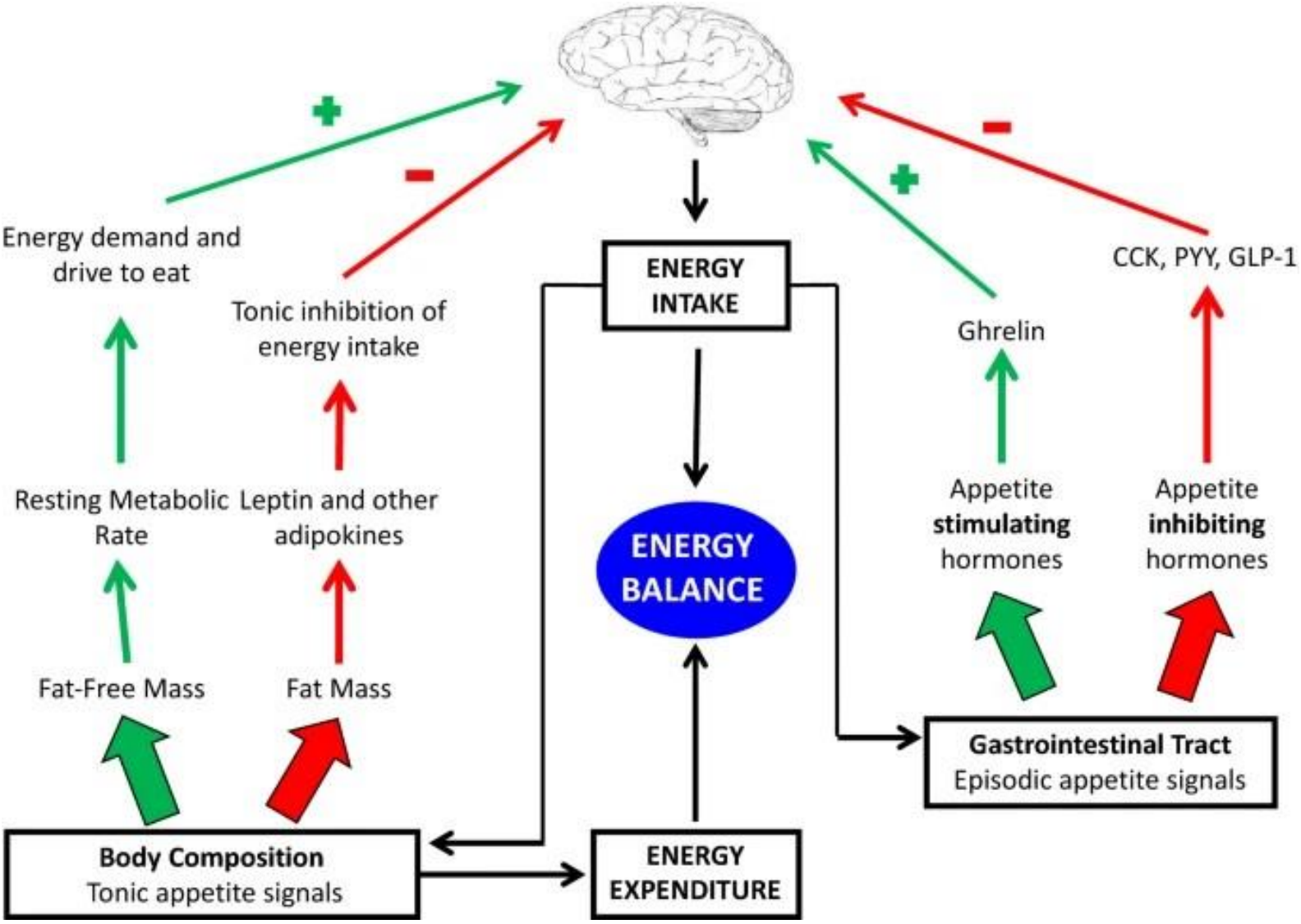
Introduction: Eating behavior is not solely a matter of personal choice or willpower; it is the outcome of complex neurobiological processes that integrate physiological needs, environmental cues, emotional states, and social contexts. Over recent decades, global increases in obesity, eating disorders, and metabolic diseases have drawn scientific attention toward the brain mechanisms that regulate appetite and energy balance. Understanding how the brain controls hunger, satiety, and metabolism is therefore essential for addressing modern public health challenges. The neurobiology of eating focuses on how central nervous system structures, particularly the hypothalamus, brainstem, and reward-related regions, interact with peripheral signals such as hormones, nutrients, and neural inputs to regulate food intake and energy expenditure. These mechanisms evolved to maintain survival in environments of food scarcity, yet they often become maladaptive in contemporary settings characterized by abundant, energy-dense foods. This research examines how appetite and metabolism are regulated by neural circuits, hormonal signals, and reward pathways. By analyzing the historical development of appetite regulation theories, the neuroendocrine mechanisms involved, and the role of environmental and psychological influences, this study aims to identify structural factors that contribute to overeating, metabolic dysregulation, and diet-related diseases. Ultimately, the research seeks to inform more effective, biologically grounded approaches to nutrition, health promotion, and disease prevention.



Source: Journal of Internal Medicine, 09 July 2023, see bibliography

Neurobiological, Hormonal, and Regulatory Frameworks: Evolutionary and Biological Foundations of Appetite

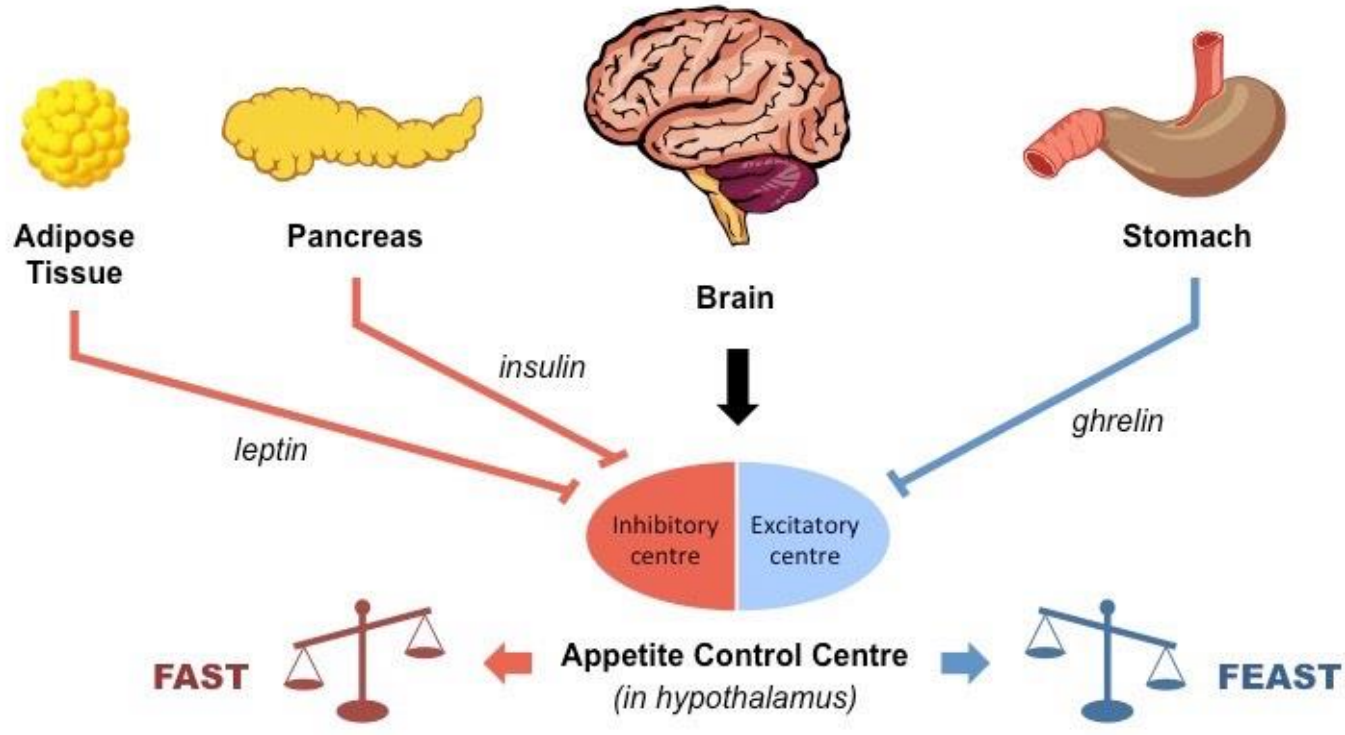
From an evolutionary perspective, the human brain developed mechanisms to ensure sufficient energy intake for survival. Hunger signaling systems evolved to prioritize high-calorie foods and promote eating during times of availability. These systems are deeply conserved across species and are resistant to conscious override, explaining why dietary restraint often fails despite strong motivation. Appetite regulation is primarily controlled by the central nervous system, with the hypothalamus serving as the main integration center. The hypothalamus receives signals from peripheral organs regarding energy status and translates them into behavioral and metabolic responses.



Source: The Psychobiology of Hunger, A Scientific Perspective, See Bibliography

Hypothalamic Control of Appetite: Within the hypothalamus, the arcuate nucleus plays a central role in appetite regulation. Two key populations of neurons operate in functional opposition: Orexigenic neurons (NPY/AgRP) stimulate hunger and reduce energy expenditure. Anorexigenic neurons (POMC/CART) promote satiety and increase energy expenditure. These neurons respond to circulating hormones such as leptin, ghrelin, and insulin. Disruptions in this balance, due to chronic stress, poor diet, or genetic factors, can lead to sustained overeating or metabolic dysfunction.

Hormonal Regulation of Hunger and Satiety. Peripheral hormones act as messengers between the body and the brain: Ghrelin, produced mainly in the stomach, signals hunger and increases food intake. Leptin, secreted by adipose tissue, signals long-term energy stores and suppresses appetite. Insulin influences both glucose metabolism and appetite control. In conditions such as obesity, leptin resistance may develop, impairing the brain's ability to recognize sufficient energy stores and leading to continued eating despite adequate or excessive fat mass.



How is Appetite Controlled by Hypothalamus? Bio Ninja, See Bibliography.

Reward Systems and Hedonic Eating: Beyond homeostatic regulation, eating behavior is strongly influenced by the brain's reward system. Dopaminergic pathways involving the ventral tegmental area and nucleus accumbens respond to palatable foods, reinforcing eating behavior even in the absence of energy need. Highly processed foods rich in sugar and fat can overstimulate these reward circuits, promoting compulsive eating patterns similar to addictive behaviors. This interaction between metabolic regulation and reward processing complicates efforts to manage eating behavior through willpower alone.

Methodology: This study adopts a qualitative, integrative research approach, grounded in a positivist scientific paradigm. The research is based on a systematic analysis of peer-reviewed neuroscience, endocrinology, and nutrition literature. **Research Design**

- The study synthesizes findings from:
- Neuroimaging studies
- Hormonal and metabolic research
- Experimental animal models
- Clinical studies on obesity and eating disorders
- The focus is on identifying patterns and causal relationships between neural mechanisms and eating behavior rather than measuring individual dietary outcomes. **Theoretical Frameworks**

•The analysis draws on:
•Homeostatic regulation theory to explain energy balance mechanisms
•Neuroendocrine signaling models linking peripheral hormones to central control
•Reward-based learning theories to understand hedonic eating

These frameworks allow examination of appetite as a biologically regulated process shaped by both internal physiology and external environments. **Data Sources:** Primary sources include academic journals, neuroscience textbooks, and reports from international health organizations. Secondary quantitative data are used to contextualize findings related to obesity prevalence and metabolic disease trends. **Results:** The analysis reveals that appetite and metabolism are regulated through interconnected neural and hormonal systems, rather than isolated brain regions or single hormones. **Key findings include:**

1. Dysregulation of hypothalamic signaling is strongly associated with chronic overeating and metabolic disorders.
2. Hormonal resistance, particularly to leptin and insulin, disrupts feedback mechanisms that normally suppress appetite.
3. Reward-driven eating can override homeostatic controls, especially in food environments rich in ultra-processed foods.
4. Stress and sleep deprivation significantly alter neuroendocrine signaling, increasing hunger and preference for high-energy foods.

These findings demonstrate that eating behavior is shaped by systemic biological processes, not solely individual choice. **Findings and Thematic Synthesis of Existing Literature:** This section synthesizes findings from neuroscientific, physiological, and behavioral studies on eating regulation. Rather than presenting original experimental results, the analysis draws on peer-reviewed literature to identify recurring neurobiological patterns and mechanisms. **Homeostatic Regulation of Appetite**

Across studies, appetite regulation consistently emerges as a homeostatic process governed primarily by the hypothalamus. Research demonstrates that the arcuate nucleus integrates peripheral hormonal signals such as leptin, insulin, ghrelin, peptide YY (PYY), and glucagon-like peptide-1 (GLP-1).

Two antagonistic neuronal populations play a central role:

- NPY/AgRP neurons, which stimulate hunger and food intake
- POMC/CART neurons, which promote satiety and energy expenditure

Evidence suggests that disruption in these signaling pathways, particularly leptin and insulin resistance, contributes significantly to obesity and metabolic disorders. Importantly, findings indicate that these disruptions are not solely behavioral but rooted in altered neural responsiveness. **Hedonic and Reward-Based Eating:** A dominant theme in the literature is the distinction between homeostatic hunger and hedonic eating. Studies consistently show that even in the absence of caloric need, highly palatable foods can activate reward circuits involving:

- The ventral tegmental area (VTA)
- The nucleus accumbens
- Dopaminergic pathways

Neuroimaging studies reveal heightened activation in these regions in response to sugar- and fat-rich foods, particularly among individuals with obesity or binge-eating tendencies. This suggests that overeating may reflect neuroadaptations in reward processing, similar to those observed in substance use disorders. **Neuroendocrine Control of Metabolism:** Findings also highlight the brain's role in regulating metabolic rate, glucose homeostasis, and fat storage. The hypothalamus communicates bidirectionally with peripheral organs via the autonomic nervous system. Insulin-sensitive neurons in the brain influence hepatic glucose production, while leptin signaling affects lipid metabolism and thermogenesis. Disruptions in these pathways are linked with type 2 diabetes and metabolic syndrome, reinforcing the concept that metabolism is centrally regulated, not merely peripheral. **Integrating Neurobiology and Eating Behavior:** The reviewed literature strongly supports the argument that eating behavior is biologically regulated rather than purely voluntary. While cultural, social, and psychological factors shape food choices, the initiation and termination of eating are deeply rooted in neural circuits evolved for survival. This challenges simplistic narratives that attribute obesity or disordered eating solely to a lack of self-control. Instead, evidence points toward neurobiological vulnerability, where certain individuals are more sensitive to food cues and reward signals. **Brain Plasticity and Dietary Environment:** An important discussion point is the role of neuroplasticity. Chronic exposure to ultra-processed foods appears to alter dopamine signaling, reducing reward sensitivity and driving higher consumption to achieve the same pleasure response. This has major implications in modern food environments where calorie-dense foods are inexpensive, accessible, and aggressively marketed. The brain adapts to this environment in ways that favor overeating, creating a feedback loop between behavior and neural change.

Implications for Eating Disorders: Neurobiological findings also contribute to understanding eating disorders such as anorexia nervosa, bulimia nervosa, and binge-eating disorder. Altered reward processing, impaired interoceptive awareness, and dysregulated satiety signaling have been observed across disorders, although manifesting differently. This reinforces the need for treatment approaches that integrate neuroscience, psychology, and nutrition, rather than focusing on behavior alone. **Public Health and Clinical Implications: Rethinking Obesity Interventions:** Understanding appetite regulation as a brain-driven process necessitates a shift in public health strategies. Interventions focusing only on willpower or calorie restriction are insufficient and often unsustainable.

- Neurobiologically informed strategies include:
- Pharmacological agents targeting GLP-1 and leptin pathways
- Environmental interventions reducing exposure to hyperpalatable foods
- Behavioral approaches aligned with neural reward systems

Policy and Food Systems: From a policy perspective, findings support regulation of food marketing, particularly to children and adolescents whose neural reward systems are still developing. Labeling policies, sugar taxation, and urban design promoting physical activity can help counteract neurobiological vulnerability. **Clinical Practice:** Clinicians can use neurobiological insights to reduce stigma and improve patient engagement. Explaining eating behavior through a brain-based lens can enhance treatment adherence and psychological well-being. **Limitations of Existing Research:** Despite significant advances, several limitations persist:

- Heavy reliance on animal models limits direct human generalization

- Neuroimaging studies often show correlation rather than causation
- Underrepresentation of low- and middle-income countries in research

Additionally, most studies focus on adults, leaving gaps in understanding adolescent neurobiology of eating, a critical developmental period.

Recommendations for Future Research

Future studies should:

- Integrate longitudinal designs to assess neural changes over time
- Include culturally diverse populations
- Examine interactions between stress, trauma, and appetite regulation
- Explore ethical applications of neuro-targeted interventions
- Interdisciplinary research combining neuroscience, public health, and social science is particularly needed.

Conclusion: This research highlights that appetite and metabolism are regulated through complex neurobiological systems integrating hormonal, neural, and environmental signals. The brain functions as the central coordinator of energy balance, influencing not only hunger and satiety but also reward, motivation, and metabolic processes. Recognizing eating behavior as a neurobiological phenomenon has profound implications for health policy, clinical practice, and societal attitudes. Addressing global challenges such as obesity and eating disorders requires moving beyond individual blame toward evidence-based, brain-informed solutions.

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"BioNatural Healing College (BNHC) sincerely appreciates your generous contribution towards the Gift of Education. Your donation plays a pivotal role in supporting scholarships for students in need, empowering them to achieve their educational aspirations. We extend our deepest gratitude for your generosity and commitment to education."

Dear Esteemed Donors Gift of Education Scholarship

Dr. Rebecca Anklam Thanks for the generous contribution. ***BNHC is a Nonprofit Online Institution that offers Online 4 Diploma/MS in BioNatural Health Sciences.***

Perspective of Scholarship Recipients

To the BioNatural Healing College (BNHC) Team,

I am very grateful to BioNatural Healing College (BNHC Online) for providing me with this scholarship opportunity in the Nutrition and Brain Function Consultant Online diploma. It allows me to study and expand my knowledge in nutritional health and brain function wellness. This program will help me gain the skills needed to support and guide people toward healthier lifestyles through better nutrition and awareness. I truly appreciate the Gift of Education initiative and the opportunity to learn and grow. Special Thanks to Mr. Shiraz Moosa and Dr. Faisal Qazi for providing me with this scholarship as a gift of education.

Scholarship recipient

Salma Hanifi

"BioNatural Healing College (BNHC) sincerely appreciates your generous contribution towards the Gift of Education. Your donation plays a pivotal role in supporting scholarships for students in need, empowering them to achieve their educational aspirations. We extend our deepest gratitude for your generosity and commitment to education."

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Perspective of Scholarship Recipients

To the BioNatural Healing College (BNHC) Team, I believe this scholarship represents more than just financial support—it is an opportunity for individuals who are passionate about health and healing to pursue their education despite challenges. The Gift of Education initiative reflects a meaningful commitment to empowering students and making knowledge accessible to those in need. I would like to express my sincere appreciation to Hajii Sahib M. Zahir Tahmass for his generosity and vision in supporting students like me.

I am also deeply grateful to BioNatural Healing College (BNHC online) for providing this valuable opportunity to study and grow in the field of nutrition and holistic health. Being part of the Online Nutrition & Brain Function Consultant program is a meaningful step toward building a future where I can contribute to improving people's well-being through nutrition and holistic practices. This scholarship not only supports my academic journey but also motivates me to use what I learn to help others in my community. I am truly thankful for this opportunity and inspired to make the most of it by working hard, expanding my knowledge, and giving back in meaningful ways.

Sincerely,

Forozan Afzali

"BioNatural Healing College (BNHC) sincerely appreciates your generous contribution towards the Gift of Education. Your donation plays a pivotal role in supporting scholarships for students in need, empowering them to achieve their educational aspirations. We extend our deepest gratitude for your generosity and commitment to education."

Scholarship Waiting, List Students

1.Forozan Afzali Nutrition & Brain Function Consultant Tuition Fee $1600

2. Asilla Nikzai Nutrition & Brain Function Consultant Tuition Fee $1600

3. Somaya Omar Nutrition & Brain Function Consultant Tuition Fee $1600

4. Maryam Samim Nutrition & Brain Function Consultant Tuition Fee $1600

5. Samira Gheysai Nutrition & Brain Function Consultant Tuition Fee $1600

6. Ghatol Shahab Nutrition & Brain Function Consultant Tuition Fee $1600

Online Diploma/ MS Degree

7. Eid Bibi Sayar Nutrition & Brain Function Consultant Tuition Fee $1600

8. Rahela Waziri Nutrition & Brain Function Consultant Tuition Fee $1600

9. Aisha Nutrition & Brain Function Consultant Tuition Fee $1600

10. Rodaba Malyar Nutrition & Brain Function Consultant, Tuition Fee $1600

11. Maria Safi, Nutrition & Brain Function Consultant Tuition Fee $1600

12. Maryam Samim Nutrition & Brain Function Consultant Tuition Fee $1600

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Scholarship Waiting, List Students

13. Ghufran Ali Plant-Based Nutrition Diploma Tuition Fee $2500
14. Salar Agha BioNatural Pest Mangement Online diploma Tuition Fee $1600
15. Fazalomar Ali Herbal Science & Master Herbalist Tuition Fee $1600
16. Sayed Israr Sayedi BioNatural Pest Management Tuition Fee $1600
17. Asadullah Maroof MS degree BioNatural Health Sciences Tuition Fee $2500
18. Hatam Malyar Nutrition & Brain Function Consultant Tuition Fee $1600

Online Diploma/ MS Degree

BNHC is a Nonprofit Online Institution that offers Online 4 Diploma/Master in BioNatural Health Sciences.

Online MS Degree in BioNatural Health Sciences (Focuses on Human Health Improvement & Disease Prevention, Nutrition, Phytonutrients, Lifestyle Biological Modification, Holistic, Ecological Approaches

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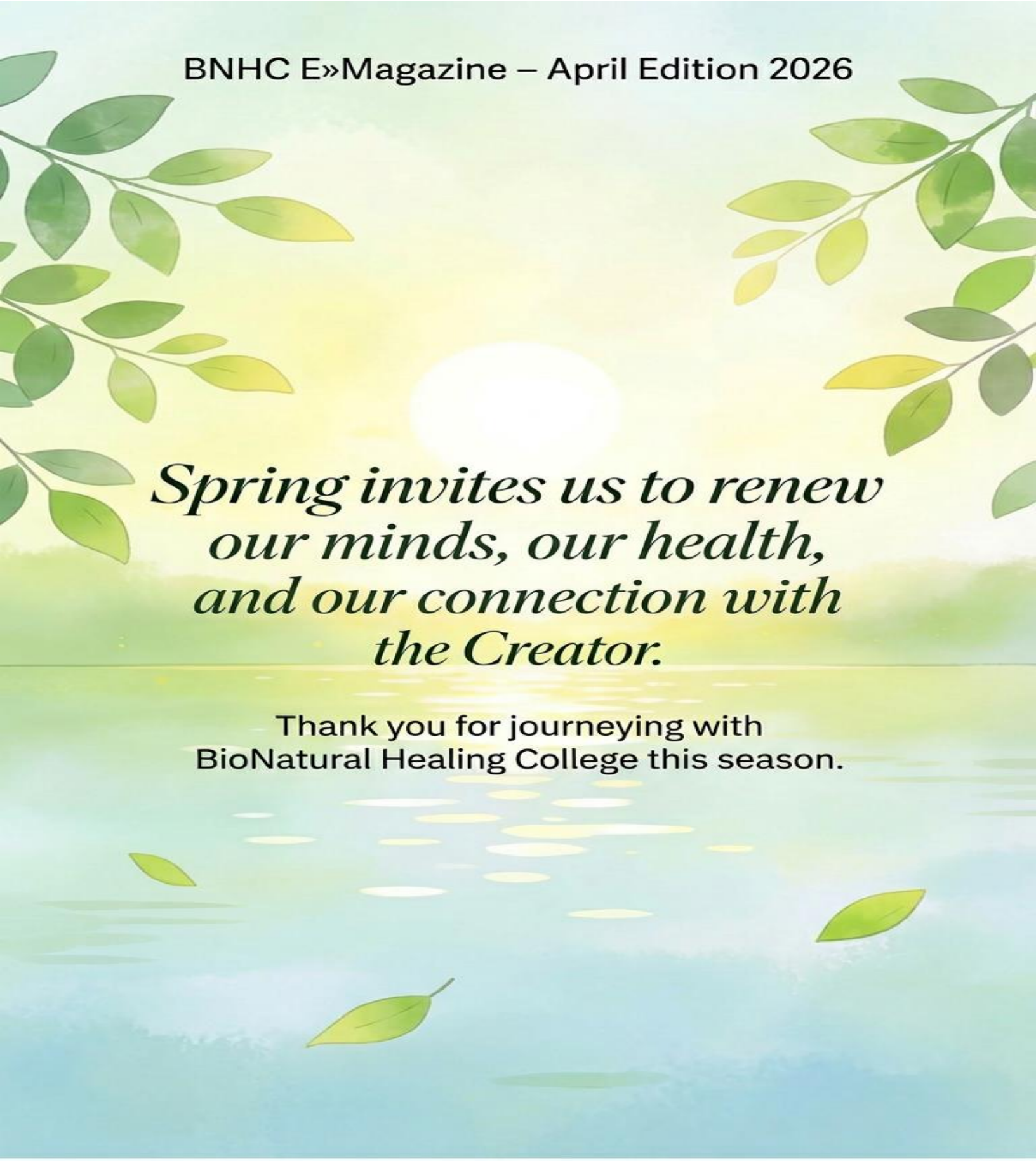
Mission: BioNatural Healing College (BNHC) is a non-profit public benefit institution that has tax-exempt status under the Internal Revenue Service, Section 501(c)(3) of the United States of America. Our goal is to offer a high-quality education a diploma program as well as holistic health and nutrition conferences, seminars, workshops, and continuing education. The focus of these educational programs is to offer healing and holistic nutrition science through online distance learning. These dynamic online education programs will provide diverse adult learners throughout the world the experience of enhancing their quality of life, their health, and their happiness.

Vision: The faculty, staff, and management team of BioNatural Healing College (BNHC) are passionately committed to providing the best teaching possible in this field. We seek to encourage, motivate, and explain the importance of this field to prospective students so that they may make an informed decision regarding enrollment. We seek an ultimate goal of satisfaction for the student based on responsibility, commitment, respect, awareness, and sustainable education for society.

Accreditation and Recognition: BioNatural Healing College (BNHC), based in California, is dedicated to providing high-quality online education and vocational online distance learning to students worldwide. As a legally recognized institution, it is authorized to operate by the State of California's Bureau for Private Postsecondary Education, by the established educational code. While BioNatural Healing College is not accredited by the United States Department of Education, BNHC is a member of the Agronomy Society of America, Crop Science Society of America, Soil Science Society of America, and American Holistic Health Association (AHHA), reflecting its commitment to a holistic and ecological approach to human health and environmental health improvement education.



Spring invites us to renew our minds, our health, and our connection with the Creator.

Thank you for journeying with
BioNatural Healing College this season.

BNHC

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