

COMBINATION OF NATURAL INGREDIENTS FOR SUPPORT IN LIFESTYLE***Dr. Raymond L. Venter*****Corresponding Author: Dr. Raymond L. Venter**

Article Received on 18/11/2021

Article Revised on 08/12/2021

Article Accepted on 28/12/2021

ABSTRACT

In this paper, a number of various natural ingredients have been discussed in terms of the benefits they offer to an individual by regular consumption. These ingredients, when combined in the proper proportions, can be extremely beneficial to human health. The blend will revitalize the potent whole food botanicals that helps an individual to get the required support for his already active lifestyle.

Index Terms: Healthy, diet, ingredients, natural.**INTRODUCTION**

THESE ingredients ensure that the human body maintains its specific functions normally, such as mood balance at various points of occasional stress, health of the response mechanism of the urinary system, vitality, and energy levels for an active lifestyle for males, and prostration of response health. A healthy diet is the one which includes all the foods that are dense with proteins and belong to majority of the major food groups that includes whole grains, proteins, fruits, healthy fats as well vegetables.

Benefits of Ingredients

The benefits of these 100% natural and non-synthetic ingredients are mentioned below.

Ginseng (root)

Ginseng has been utilized for many years in traditional Chinese medicine. The plant is primarily slow growing in nature, with fleshy roots and short plants that can be classified as red, white, or fresh depending on the length of the plant that has grown. Fresh ginseng must be harvested within a period of four years, 4 to 6 years for the white ginseng, and six years or more for that of the red ginseng. There are a number of different types of ginsengs. But out of all these types, the Asian and American ginseng, *Panax ginseng* and *Panax quinquefolius* respectively, has gained the most popularity. Both varieties differ in terms of the active substances in their components as well as their effect on the human body. The Asian ginseng is known to offer invigorating effect while on the other hand the American variant is known to function as a relaxing agent.^[1] Ginseng consists of two active compounds, gintonin and the ginsenosides. These compounds can give synergistic effects for providing health benefits to the consumer.^[2]

Ginseng can help for improving the brain functions that includes, behavior mood as well as memory. Some studies, animal, and test tube, show that these components that are present in ginseng, such as compound K and ginsenosides, have the ability to protect the brain from any damage that can be caused by free radicals.^[3]

According to one study, an experiment was conducted with 30 healthy people who consumed approximately 200 mg of *Panax ginseng* on a regular basis for four weeks. By the end of the study, it was discovered that the participants' mental health, as well as their mood and social functioning, had improved. But it is also worth mentioning that these benefits were not very significant after four weeks. It was concluded that the effects of the consumption tend to decrease with time.^[4]

As per another study, it was examined that about 200 to 400mg of consumption of *Panax ginseng* had evident effect on mental fatigue, blood sugar levels and mental performance in 30 healthy participants when compared before and after the mental test at a duration of 10 minutes. As compared to the dose of 400mg, that of 200mg was observed to have been more effective in terms of the tests conducted for fatigue and improvement of mental performance.^[5] It is one of the possibilities that ginseng consumption helped in blood sugar support. This could have aided in reducing mental fatigue and improving overall performance. However, the reason why the lower one is more successful than the higher one is still unclear. Another study showed that consumption of 400mg for eight days, of *Panax ginseng*, considerably improved mathematics skills and calmness.^[6] Apart from these benefits, its consumption showed positive effects on the behavior and brain function of the people

suffering from Alzheimer's disease.^[7] It can also have positive impact on the immune system by strengthening it. To further study its effects on the immune system of the human body, its effects were observed on the people undergoing chemotherapy or surgical treatments. Another study found that there was an improvement in the immune system as well as a reduced recurrence of the symptoms. This experiment was conducted with people who were in the recovery stage from stomach cancer after their surgery. These participants were treated with 5,400mg of ginseng regularly for two years.^[8]

Similar studies have been conducted to investigate the effect of red ginseng extract on immune system markers in patients undergoing chemotherapy following stomach cancer surgery. Over a three-month period, the consumption of the extract resulted in an improvement in immune system markers when compared to individuals in the placebo or control group.^[9]

Ashwagandha (root)

Ashwagandha is regarded as one of the most important herbs in Ayurveda due to its use as an alternative medicine based on Indian principles of natural healing. It has been used to relieve stress for over 3,000 years. It is also used to improve concentration and to boost energy levels. A number of its health benefits can be attributed to tannolides that are present in it in high concentration. It also shows capability for fighting tumor growth as well as inflammation.^[10]

In a test-tube study, it was discovered that it can also increase insulin secretion as well as improve insulin sensitivity in muscle cells.^[11] As per a number of various medical studies, it has been suggested that it is also capable of reducing blood sugar levels in people suffering from diabetes as well as for those who are not.^[12] Furthermore, a week study on several subjects suffering from schizophrenia who were treated with Ashwagandha revealed a reduction in blood sugar levels, fasting, of 13.5 mg/dl on average. When compared to those who received a placebo, it was 4.5 mg/dl.^[13]

According to test-tube and animal research, it also aids in the production of apoptosis due to the presence of a compound known as withaferin. It is the programmed death for the cancerous cells. It also plays a vital role for hindering the growth of cancer cells.^[14] Initially, withaferin was thought to be capable of promoting the formation of ROS (reactive oxygen species) inside cancer cells, thereby disrupting their function. Second, it was discovered that it may cause cancer cells to be less resistant to apoptosis.^[15]

According to animal studies, it can also help for the treatment of various cancer types that may include that of brain, lung, breast, ovarian as well as breast cancer. According to a study conducted, the mice suffering from ovarian tumors were treated using withaferin, either alone or in combination with other anti-cancer drugs. It

showed considerable reduction in growth of tumor i.e., about 70 to 80%.^[16]

In comparison to all of its multiple benefits, it is most well-known for its ability to reduce stress. It was also found from different research that it can block the pathway of stress in the brains of mice by the regulation of chemicals that signal in nervous system.^[17] Also, in the case of a number 2 of human studies, it has shown evidence of reducing the symptoms of people dealing with anxiety and stress disorders.^[18]

Damiana (leaf)

Damiana, also known as *Turnera diffusa*, has a long history of being associated with health benefits for the human body. It is highly beneficial for menstrual support, weight management and healthy cell homeostasis and blood sugar levels. Damiana extract consists of thymol. This compound is beneficial for overall health and has stimulating effects on the body and mind. It also boosts the body's absorption rate. Due to this property, it is generally recommended by herbalists for stress and exhaustion of mood and nervous system. Some of the advantages include digestive health, weight management, and many others. Its extracts break down the sugars in fats and carbohydrates, making them easier to digest. As a result, it promotes balanced blood sugar levels and natural healing.^[19]

Ginger (root)

Ginger has been long known for its application in the form of alternative and conventional medicines. It can be used as an aid for digestion and reduction in nausea. It can also help with fighting against the common cold, flu and other health related issues. Its distinct scent is due to the natural oils contained within it. Gingerol is the most important of them. Gingerol is the primary bioactive compound that has an effect on the body. It carries a significant portion of its therapeutic characteristics. According to studies, it has antioxidant and anti-inflammatory properties. For example, it can help in reducing the oxidative stress which frequently occurs in the body as a result of the existence of a substantial number of free radicals.^[20]

Ginger also works very effectively against nausea.^[21] It provides significant relief from nausea and vomiting in those who have undergone surgery. It can also assist to alleviate nausea caused by chemotherapy. However, more research may be required in this case for further clarification.^[22]

Lemon (fruit)

Some of the most prominent applications of lemon in the field of medicine are listed below.

- It is a popular remedy for skin care. Due to application on skin, it works as a scrub and dusts off the dead cells and cures dandruff as well. It also helps in digestion process by breaking the macro sized molecules of food through consumption. The

consumption of lime juice or oil is highly beneficial for skin health if consumed or applied on the skin combined with other essentials.

- Lemon is famous for treating scurvy that is a disease caused by the deficiency of Vitamin C and it is usually characterized by symptoms of frequent infections such as cold, cough, swollen gums, ulcers in mouth and tongue etc.

Aside from these, lemon has other benefits such as treating constipation, gastric ulcers, respiratory, and urinary diseases.^[26]

Fig

Figs are very unique. They resemble to a teardrop. They are approximately equal to the size of an average thumb, and it is filled with numerous seeds. It consists of a green or purple peel that is edible too. It has a mild sweet taste, and the flesh of the fruit is pink in color. Scientifically, it is referred to as the *Ficus carica*. Both parts of the fruit, i.e., the flesh as well as the leaves, are bundled with multiple nutrients and hence offer the consumer with a lot of different health benefits. Figs can also help to improve the digestive system, lower the risk of heart disease, and manage blood sugar levels.

Among the several benefits provided by figs, one of the most notable is that it can help the consumer satisfy his sweet cravings while simultaneously providing a variety of different health benefits to the human body. Even if a person does not have a sweet tooth, it is recommended that he incorporate figs into his normal diet to reap the many benefits it has to offer. Figs are an excellent source of both, potassium as well as calcium. These minerals are responsible for working together for the improvement of bone density and hence as a result, it helps prevent serious conditions such as osteoporosis. According to studies, consuming a potassium-rich diet assists a great deal in improving bone health and reducing bone turnover. Furthermore, calcium is a critical component in the development of bones, and extensive research has demonstrated that adequate calcium intake improves bone mineral structure at all ages.

Hypertension, that is also referred to as high blood pressure, can lead to multiple complications such as stroke and heart disease. One of the major factors to contribute for such state of health is the imbalance of potassium that occurs due to high consumption of sodium and low potassium. Figs are rich with potassium, and they can help to prevent this kind of imbalance in the human body. While providing enough potassium, it also drains off the excessive sodium from the body.

Multiple digestive issues can also be treated with the help of figs. They may be related to alleviating diarrhea or constipation. At both ends, an increase in fiber within the body can be extremely beneficial. Figs are a good source of fiber content for the body, which aids in

digestion. Figs also promotes general gut health since they contain prebiotics.^[49]

Pomegranate

Pomegranate has also been shown to have beneficial effects on various types of cancer, including cell cycle, angiogenesis, invasion, and tumor cell proliferation.^[28] The polyphenols play a vital role for the inhibition of two enzymes, aromatase and 17- β -hydroxysteroid dehydrogenase. These are involved in the carcinogenesis of the breast and are responsible for the conversion of androgen into estrogen as well as the production of estrogen.

Pomegranate's anti-inflammatory and anti-oxidative actions have been observed, indicating that it includes benefits capable of attaining the desired effects on inflammation. Furthermore, multiple studies suggest that pomegranate has significant impact on chronic inflammatory conditions such as RA (rheumatoid arthritis), IBD (inflammatory bowel disease), as well as cardiovascular and metabolic problems.^[29]

III. CONCLUSION

It is critical for each individual to focus on eating the healthiest diet possible as well as taking useful supplements made entirely of natural ingredients. This can help them to maintain a healthy lifestyle and refrain from any kind of abnormality that may occur in the body parts while functioning. Some of the basic health benefits of consumption of such healthy ingredients include maintaining the health of heart. For example, eliminating a fatty diet and replacing it with a healthier one can help to control blood pressure and therefore keep the heart healthy. Consumption of antioxidant-rich supplements can help the body provide significant defense against cancer by protecting the cells from any type of damage that may occur. In addition to these health benefits, one can also attain numerous other benefits as well such maintain a better mood, improvement in gut health and memory, weight loss, management of diabetes as well as strong teeth and bones.

IV. REFERENCES

1. E. & V. R. P. Stahl-Biskup, "Thyme. In Handbook of herbs and spices," 2012; 499-525.
2. K. Herrmann, "Antioxidativ wirksame Pflanzenphenole sowie," 1994; 94: 113-117.
3. I. K. A. S. A. D. P. & G. S. Stoilova, "Antioxidant activity of a ginger extract (*Zingiber officinale*)," *Food chemistry*, 2007; 102(3): 764-770.
4. T. E., 2003; 432-429.
5. M. B. W. R. G. A. G. J. H. T. R. W. R. R. S. a. K. S. E. Blumenthal, "The Complete German Commission E Monographs: Cinnamon Bark," 1998; 111.
6. J. P. B. L. P. J. S. S. M. A. S. S. S. & S. K. C. Sahoo, "The Golden Spice Turmeric (*Curcuma longa*) and Its Feasible Benefits in Prospering

- Human Health," *A Review. American Journal of Plant Sciences*, 2021; 3(12): 455.
7. Y. Z. C. M. s. H. C. Bin Shan, "Antioxidant capacity of 26 spice extracts and characterization of their phenolic constituents, 2005; 53(20): 7749-59.
 8. R. Yang, L. Wang, B. Yuan and Y. Liu, "The pharmacological activities of licorice.," *Planta Med.*, 2015; 81: 1654–1669.
 9. T. Volqvartz, A. Vestergaard, S. Aagaard, M. Andreasen, I. Lesnikova, N. Uldbjerg, A. Larsen and P. Bor, "Use of alternative medicine, ginger and licorice among Danish pregnant women --- A prospective cohort study," *BMC Complement. Altern. Med.*, 2019; 5.
 10. R. Isbrucker and G. Burdock, "Risk and safety] assessment on the consumption of licorice root (Glycyrrhizasp), its extract and powder as a food ingredient, with emphasis on the pharmacology and toxicology of," *Pharmacol*, 2006; 46: 167–192.
 11. W. RF, "Herbal Medicine. Arcanum AB (ed)., 1988; 22-28.
 12. B. R, ") Chemistry, analysis and immunological] investigations of Echinacea phytopharmaceuticals.," *Immunomodulatory Agents from Plants*, 1999; 41–88.
 13. I. I. B. B. A. J. Binns SE, "Methyl jasmonate increases]reported alkamides and keto alkene/ynes in Echinace pallida (Asteraceae).," *Phytochemistry*, 2001; 57: 417–420.
 14. P. A. K. V. L., A. C. Vincenzo Lattanzio, "Globe] artichoke: A functional food and source of nutraceutical ingredients," *Journal of functional foods*, 2009; 1.2: 131-144.
 15. "Is fenugreek good for you?" Medical news today,] [Online]. Available: <https://www.medicalnewstoday.com/articles/324334> . [Accessed 1 August 2021].
 16. D. Bown, "RHS Encyclopedia of Herbs and Their Uses,," 2008.
 17. K. C. R. & S. A. Schütz, "Taraxacum—A review on its] phytochemical and pharmacological profile," *Journal of ethnopharmacology*, 2006; 107(3): 313-323.
 18. F. Maggi, "Dandelion," *Nonvitamin and Nonmineral] Nutritional Supplements...*
 19. "Health Benefits of Coriander," WebMD, [Online].] Available: <https://www.webmd.com/diet/health-benefits-coriander#1>. [Accessed 1 August], 2021.
 20. D. R. Guay, "Cranberry and Urinary Tract Infections,]" *Drugs*, 2009; 69: 775–807.
 21. W. M. N. Y. Y. C. Y. M. Marotta F, "Nutraceutical] supplementation, effect of a fermented papaya preparation on redox status and DNA damage in GSATM1 genotype, a randomized, placebo controlled, 2006.
 22. "A Better Choice for Freshness," A better choice, 19]. [Online]. Available: <https://www.abetterchoice.com.au/seasonal-choice/the-benefits-of-mandarins/>. [Accessed 1 August 2021], 2021.
 23. E. G. F. C. G. C. G. C. S. C. Angela Sorice, "Ascorbic] acid: its role in immune system and chronic inflammation diseases, 2014; 14(5): 444-52.
 24. A. M. & K. P. P. Bakowska-Barczak, "Black currant] polyphenols: Their storage stability and microencapsulation," *Industrial crops and products*, 2011; 1301-1309.
 25. "Oro Blanco Grapefruit," Special Produce, 16 July 2021.] [Online]. Available: https://specialtyproduce.com/produce/Oro_Blanco_Grapefruit_60.php. [Accessed 1 August], 2021.
 26. M.-H. K. E.-H. K. E.-K. L. I.-S. P. D.-C. Y. H.-S. J. Eun-] Young Park 1, "Efficacy comparison of Korean ginseng and American ginseng on body temperature and metabolic parameters," *Am J Chin Med*, 2014; 42(1): 173-87.
 27. S.-y. N. Dong-soon Im 1, "Yin and Yang of ginseng] pharmacology: ginsenosides vs gintonin," *Acta Pharmacol Sin*, 2013; 34(11): 1367-73.
 28. S. L. G. G. K. R. Wolf-Dieter Rausch 1,] "Neuroprotective effects of ginsenosides," *Acta Neurobiol Exp (Wars)*, 2006; 66(4): 369-75.
 29. P. R. Jennifer M Ellis 1, "Effects of Panax ginseng on]quality of life," *Ann Pharmacother*, 2002; 36(3): 375-9.
 30. D. O. K. A. B. S. Jonathon L Reay 1, "Single doses of] Panax ginseng (G115) reduce blood glucose levels and improve cognitive performance during sustained mental activity," *J Psychopharmacol*, 2005; 19(4): 357-65.
 31. A. B. S. D. O. K. Jonathon L Reay 1, "Panax ginseng] (G115) improves aspects of working memory performance and subjective ratings of calmness in healthy young adults," *Hum Psychopharmacol*, 2010; 25(6): 462-71.
 32. S.-T. L. M. J. O. H.-J. P. J.-Y. S. K. C. M. K. Jae-Hyeok] Heo 1, "Improvement of cognitive deficit in Alzheimer's disease patients by long term treatment with korean red ginseng," *J Ginseng Res*, 2011; 35(4): 457-61.
 33. K. J. H. H. HK, "The Effect of Ginseng on the] Nutritional Status and the Immune Functions after Curative Operations on Gastric Carcinoma Patients," *J Korean Surg Soc*, 1998; 54(6): 854-862.
 34. S.-O. S. M.-Y. C. Jin Kim, "Prospective Study for] Korean Red Ginseng Extract as an Immune Modulator Following a Curative Gastric Resection in Patients with Advanced Gastric Cancer, 2004; 28(2): 104-110.
 35. E. M. M. B. R. M. C. J. P. Mohammad Hossein Mirjalili] 1, "Steroidal lactones from Withania somnifera, an ancient plant for novel medicine," *Molecules*, 2009; 14(7): 2373-93.
 36. R. R. 2. A. S. 3. L. H. 4. N. B. 5. Jonathan Gorelick 1,] "Hypoglycemic activity of withanolides and elicited Withania somnifera," *Phytochemistry*, 2015; 283-289.
 37. N. N. R. F. M. T. P. V. S. K. R. K. S. G. S. S. N. P. R. A.] V. A. B. V. Ashwinikumar A Raut 1, "Exploratory study to evaluate tolerability, safety,

- and activity of Ashwagandha (*Withania somnifera*) in healthy volunteers," *J Ayurveda Integr Med*, 2012; 3(3): 111-4.
38. S. D. S. V. R. T. A. S. a. V. S. S. G. Akshay P.] Agnihotri, "Effects of *Withania somnifera* in patients of schizophrenia: A randomized, double blind, placebo controlled pilot trial study," *Indian J Pharmacol*, 2013; 45(4): 417-418.
 39. S. V. S. Avani R Vyas 1, "Molecular targets and mechanisms of cancer prevention and treatment by withaferin a, a naturally occurring steroidal lactone," *AAPS J*, 2014; 16(1): 1-10.
 40. D. O. 2. K. F. 1. S. M. 1. S. O. 1. Y. O. 1. N. Y. 1. H. N.] 2. Yukihiko Nishikawa 1, "Withaferin A Induces Cell Death Selectively in Androgen-Independent Prostate Cancer Cells but Not in Normal Fibroblast Cells," *PLoS One*, 2015; 10(7).
 41. M. Z. R. 2. K. S. P. 3. M. M. 4. D. M. M. 2. S. K. B. 5. S.] K. S. 1. Sham S Kakar 1, "Withaferin a alone and in combination with cisplatin suppresses growth and metastasis of ovarian cancer by targeting putative cancer stem cells," *PLoS One*, 2014; 29(9).
 42. E. C. 1. J. M. R.-R. 2. N. D. 3. Z. F. 3. R. M. 2. A. R.-N.] 1. A. L. 4. Manuel Candelario 1, "Direct evidence for GABAergic activity of *Withania somnifera* on mammalian ionotropic GABAA and GABA_p receptors," *J Ethnopharmacol*, 2015; 264-72.
 43. J. K. S. A. K Chandrasekhar 1, "A prospective,] randomized double-blind, placebo-controlled study of safety and efficacy of a high-concentration full-spectrum extract of ashwagandha root in reducing stress and anxiety in adults," *Indian J Psychol Med*, 2012; 34(3): 255-62.
 44. S. Fasano, "U.S. Patent No. 6586018B1. Washington,] DC: U.S. Patent and Trademark Office, 2003.
 45. C. Z. G. Y. Y. Shaopeng Wang, "Biological properties] of 6-gingerol: a brief review," *Nat Prod Commun*, 2014; 9(7): 1027-30.
 46. 1. S. J. K. N. P. L. J. E. M. Y. C. Y. E. G. L. M. K. T. J.] K. Y. Y. Y. E. Y. S. S. J. Y. N. C. D. H. M. K. a. S. W. K. Nguyen Hoang Anh, "Ginger on Human Health: A Comprehensive Systematic Review of 109 Randomized Controlled Trials," *Nutrients*, 2020; 12(1): 157.
 47. A. A. J. M. A. A. a. A. D. E. Soltani, "Effects of] preoperative administration of ginger (*Zingiber officinale* Roscoe) on postoperative nausea and vomiting after laparoscopic cholecystectomy," *J Tradit Complement Med.*, 2018; 8(3): 387-390.
 48. M. R. L. & R. R. Mohanapriya, "Health and medicinal] properties of lemon (*Citrus limonum*).," *International Journal of Ayurvedic and Herbal Medicine*, 2013; 3(1): 1095-100.
 49. "Health Benefits of Figs," WebMD, [Online]. Available:] <https://www.webmd.com/diet/health-benefits-figs#1>. [Accessed 9 August], 2021.
 50. Bassiri-Jahromi, "S. *Punica granatum* (Pomegranate)] activity in health promotion and cancer prevention.," *Oncol Rev*, 2018; 12(1): 345.
 51. M. R. Y. W. e. a. Kim ND, "Chemopreventive and] adjuvant therapeutic potential of pomegranate (*Punica granatum*) for human breast cancer.," *Breast Cancer Res Treat*, 2002; 71(3): 203-17.
 52. "Is fenugreek good for you?" [Online]. Available:] <https://www.medicalnewstoday.com/articles/324334>
 53. "Malabar Tamarind (Kudam Puli) For Weight Loss: How] To Consume Garcinia Cambogia To Shed Kilos," FoodNDTV, 22 January 2020. [Online]. Available:] [hrome.google.com/webstore/category/extensions](https://www.hrome.google.com/webstore/category/extensions). [Accessed 4 August 2021].
 54. Y. T. C. Z. S. H. M. a. K. K. 5. Bai, "Active components] from Siberian ginseng (*Eleutherococcus senticosus*) for protection of amyloid β (25-35)-induced neuritic atrophy in cultured rat cortical neurons," *Journal of natural medicines*, 2011; 417-423.
 55. R. S. M. K. Parijat Kanetkar, "Gymnema sylvestre: A] Memoir, 2007; 77-81.
 56. "Diabetes," World health organization, 13 April 2021.] [Online]. Available:] <https://www.who.int/news-room/factsheets/detail/diabetes>. [Accessed 4 August], 2021.
 57. B. N. M. a. N. S. S. Pragya Tiwari, "Phytochemical and] Pharmacological Properties of *Gymnema sylvestre*: An Important Medicinal Plant, 2014.
 58. E. G., "What are the Medical Uses of Balsam Pear? (with] pictures)," Info Bloom, [Online]. Available:] <https://www.infobloom.com/what-are-the-medical-uses-of-balsam-pear.htm#comments>. [Accessed 12 July 2021].
 59. S. A. a. S. E. h. A. a. S. n. Sima Younsey, "Effects of] Fenugreek Seed on the Severity and Systemic Symptoms of Dysmenorrhea," *J Reprod Infertil.*, 2014; 15(1): 41-48.
 60. J. & L. R. H. Boyer, "Apple phytochemicals and their] health benefits," *Nutrition journal*, 2004; 3(1): 1- 15.
 61. L. J. G. J. T. K. K. M. J. D. Patrice Carter 1, "Fruit and] vegetable intake and incidence of type 2 diabetes mellitus: systematic review and meta-analysis, 2010.
 62. A. A. J. A. J. K. S. S. B. Shrestha Sharma 1, "Rutin:] therapeutic potential and recent advances in drug delivery, 2013; 22(8): 1063-79.