

JUICE PLUS+® RESEARCH

In this chapter, we will review how many of the healthful benefits of Juice Plus+® have been demonstrated through numerous independent clinical research studies conducted in leading hospitals and universities by investigators in the United States and around the world.

Instead of focusing on each individual study, the purpose of this chapter is to highlight the overall outcomes of the research, as well as the quality of the investigators and the institutions behind it – because this is what YOU should always do when talking about Juice Plus+® clinical research.

Individual abstracts of all the research can be viewed at www.juiceplus.com/nsa/pages/ResearchShows.soa.

In addition, each study can be viewed at each respective journal's website, or can be purchased from NSA Promo Plus+ at 888-552-8200 or at www.nsapromoplus.com.

However, if you review any of the above online sources, please keep in mind that this is just background information. You should always talk about the overall outcomes of the research, as well as the quality of the investigators and the institutions behind it – and never about the particulars of any individual study.

Numerous clinical studies published in peer-reviewed scientific journals have demonstrated that:

Juice Plus+® delivers key phytonutrients that are absorbed by the body.

There are several examples of published, peer-reviewed clinical research showing the bioavailability of select nutrients found in Juice Plus+® in a variety of populations. Recently, for example, in a study conducted at Tokyo Women's Medical University¹, Juice Plus+® was shown to increase the bioavailability of various nutrients in a Japanese population. The bioavailability of Juice Plus+® has also been demonstrated in subjects in Europe (Medical University Vienna² and King's College London),³ and Australia (University of Sydney).⁴ In the United States, the bioavailability of Juice Plus+® has been shown across the age spectrum in young adults (University of Florida),⁵ middle-aged people (Vanderbilt University School of Medicine),⁶ and the elderly (University of Texas Health Science Center).⁷

Juice Plus+® reduces oxidative stress.

Several investigations have reported that Juice Plus+® reduced various markers of oxidative stress. For example, a study conducted at the University of North Carolina-Greensboro⁸, showed that Juice Plus+® Orchard, Garden, and Vineyard Blends together were effective in reducing a marker of oxidative stress associated with aerobic exercise. Improvements in other markers of oxidative stress have been noted in studies of sedentary people in both the United

States (University of Texas Health Science Center)⁷ and England (King's College London).³

Juice Plus+® helps support a healthy immune system.

A healthy immune system protects the body, and good nutrition is important for a healthy immune system. Published clinical research indicates that Juice Plus+® supports several measures of immune function – in law school students at the University of Florida⁵ and in elderly people in a study conducted at the University of Arizona.⁹

Juice Plus+® helps protect DNA.

A high-quality diet rich in fruits and vegetables is also important to protect DNA from oxidative damage, which can weaken the structural integrity of DNA. DNA becomes damaged and fragile when exposed to oxidative stress; antioxidants from fruits and vegetables can help protect DNA from this damage. Studies conducted on Juice Plus+® have shown a reduction in DNA damage after taking Juice Plus+® in both young adults (University of Florida)⁵ and in an elderly population (Brigham Young University).¹⁰

Juice Plus+® positively impacts several key indicators of cardiovascular wellness.

Several investigations have found that Juice Plus+® reduces homocysteine levels. A clinical study at the University of Sydney⁴ has shown a reduction of homocysteine levels in subjects who were already within an acceptable range. Researchers in Foggia, Italy¹¹ found a reduction of homocysteine levels in subjects with elevated levels.

Researchers at the University of Maryland¹² have found that subjects who consumed Juice Plus+® were better able to maintain the elasticity of the arteries, even after a high-fat meal. Investigators at Vanderbilt University School of Medicine⁶ monitored several measures of vascular health in a low risk population who took Juice Plus+ for two years and noted modest improvements with no adverse side effects.

Juice Plus+® Clinical Research Citations:

¹ Kawashima A, et al. Four week supplementation with mixed fruit and vegetable juice concentrates increased protective serum antioxidants and folate and decreased plasma homocysteine in Japanese subjects. *Asia Pacific Journal of Clinical Nutrition* 2007; 16:411-421*

² Kiefer I, et al. Supplementation with mixed fruit and vegetable juice concentrates increased serum antioxidants and folate in healthy adults. *Journal of the American College of Nutrition* 2004; 23: 205-211*

³ Leeds AR, et al. Availability of micronutrients from dried, encapsulated fruit and vegetable preparations: a study in healthy volunteers. *Journal of Human Nutrition and Dietetics* 2000; 13: 21-27

⁴ Samman S, et al. A mixed fruit and vegetable concentrate increases plasma antioxidant vita-

mins and folate and lowers plasma homocysteine in men. *Journal of Nutrition* 2003; 133: 2188-2193*

⁵ Nantz MP, et al. Immunity and antioxidant capacity in humans is enhanced by consumption of a dried, encapsulated fruit and vegetable juice concentrate. *Journal of Nutrition* 2006; 136:2606-2610*

⁶ Houston MC, et al. Juice powder concentrate and systemic blood pressure, progression of coronary artery calcium and antioxidant status in hypertensive subjects: a pilot study. *Evidence-based Complementary and Alternative Medicine* 2007; doi:10.1093/ecam/nel108

⁷ Wise JA, et al. Changes in plasma carotenoids, alpha-tocopherol, and lipid peroxide levels in response to supplementation with concentrated fruit and vegetable extracts: a pilot study. *Current Therapeutic Research* 1996; 57: 445-461

⁸ Bloomer RJ, et al. Oxidative stress response to aerobic exercise: comparison of antioxidant supplements. *Medicine & Science in Sports & Exercise* 2006; 38: 1098-1105*

⁹ Inserra PF, et al. Immune function in elderly smokers and nonsmokers improves during supplementation with fruit and vegetable extracts. *Integrative Medicine* 1999; 2: 3-10

¹⁰ Smith MJ, et al. Supplementation with fruit and vegetable extracts may decrease DNA damage in the peripheral lymphocytes of an elderly population. *Nutrition Research* 1999; 19: 1507-1518

¹¹ Panunzio MF, et al. Supplementation with fruit and vegetable concentrate decreases plasma homocysteine in a dietary controlled trial. *Nutrition Research* 2003; 23: 1221-1228

¹² Plotnick GD, et al. Effect of supplemental phytonutrients on impairment of the flow-mediated brachial artery vasoactivity after a single high-fat meal. *Journal of the American College of Cardiology* 2003; 41: 1744-1749*

*randomized, double-blind, placebo-controlled investigation

Examples of current and past Juice Plus+® research affiliations:

Brigham Young University
Georgetown University
King's College, London, England
Medical University of Graz, Austria
Medical University of Vienna, Austria
Tokyo Women's Medical University, Japan
University of Arizona
University of Birmingham, England
University of California, Los Angeles
University of Florida
University of Maryland School of Medicine
University of Milan, Italy
University of Mississippi Medical Center
University of North Carolina-Greensboro
University of South Carolina
University of Sydney, Australia
University of Texas Health Science Center
University of Texas/MD Anderson
University of Würzburg, Germany
Vanderbilt University School of Medicine
Wake Forest University (with the NCI-National Institutes of Health)
Yale University-Griffin Hospital Prevention Research Center

Juice Plus+® Research Summary

For a quick snapshot of all of the Juice Plus+® clinical research, just go to your Virtual Office and download the most recent version of the handout pictured below – customized to include with your own personal contact information – to distribute to your prospects and customers. Just sign-in to your Virtual Office and, under the Tool menu, select Juice Plus+® Materials and then Brochures and Publications. Click on Personalized Research Summary in the upper left margin.

Juice Plus+® Clinical Research Currently Underway
 In addition to the clinical studies on Juice Plus+® already published there are numerous others currently underway.

Researchers from:	Are investigating the effect(s) of Juice Plus+® on:
*University of Mississippi Medical Center	Pregnancy health.
*Wake Forest University, funded by the National Cancer Institute of the National Institutes of Health	Nutritional status and various markers of cell health.
University of Texas/M.D. Anderson Cancer Center	Nutritional status and quality of life.
*UCLA/Georgetown University	Bioavailability in an overweight population.
*University of Milan, Italy	Nutritional status in smokers.
*Yale University-Griffin Hospital Prevention Research Center	Endothelial function in insulin-resistant adults.
*University of South Carolina	Markers of systemic inflammation in healthy adults.
*University of North Carolina – Greensboro	Exercise-related muscle fatigue.
*University of Würzburg, Germany	Oral health.
*University of Birmingham, England	Oral health.
*Ontario, Canada	Markers of oxidation in healthy adults.

*Randomized, double-blind, placebo-controlled investigation

The citations below refer to the studies on Page 3:

1. *Asia Pacific Journal of Clinical Nutrition* 2005;16:413-421

2. *Journal of Nutrition* 2006;136:360-363

3. *Evidence-Based Complementary and Alternative Medicine* 2007; doi:10.1093/acam/nal128

4. *Journal of the American College of Nutrition* 2004;23:205-211

5. *Journal of Nutrition* 2003;133:2188-2193

6. *Journal of Human Nutrition and Dietetics* 2005;13:21-27

7. *Nutrition Research* 1999;18:1527-1518

8. *Integrative Medicine* 1999;3:1-10

9. *Current Therapeutic Research* 1996;57:445-461

10. *Medicine & Science in Sports & Exercise* 2006;38:1096-1105

11. *Nutrition Research* 2003;23:1221-1228

12. *Journal of the American College of Cardiology* 2003;41:1744-1749