



PREVENTION

THE HEALTH & WELLNESS NEWSLETTER
FROM THE MAKER OF JUICE PLUS+®

Plus+

The Science of Juice Plus+®



We started with a **Quantitative Laboratory Analysis** showing that Juice Plus+® is packed with good, whole food nutrition. NSA updates the analysis regularly and publishes it periodically as evidence that Juice Plus+® remains the same great product it's always been.

That was followed by a bio-availability study demonstrating that Juice Plus+® actually delivers that nutrition into the bloodstream. "We all know that fruits and vegetables contain important nutrients," explains John Blair, NSA Vice-President for Product Development. "And the Laboratory Analysis shows that we retain much of that nutrition when we make Juice Plus+®. But we wanted to demonstrate that the antioxidants in Juice Plus+® are actually assimilated by the body."

That's exactly what the first **Juice Plus+® Bio-Availability Study** — published in June 1996 in the journal *Current Therapeutic Research* — did. In the words of the researchers: "Test subjects showed significant increases in blood plasma levels of key antioxidants after only 28 days on Juice Plus+®."

Researchers learned not only that Juice Plus+® dramatically increases antioxidants in the bloodstream, but also that these antioxidants are functioning to reduce oxidative stress, as evidenced by a reduction in lipid peroxides. In the study, taking Juice Plus+® reduced lipid peroxides in the bloodstream by 75% overall, and reduced them to undetectable levels in a third of the subjects.

As a logical next step, a group of researchers at the **University of Arizona** wanted to measure the impact of Juice Plus+® on the

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More Juice Plus+® studies

Juice Plus+® fuels the Carolina Hurricanes

Prevention Plus+ Profile: Fred Aurbach, D.D.S.

What separates Juice Plus+® from the literally thousands of other nutritional supplements on the market today?

The quality and simplicity of juice Plus+® is a great place to start. You can add to that the support of thousands of health professionals who recommend Juice Plus+® to their patients and clients. But the single most important factor that separates Juice Plus+® from the rest of the nutritional pack is the large and growing body of product-specific research conducted on the product.

A history of independent scientific validation

NSA committed years ago to ongoing support of independent scientific research to demonstrate the effectiveness of Juice Plus+®.



Juice Plus+® fuels the Carolina Hurricanes

Not many people predicted an appearance in the Stanley Cup Finals for the National Hockey League's Carolina Hurricanes this year. Ranked 24 out of 30 NHL teams before the season started, the Hurricanes won their Conference and reached the Stanley Cup Finals — the “world series” of the NHL — for the first time in franchise history.

Juice Plus+® was in the Carolina locker room as the Hurricanes eliminated New Jersey, Montreal and Toronto in six games each to advance to the finals against the Detroit Red Wings.

“We’ve been providing Juice Plus+® to our players for about five years now,” shares **Peter Friesen**, Head Trainer and Strengthening & Conditioning Coach for the Hurricanes. “Because these guys are on the road all the time, they don’t always eat so well, and they certainly don’t have easy access to fruits and vegetables. Juice Plus+® is just one more assurance that my players are getting the nutrition they need.” Friesen keeps an extra supply of Juice Plus+® in the home locker room and takes Juice Plus+® on the road as well.

Friesen believes nutrition plays a pivotal role in the success of any professional team, and that this is especially true for the Hurricanes. “Our payroll is half that of other teams like the (New York) Rangers, Washington and Colorado,” Friesen explains. “We have to look for every little advantage we can find.”

He believes that the Hurricanes have found a tremendous advantage in Juice Plus+®.



The Science of Juice Plus+® (continued)

human immune system. The **Juice Plus+® Immune System Study** analyzed key immune system components to determine whether supplementation with Juice Plus+® could improve multiple immune functions. After 80 days, researchers found;

- significant increases in: T-cell activity, which is critical to various immune functions such as antibody production, surveillance of cancer cells and destruction of virus-infected cells.
- significant increases in the activity of natural killer cells, which seek out and destroy cancer cells.
- significant increases in the levels of cytokines, which are proteins that enhance T-cells and natural killer cells.
- normalization of the activity of B-cells, which detect and produce an antibody response to bacteria, viruses and infections.

Results of this study were published in *Integrative Medicine* in 1999.

Another study, the **Juice Plus+® DNA Study**, conducted at the Department of Microbiology at **Brigham Young University**, analyzed newly replicated blood lymphocyte cells to determine whether supplementation with Juice Plus+® could reduce DNA damage in humans. After 80 days, researchers found an average reduction of 66% in DNA damage among test subjects. Significantly, the reduction in DNA damage was virtually the same for smokers and non-smokers alike. These results were published in the journal *Nutrition Research* in October 1999.

These studies form an unprecedented foundation of independent scientific validation for Juice Plus+®.

More Juice Plus+® studies

- A second Juice Plus+® Bio-Availability Study was conducted by researchers at

King’s College in London. Their conclusion: “In as little as seven days, (supplementation with Juice Plus+®) can raise blood antioxidant levels into the ranges associated with reduced risk of disease.” Results from this study were published in the *Journal of Human Nutrition and Dietetics* in late 2000.

- Another Juice Plus+® Bio-Availability Study at the **University of Vienna** Medical School focused on gender specific differences in diet and nutrition using a randomized double blind, placebo-controlled research protocol. The Austrian researchers concluded, “Supplementation (with Juice Plus+®) proved to be effective in raising plasma levels of all nutrients studied, for both men and women.” This study has been submitted to a major medical journal for publication; results were presented at the *First World Congress on Men’s Health* in November 2001 in Vienna.

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Prevention Plus+ Profile: *Fred E. Aurbach, D.D.S.*



Home:
Dallas, Texas

Specialty:
General Dentistry;
Restorative and
Cosmetic Dentistry

Medical Training: Graduated 1966 from Hardin-Simmons University with a B.A. in Chemistry. Graduated 1973 from Baylor College of Dentistry in Dallas, Texas as a Doctor of Dental Surgery.

Positions & Honors: Served as Chairman of the American Dental Association Council on Dental Practice, President of the Dallas County Dental Society, and Vice-President of the Texas Dental Association. Represented the ADA to President Clinton's Commission on Quality in Healthcare. Recipient of the Texas Dentist of the Year Award. Member of

the Board of Trustees of Hardin-Simmons University. Recipient of the Bronze Star and the National Defense Service Medal for his service in Vietnam.

Dental Advice: "FBI: floss, brush and irrigate, in that order. Remember, you only need to floss the ones you want to keep."

Health Advice: "Take Juice Plus+®."

Why he recommends Juice Plus+® to his patients: "I accept the fact that my patients are human. That means that most of them do not do what's best for their health, including eating well. Most either can't, don't or won't eat 5-9 servings of a wide variety of fresh, raw fruits and vegetables every day. That's why Juice Plus+® makes sense. It's convenient, it's simple, it's effective and it's affordable.

"It's my patient's choice to follow my advice or not, whether it's flossing or taking Juice Plus+®. It's my responsibility as a healthcare professional to offer that advice."

"FBI: floss, brush and irrigate, in that order...and take Juice Plus+®."

Dr. Fred Aurbach is one of many prominent healthcare professionals speaking to audiences around the world as part of our Prevention Plus+ Health Education Series.

If you'd like to attend a Prevention Plus+ Seminar in your area, ask your Juice Plus+® distributor or call our Preferred Customer Hotline at 1-800-347-4014.



The Science of Juice Plus+® *(continued)*

- In another randomized double blind, placebo-controlled study, researchers at the **University of Sydney** in Australia analyzed the effect of Juice Plus+® on homocysteine levels. Homocysteine is an amino acid produced by the body that often accumulates to unhealthy levels when nutritional status is compromised. Elevated levels of homocysteine in the blood correlate to a significantly elevated risk of heart attack, stroke, venous thromboembolism (blood clots in the veins) and other forms of cardiovascular disease, as well as to a greater risk of Alzheimer's disease.

As in all previous studies, the Australian researchers found significant increases in blood antioxidant levels in subjects taking Juice Plus+®. They also found a significant reduction in serum homocysteine levels, leading them to conclude: "In the absence of dietary modification, supplementation with a mixed fruit and vegetable concentrate (Juice Plus+®) produced responses consistent with a reduction in risk of coronary heart disease." This study was

presented in April to the *Federation of American Societies for Experimental Biology* and has also been submitted to a professional journal for publication.

- A study by researchers at the **University of Maryland** analyzed the effect of taking Juice Plus+® on the constriction of blood vessels that occurs following a high fat meal. They concluded that taking Juice Plus+® helps reduce vascular constriction and "tends to protect against the detrimental effects of a high fat meal." They presented their results to the *Second International Congress on Heart Disease* in July 2001 in Washington, DC, and have submitted their study for publication as well.

There's even more Juice Plus+® research currently underway at leading universities and research hospitals all over the world, including:

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The Science of Juice Plus+®

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- an Oxidative Stress Study by researchers at **Georgetown University** and **UCLA** analyzing antioxidant levels before, during and after taking Juice Plus+®.
- a study by a research team from **Vanderbilt University** to determine whether taking Juice Plus+® can slow down the progression of coronary heart disease in high risk patients.
- a study by researchers at the **M.D. Anderson Cancer Center** to gauge the effect of Juice Plus+® on the nutritional status and quality of life of ovarian cancer patients.
- a study at **Wake Forest University** approved for funding by the **National Institutes of Health** analyzing the effect of Juice Plus+® on cell proliferation, immune function and DNA damage in head and neck cancer patients.
- a study at the **University of Mississippi** quantifying the impact of taking Juice Plus+® on the incidence of pre-eclampsia and reproductive loss among pregnant women. Left untreated, pre-eclampsia — the most common complication of pregnancy, occurring in about 6% of all

pregnancies in the U.S. — can progress to eclampsia, a life-threatening situation for both mother and fetus.

An unprecedented investment in research

Juice Plus+® has been analyzed to determine what's in it, where it goes in the body, and what it does when it gets there.

Juice Plus+® is being tested on a variety of conditions, in a variety of circumstances, at leading universities and research hospitals all over the world.

Juice Plus+® has been the subject of research in smaller clinical studies over shorter periods of time and large real world populations over longer periods of time.

Researchers have studied the effect of Juice Plus+® on pregnant women, small children, teens, adults of all ages, and even senior citizens.

No other supplement has ever been exposed to such breadth and depth of scientific scrutiny. Juice Plus+® is — and will continue to be — the most thoroughly tested nutritional supplement in history.



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