

QUICK TIPS & REFERENCES

RECIPES

CHILDREN'S HEALTH

DISEASE PREVENTION

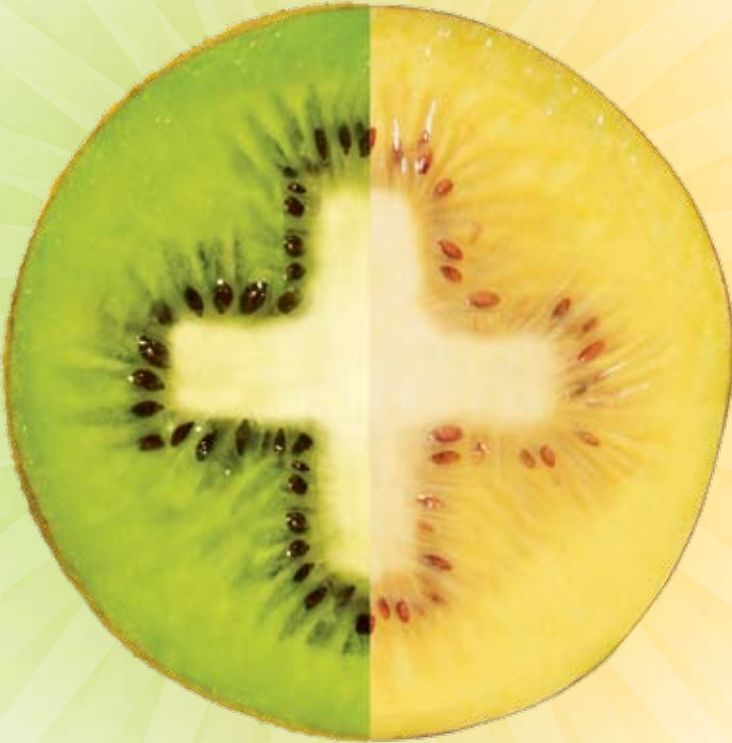
NUTRIENTS PER CALORIE

NUTRITION PROFILE

ORIGIN & HISTORY

KIWIFRUIT NUTRITION

A GUIDE FOR HEALTH PROFESSIONALS



NOURISH AND FLOURISH WITH ZESPRI™



Meet the Fuzzy Fruit from New Zealand

New Zealand kiwifruit has helped adults and children alike nourish and flourish with great taste and abundant nutrition for over 100 years.

More than a century ago, in 1904, New Zealand teacher Isabel Fraser returned from a trip to China with some very special black seeds. The seeds were sprouted and, in doing so, the New Zealand kiwifruit industry was born.

Hayward Wright, however, is the person responsible for the start of ZESPRI™ Kiwifruit. In 1928, he grew his first vines in the Bay of Plenty's rich volcanic soils and mild climate. Since then, the "Hayward" cultivar has been grown and exported all over the world.

Exports to Europe began in the early 1950s and the fruit originally called Chinese gooseberry was renamed kiwifruit – after New Zealand's national bird, the kiwi. It arrived in San Francisco in 1959.

What is ZESPRI™?

ZESPRI™ is the brand name for all kiwifruit grown in New Zealand. ZESPRI™ International is owned by more than 2,700 growers and sells more than 100 million trays of conventionally-grown and organic GREEN and GOLD kiwifruit each year.



ZESPRI Strikes GOLD

ZESPRI™ GOLD Kiwifruit is the most recent addition to the ZESPRI™ Kiwifruit family. It has a smooth hairless skin that is bronze in color, a golden flesh interior, and a white core with black seeds.

Taste-wise, ZESPRI™ GOLD Kiwifruit has a sweet, uniquely tropical flavor. It contains many of the same vitamins and minerals as ZESPRI™ GREEN Kiwifruit, but with slightly higher levels of vitamin E and folate.

ZESPRI™ GOLD Kiwifruit is a unique cultivar, and was naturally bred from one seedling planted in 1992.

Consistently Better

The unique 'ZESPRI™ System' ensures consistency in size, appearance and taste. This world class orchard-to-retail system delivers delicious fruit while using environmentally-considerate methods to grow, cultivate, store and ship the fruit — all reasons why ZESPRI™ is consistently better than the competition!

GREEN Kiwifruit is in season May - November.
GOLD Kiwifruit is in season May - September.



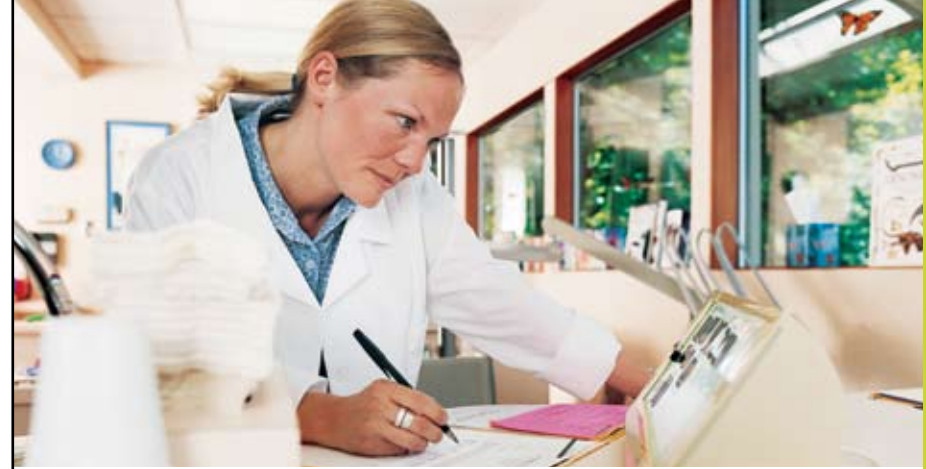
Nutrient Density in Every Scoop

Both GREEN and GOLD kiwifruit are nutritional powerhouses! Loaded with vitamins and minerals, kiwifruit provides a nutrient dense option that easily outranks other foods and fits into most nutrition plans. Also, kiwifruit's powerful nutrition doesn't come with a heavy caloric cost — one serving is less than 100 calories.

- A two-piece serving of kiwifruit has twice the vitamin C of an orange, as much potassium as a banana and as much fiber as many whole grain cereals (4 grams of fiber per serving for GREEN and 2 grams of fiber per serving for GOLD) — all for less than 100 calories.
- Kiwifruit is recognized as a SuperFood, a food that promotes health and fights disease, as declared by Dr. Stephen Pratt and Dr. Wendy Bazilian.^{1,2}
- Kiwifruit is a low-fat source of vitamin E, which is rare among fruits. Most other sources of vitamin E are not low-fat choices.
- Kiwifruit is a natural, unfortified source of folate. GOLD kiwifruit is considered a good source of this nutrient.



*Bite for bite,
kiwifruit is one of the
most nutrient-dense
fruits in the world.³*



Scientific Research

Studies continue to demonstrate the nutritious impact of kiwifruit. From heart health and DNA repair to antioxidant absorption and immune response, kiwifruit shows that a small fruit can pack a big nutritional punch. See the next four pages for more information about specific nutrients and health implications.

Nutrient Comparison

ZESPRI™ GREEN KIWIFRUIT

Nutrition Facts

Serving Size 2 Medium Kiwifruit (148g)
Servings Per Container Varies

Amount Per Serving		% Daily Value*	
Calories	90	Calories from Fat	5
Total Fat	1g		2%
Saturated Fat	0g		0%
Trans Fat	0g		
Cholesterol	0mg		0%
Sodium	0mg		0%
Potassium	460mg		13%
Total Carbohydrate	22g		7%
Dietary Fiber	4g		16%
Sugars	13g		
Protein	2g		
Vitamin A 0%		Vitamin C 230%	
Calcium 6%		Iron 2% • Vitamin E 10%	

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram: Fat 9 • Carbohydrate 4 • Protein 4

ZESPRI™ GOLD KIWIFRUIT

Nutrition Facts

Serving Size 2 Medium Kiwifruit (150g)
Servings Per Container Varies

Amount Per Serving		% Daily Value*	
Calories	80	Calories from Fat	10
Total Fat	1g		2%
Saturated Fat	0g		0%
Trans Fat	0g		
Cholesterol	0mg		0%
Sodium	0mg		0%
Potassium	450mg		13%
Total Carbohydrate	17g		6%
Dietary Fiber	2g		8%
Sugars	23g		
Protein	2g		
Vitamin A 0%		Vitamin C 270%	
Calcium 4%		Iron 4% • Vitamin E 15%	

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram: Fat 9 • Carbohydrate 4 • Protein 4



Nutrient Dense Choices

Everyday wellness starts with lots of nutrients for just a few calories. Kiwifruit offers essential nutrients that have been linked to good health and disease prevention, such as potassium and vitamin C. So much so, in fact, a few fruits might feel a little intimidated.

GREEN and GOLD kiwifruit also play an important role in **weight management**. Each two-piece serving contains less than 100 calories, so you get great nutrition for a very modest amount of your calorie allotment.

Potassium plays an important role in maintaining healthy blood pressure. Increased consumption of potassium-rich foods, such as kiwifruit, has the potential to lower blood pressure by 10% or more.⁴ In addition, it is an under-consumed nutrient for most Americans.⁵ **GREEN and GOLD kiwifruit are good sources of potassium, containing as much as a banana.** GREEN contains 13% Daily Value (DV); GOLD contains 13% DV.

Vitamin C is recognized as an important antioxidant with ties to cancer prevention⁶ and improved iron absorption.⁵ A two-piece serving of kiwifruit **has more than twice the vitamin C of an orange.** GREEN contains 230% DV; GOLD contains 270% DV.



Vitamin E has been shown to reduce the risk of heart disease.^{7,8} It is under-consumed by most Americans, according to the U.S. Dietary Guidelines.⁵ **GREEN and GOLD kiwifruit are considered good, low-fat sources of vitamin E, which is rare among fruits.** GREEN contains 10% DV; GOLD contains 15% DV.

Low calorie content is another benefit of kiwifruit. GREEN and GOLD are naturally portion-controlled in that each two-piece serving has less than 100 calories. GREEN contains 90 calories per serving; GOLD contains 80.

Dietary fiber plays an active role in preventing and relieving constipation and has been shown to lower the risk of diabetes and heart disease.^{9,10} GREEN contains 4 grams of fiber, **as much fiber as many whole grain cereals.** GOLD also is a source of fiber, containing 2 grams.

Folate is best known for its role in preventing neural birth defects. **GOLD kiwifruit is considered a good source of this nutrient and contains 10% DV.**





Reducing the Risk, from Head to Toe

Beyond everyday wellness, researchers around the world are attracted to kiwifruit for its potential to prevent a wide variety of health problems. While the majority of research to date focuses on GREEN kiwifruit, new research explores the benefits of GOLD. With similar nutrition profiles and range of phytonutrients, there's every reason to support a recommendation for both GREEN and GOLD kiwifruit in the U.S. diet.

Nutrient Density: Researchers analyzed the nutrient-density of 27 of the most popular fruits based on the ability of a standard 100 grams of each fruit to provide the recommended amounts of 29 dietary constituents. **Kiwifruit topped the list**, solidifying it as one of the most nutrient dense fruits in the world.³

Antioxidant Bioavailability: The focus of antioxidant research has changed from quantity to bioavailability. The antioxidants in kiwifruit, most notably vitamin C, are among the most readily absorbed by the body. **So, move over berries** – kiwifruit consumption was shown to increase cells' resistance to oxidative damage and produce a significant increase in blood antioxidant capacity.¹¹

Heart Health: Heart disease is the number one killer in America, with one in three adults having one or more forms of the disease.¹² Kiwifruit is a good source of potassium and vitamin E, two nutrients that impact heart health. Research also shows that kiwifruit consumption can significantly reduce blood platelet aggregation, decreasing the chance of the type of blood clot that can lead to a heart attack or stroke.¹³

DNA Repair: Eating kiwifruit daily may provide substantial protection against the kind of DNA damage that can cause cancer. Repair to lymphocyte DNA was remarkable after human participants consumed one to three kiwifruit daily over three consecutive, three-week periods. The DNA repair rate almost doubled among participants who ate up to three kiwifruit per day.¹⁴

Immune Response: Kiwifruit may help improve the body's natural defense response. Recent animal studies show an extract from both varieties of kiwifruit **created a better immune response** to two types of vaccination. The levels of antibodies produced against the vaccinations in blood and surface cells, and the levels of protective innate immunity cells, were positively affected in the study. The findings support previous research which showed GOLD kiwifruit can modulate an antigen-specific immune response.^{15,16}

Eye Health: Kiwifruit is the best fruit source of lutein, a phytonutrient scientists believe may protect against age-related macular degeneration (AMD). AMD is the leading cause of irreversible blindness among older Americans.¹⁷

Regularity: Kiwifruit can relieve the effects of constipation. Eating two to three kiwifruit each day can improve regularity and the consistency of stool in otherwise healthy people who have problems with constipation.¹⁸

Boosting Nutrition for the Big and Small

It is a bit alarming, but most Americans need to *triple* their current intake of fruits and vegetables in order to meet federal recommendations. In fact, the average person consumes less than two cups of fruit or vegetables in a typical day.¹⁹ With children, there's even more reason to ramp up fruit consumption, as healthy eating habits will last a lifetime.

Lunchbox-friendly GREEN and GOLD kiwifruit can help. A two-piece serving of kiwifruit is equivalent to one cup of fruit and serves as another option to help meet daily fruit consumption. Daily requirements of fruit vary from one to two cups depending on age, sex and level of physical activity.²⁰

Daily Recommendation*

Children	2 - 3 years old	1 cup
	4 - 8 years old	1 ½ cups
Girls	9 - 13 years old	1 ½ cups
	14 - 18 years old	1 ½ cups
Boys	9 - 13 years old	1 ½ cups
	14 - 18 years old	2 cups
Women	19 - 30 years old	2 cups
	31 - 50 years old	1 ½ cups
	51+ years old	1 ½ cups
Men	19 - 30 years old	2 cups
	31 - 50 years old	2 cups
	51+ years old	2 cups

* These amounts are appropriate for individuals who get less than 30 minutes per day of moderate physical activity, beyond normal daily activities.



Kiwifruit are the perfect substitute for high-calorie, high-sugar junk foods.

No Empty Calories!

Childhood obesity has nearly tripled in the past three decades,^{21,22} leaving parents in search of healthier kid-friendly options. Kiwifruit add fun and flavor to kids' meals, while also supplying valuable nutrients in a portion-controlled format. Kids like the sweet taste of both GREEN and GOLD, and they also enjoy the fun "cut and scoop" eating method, so kiwifruit can appeal to even the fussiest of eaters.

Try simple mealtime strategies like lean grilled meats topped with fresh kiwifruit salsa or bake slices of kiwifruit into a quesadilla with low-fat cheese. Kiwifruit are also the perfect snacking substitute for high-calorie, high-sugar junk foods. The nutrient density is especially ideal for young children, who typically don't eat large quantities of any one food.





Kiwifruit & Quinoa Salad

Prep Time: 10 min Cooking Time: 20 min
Makes: 6 servings

- ½ cup quinoa
- 2 ZESPRI™ GREEN Kiwifruit, peeled, quartered and sliced
- 2 ZESPRI™ GOLD Kiwifruit, peeled, quartered and sliced
- 1 cup red grapes, cut in half
- 1 cup cherry tomatoes
- ¼ cup red onion, diced
- 2 tbsp olive oil
- 2 tbsp red wine vinegar
- 1 tbsp sugar
- ¼ tsp salt
- ⅛ tsp black pepper, ground

Rinse quinoa under running water for 1 minute. Place quinoa and 1 cup water in medium saucepan. Bring to boil over high heat. Cover and reduce heat to low. Simmer for 15 to 20 minutes or until all water is absorbed. Fluff with fork. Cool completely.

Place quinoa in large bowl. Add ZESPRI™ Kiwifruit, grapes, tomatoes and red onion; set aside.

Whisk oil, vinegar, sugar, salt and pepper in small bowl. Pour over quinoa mixture; toss lightly until blended. Serve immediately.

Nutritional Analysis per Serving: Calories 150 (32% Calories from Fat), 3g Protein, 24g Carbohydrate, 2g Fiber, 6g Fat, 1g Sat. Fat, 0g Trans Fat, 0mg Cholesterol, 105mg Sodium.



Chicken with Kiwifruit Relish

Prep Time: 10 min Makes: 4 servings

Fresh Kiwifruit Relish

- 3 ZESPRI™ GREEN Kiwifruit, peeled, diced
- 1 orange, peeled, segmented, chopped
- ½ cup red pepper, seeded, diced
- ½ cup tomato, seeded, diced
- ¼ cup cilantro, chopped
- ¼ cup green onion, sliced
- 1 tbsp jalapeño pepper, seeded, diced
- 1 tbsp rice vinegar
- ½ tsp each salt and pepper

Combine all ingredients in medium bowl.

For full recipe, please visit www.zesprikiwi.com/recipes.

Nutritional Analysis per Serving for full recipe: Calories 380 (48% Calories from Fat), 32g Protein, 18g Carbohydrate, 4g Fiber, 21g Fat, 5g Sat. Fat, 0g Trans Fat, 95mg Cholesterol, 390 mg Sodium



Potassium Power Smoothie

Prep Time: 5 min Makes: 2 servings

- 1 cup vanilla soymilk, fortified
- 1 cup orange juice, calcium fortified
- 2 ZESPRI™ GOLD Kiwifruit, washed, unpeeled, chopped*
- 1 banana, sliced
- ½ cup ice cubes
- 2 tbsp soy protein powder
- 1 tsp honey

Blend all ingredients in blender on high for 20 to 30 seconds or until smooth. Serve immediately.

* Peeled GREEN Kiwifruit can be substituted for this recipe.

Nutritional Analysis per Serving: Calories 280 (12% Calories from Fat), 10g Protein, 42g Carbohydrate, 6g Fiber, 3.5g Fat, 0g Sat. Fat, 0g Trans Fat, 0mg Cholesterol, 50mg Sodium.



For more healthy kiwifruit recipes, please visit
www.zesprikiwi.com/recipes

Top 10 Ways to Add Kiwifruit to a Healthy Diet

1. Gently blend kiwifruit into your favorite smoothie.
2. Top a bowl of granola, oatmeal or yogurt with kiwifruit slices.
3. Bake GOLD Kiwifruit, mango slices and low-fat cream cheese into a whole grain quesadilla.
4. Surprise everyone with kiwifruit in unexpected places; try sushi rolls or dessert pizza.
5. Ask for kiwifruit at your favorite restaurants.
6. Toss GREEN kiwifruit into a fruit salad and top with a lime juice and ginger marinade.
7. Dice GREEN kiwifruit, red onion and jalapeño and serve over salmon or chicken.
8. Stir pieces of kiwifruit, toasted nuts and dried fruit into grain dishes like tabbouleh or couscous.
9. Throw fruit kabobs on the grill, glazed in kiwi-honey marinade.
10. Straight up! Just cut a kiwifruit in half and dig in with a spoon.



1. Pratt S, Matthews K. *SuperFoods HealthStyle: Proven Strategies for Lifelong Health*. Harper Collins; 2006.
2. Bazilian W, Pratt S, Matthews K. *The Superfoods Rx Diet: Lose Weight with the Power of SuperNutrients*. Rodale Books; 2007.
3. Lachance PA, Sloan AE. Fruits in Preventative Health and Disease Treatment: Nutritional Ranking and Patient Recommendation. *Proceedings of the Symposium on Advances in Clinical Nutrition: The American College of Nutrition 38th Annual Meeting, New York*. September 26-28, 1997.
4. Houston MC, Harper KJ. Potassium, magnesium, and calcium: Their role in both the cause and treatment of hypertension. *J Clin Hypertens*. 2008; 10:3-11.
5. U.S. Department of Health and Human Services and U.S. Department of Agriculture. *Dietary Guidelines for Americans, 2005*. 6th Edition, Washington, DC: U.S. Government Printing Office; 2005.
6. Steinmetz KA, Potter JD. Vegetables, fruit, and cancer prevention: A review. *J Am Diet Assoc*. 1996; 96:1027-1039.
7. Jialal I, Fuller CJ. Effect of vitamin E, vitamin C and beta-carotene on LDL oxidation and atherosclerosis. *Can J Cardiol*. 1995; 11:97G-103G.
8. Stampfer MU, Hennekens CH, Manson JE, Colditz GA, Rosner B, Willett WC. Vitamin E consumption and the risk of coronary disease in women. *N Engl J Med*. 1993; 328:1444-9.
9. Ma Y, Griffith JA, Chasan-Taber L, Olendzki BC, Jackson E, Stanek EJ, Li W, Pagoto SL, Hafner AR, Ockene IS. Association between dietary fiber and serum C-reactive protein. *Am J Clin Nutr*. 2006; 83:760-766.
10. Weickert MO, Möhlig M, Schöfl C, Arafat AM, Otto B, Viehoff H, Koebnick C, Kohl A, Spranger J, Pfeiffer AF. Cereal fiber improves whole-body insulin sensitivity in overweight and obese women. *Diabetes Care*. 2006; 29:775-780.
11. Prior R, Gu L, Wu X, et al. Plasma antioxidant capacity changes following a meal as a measure of the ability of a food to alter in vivo antioxidant status. *J Am Coll Nutr*. 2007; 26:170-181.
12. American Heart Association. *Heart Disease and Stroke Statistics — 2008 Update*. Dallas, Texas: American Heart Association. 2008.
13. Duttaroy AK, Jørgensen A. Effects of kiwi fruits consumption in human volunteers on platelet aggregation and plasma lipids in vitro. *Platelets*. 2004; 15:287-292.
14. Collins AR, Harrington V, Drew J, Melvin R. Nutritional modulation of DNA repair in a human intervention study. *Carcinogenesis*. 2003; 24:511-515.
15. Hunter C, Denis M, Parlane NA, Buddle BM, Stevenson LM, Skinner MA. Feeding Zespri Gold Kiwifruit puree to mice enhances serum immunoglobulins specific for ovalbumin and stimulates ovalbumin-specific mesenteric lymph node cell proliferation in response to orally administered ovalbumin. *Nutr Res*. 2008; 28:251-257.
16. Shu Q, Mendis De Silva U, Chen S, Peng W, Ahmed M, Lu G, Yin Y, Liu A, Drummond L. Kiwifruit extract enhances markers of innate and acquired immunity in a murine model. *Food Agric Immunol*. 2008; 19:149-161.
17. The Eye Diseases Prevalence Research Group. Causes and prevalence of visual impairment among adults in the United States. *Arch Ophthalmol*. 2004; 122:477-485.
18. Rush EC, Patel M, Plank LD, Fergus LR. Kiwifruit promotes laxation in the elderly. *Asia Pac J Clin Nutr*. 2002; 11(2):164-8.
19. Produce for Better Health Foundation. *State of the Plate 2005: Study on America's Consumption of Fruits and Vegetables*. 2005.
20. United States Department of Agriculture. The MyPyramid Food Guidance System page. Available at: http://www.mypyramid.gov/pyramid/fruits_amount.aspx#. Accessed August 28, 2008.
21. Hedley AA, Ogden CL, Johnson CL, Carroll MD, Curtin LR, Flegal KM. Overweight and obesity among US children, adolescents, and adults, 1999-2002. *JAMA*. 2004; 291:2847-50.
22. Ogden CL, Flegal KM, Carroll MD, Johnson CL. Prevalence and trends in overweight among US children and adolescents, 1999-2000. *JAMA*. 2002; 288:1728-32.



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