



Saladplate  
Indonesia

# F&B HUB

Senin-Selasa, 26 - 27 Juli 2021

Pembicara

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Organised by:



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# Basic Product Knowledge about Almond by Almonesia



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# DOWN TIME/DORMANCY

November through January, almond trees go through a period of dormancy, losing their leaves and chilling out in California's cool, wet winters. Orchard soils store up rainwater for the upcoming growing season, and the trees store nutrients and energy for next year's crop. Toward the end of dormancy, buds begin swelling on each tree's branches in preparation for bloom.





# BLOOM

Between mid-February and mid-March, almond tree buds burst into beautiful white and light-pink blooms. During this time, beekeepers bring hives into the orchards to help pollinate the crop. As the trees blossom, **honey bees** forage for pollen and nectar, bringing it back to their hives as their first natural food source of the year. When the bees move from tree to tree, they pollinate almond blossoms along the way by moving pollen between the different tree varieties grown within each orchard.



Every almond you eat exists because a honey bee pollinated an almond blossom. And bee hives that help pollinate almonds consistently leave stronger than they arrived,<sup>1</sup> providing a healthy start to their year. After almonds, beekeepers bring their honey bees to different locations across the United States, pollinating more than 90 other crops and making honey.





# GROWING UP

From March to June, almond kernels mature and grow to full size, with the shell hardening around it—both protected by a fuzzy outer hull. Once the spring rains stop and the weather heats up, farmers begin irrigating their orchards to support the growing crop, taking great care to ensure **each drop of water** is used responsibly and efficiently. Also at this time, green almonds can be harvested for various culinary uses.





# CRACKING OPEN



In July, almond hulls split open, exposing the almond shell and allowing it and the kernel inside to dry. Shortly before harvest, the hulls turn a straw-yellow color and open completely.





# HARVEST



From August through October, mechanical tree "shakers" harvest the crop by vigorously shaking it to the ground. Protected by their outer hulls and shells, the almonds then dry naturally in the warm California sun for 7-10 days before being swept into rows by a "sweeper" machine. After that, a harvester or "pickup" machine drives over the rows, vacuuming the nuts up into a cart that brings them to the edge of the orchard for transport to the next stop on their journey.

Each almond variety is harvested separately, so this process typically happens two to three times per orchard. Also during this period, almond trees begin building the pieces that will become the next year's crop, so farmers take care to give the trees what they need for this important stage.





# SHELLING + SIZING

After harvest, almonds go to a huller/sheller facility where the kernels pass through a roller to remove the hull, shell and any debris from the orchard, such as sticks and rocks. Almond farmers practice a zero-waste approach, ensuring everything an orchard grows is put to use. Almond shells are used as livestock bedding, and hulls are valuable dairy feed, with research underway exploring new potential uses in the areas of recycled plastics, fuel, and regenerative agriculture.

Next stop: the processor for sizing, where the almond kernels drop into separate bins according to size.





# STORAGE + DELIVERY

After sizing, almonds are kept in controlled storage conditions to maintain quality until they're either shipped or further processed into a variety of different almond forms for diverse culinary uses. Producing 80% of the world's supply, California almonds make their way to almond lovers in over 90 countries worldwide. And the biggest almond lovers are right here in the U.S., where over 30% of almonds grown in California each year are consumed.



# RAW MATERIAL PLAN

## Varieties

## Grade

### NONPAREIL



### MONTEREY



### BUTTE PADRE



U.S. Extra #1



Supreme



Select Sheller Run



Standard Sheller Run

## In-Shell





# PRODUCTION PLAN

## Natural



Sliced



Meal



Diced Large 30/16



Diced Medium 22/8



Diced Small 12/8

## Blanched



Whole



Sliced



Slivered



Splits



Whole/Broken



Pieces



Diced Small 12/8



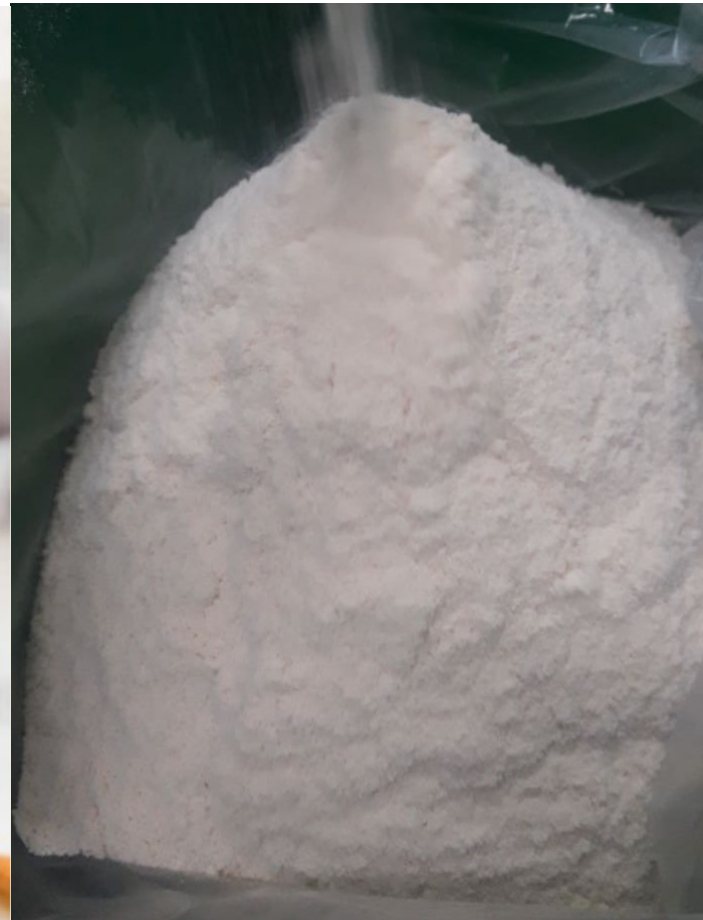
Meal

# ALMOND OIL





# ALMOND MILK INSTANT





# ALMOND IN SHELL MILK FLAVOR





# ALMOND SNACK





# ALMOND BUTTER





# ALMONESIA IN FOOD & BEVERAGE





# ALMOND TOFU & PUDDING





# BREAD







## ALMONESIA NOODLE INSTANT



# FLORENTINE ALMOND BISCUIT









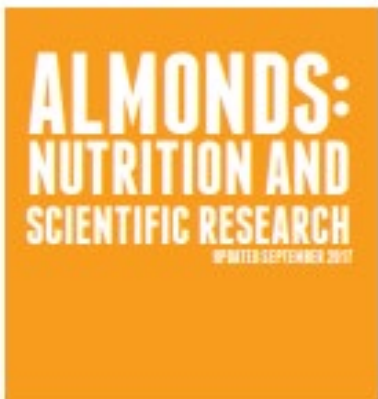
# NUTRIENT COMPARISON CHART FOR TREE NUTS





Based on a one-ounce portion¹	ALMOND	BRAZIL NUT	CASHEW	HAZELNUT	MACADAMIA NUT	PECAN	PISTACHIO	WALNUT
Calories	160²	190	160	180	200	200	160	190
Protein (g)	6	4	4	4	2	3	6	4
Total Fat (g)	14	19	13	17	22	20	13	18
Saturated Fat (g)	1	4.5	3	1.5	3.5	2	1.5	1.5
Polyunsaturated Fat (g)	3.5	7	2	2	0.5	6	4	13
Monounsaturated Fat (g)	9	7	8	13	17	12	7	2.5
Carbohydrates (g)	6	3	9	5	4	4	8	4
Dietary Fiber (g)	4	2	1	3	2	3	3	2
Potassium (mg)	208	187	160	193	103	116	285	125
Magnesium (mg)	77	107	74	46	33	34	31	45
Zinc (mg)	0.9	1.2	1.6	0.7	0.4	1.3	0.7	0.9
Vitamin B6 (mg)	0	0	0.1	0.2	0.1	0.1	0.3	0.2
Folate (mcg)	12	6	20	32	3	6	14	28
Riboflavin (mg)	0.3	0	0.1	0	0	0	0.1	0
Niacin (mg)	1.0	0.1	0.4	0.5	0.7	0.3	0.4	0.3
Vitamin E (mg)	7.3	1.6	0.3	4.3	0.2	0.4	0.6	0.2
Calcium (mg)	76	45	13	32	20	20	30	28
Iron (mg)	1.1	0.7	1.7	1.3	0.8	0.7	1.1	0.8

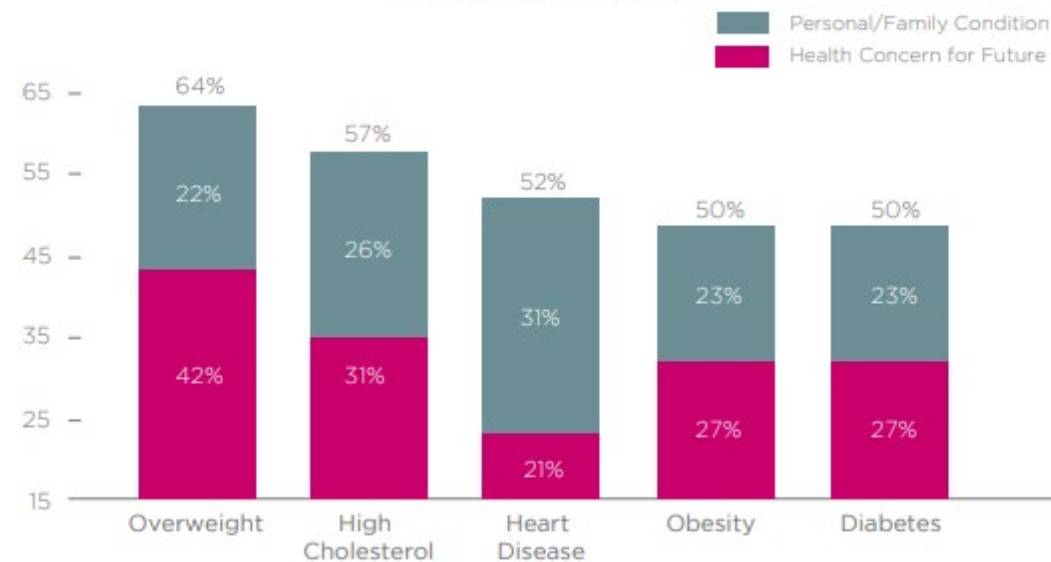






# ALMONDS: NUTRITION AND SCIENTIFIC RESEARCH

Figure 1: Concerns about health condition  
(n = 5,500 global consumers)



Source: Almond Board Global Perceptions Study, 2013.

Question: For the following health concerns, please indicate how impacted you are by each. (select all that apply.)





# ALMONDS: A HEART-SMART SOLUTION



**PROTEIN**  
6g

**VITAMIN E**  
7.3mg  
50% DV

**FIBER**  
4g  
13% DV

**UNSATURATED  
FATS**  
13g

**POTASSIUM**  
210mg  
4% DV

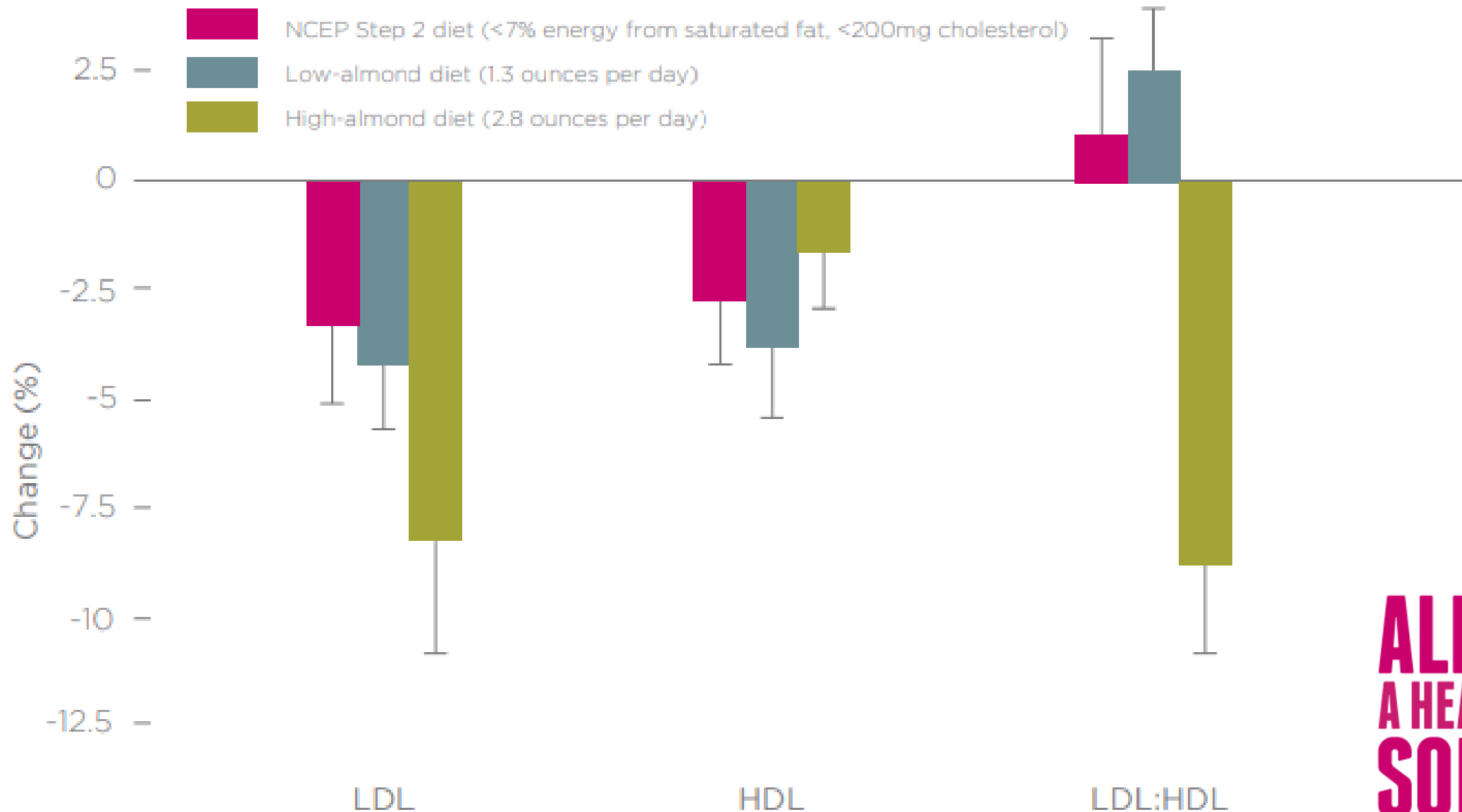
**MAGNESIUM**  
76mg  
20% DV



**1 OZ = 23 ALMONDS**



Figure 2: Change from baseline at four weeks in blood lipids on control, half-dose almonds and full-dose almonds. Values are mean  $\pm$  SEM



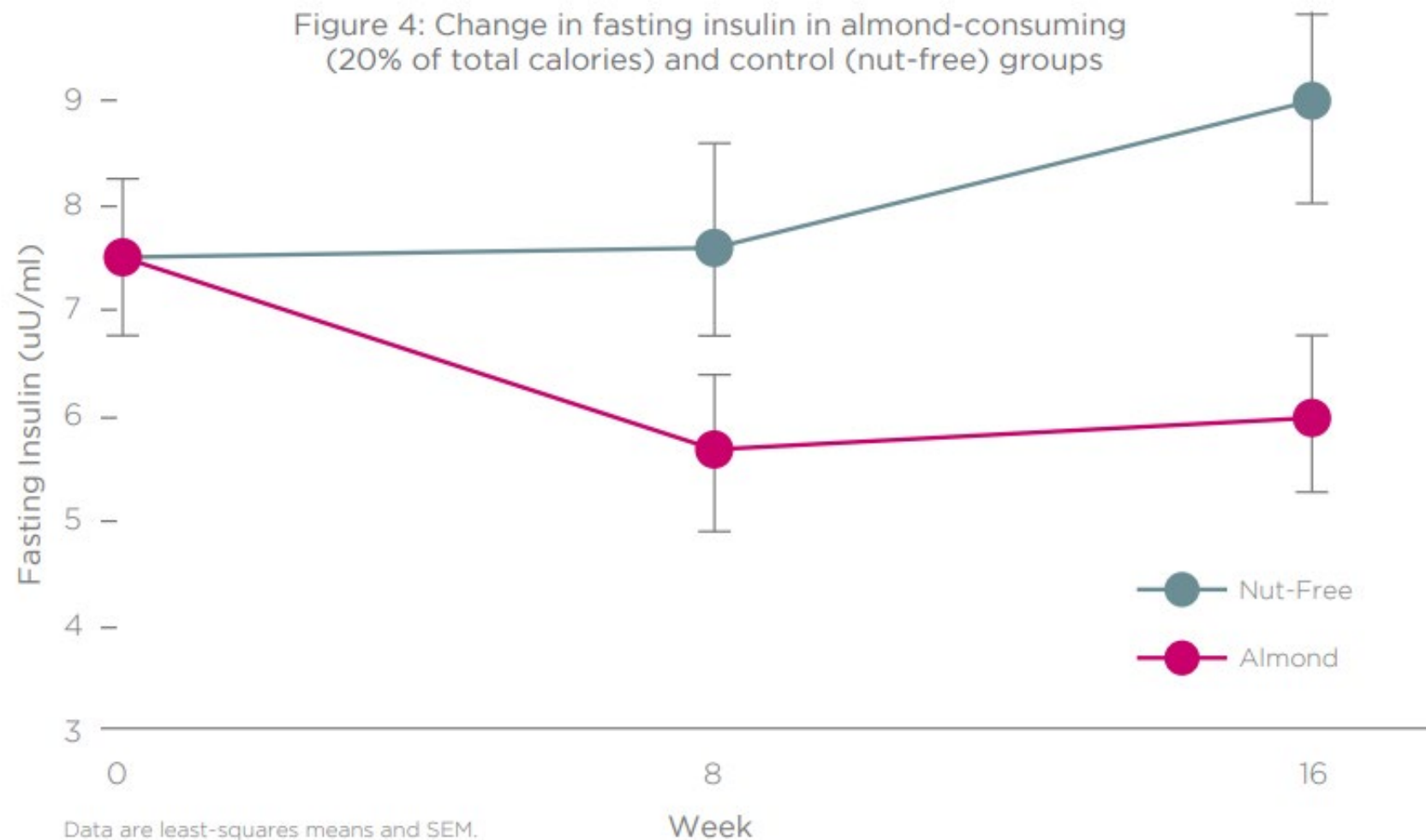
**ALMONDS:  
A HEART-SMART  
SOLUTION**

# ALMONDS AND DIABETES

THE UNIQUE NUTRIENT PACKAGE IN ALMONDS MAKES THEM A SMART CHOICE FOR MANAGING HEALTHY BLOOD SUGAR LEVELS.



Figure 4: Change in fasting insulin in almond-consuming (20% of total calories) and control (nut-free) groups





# ALMONDS: A SATISFYING WEIGHT-WISE SNACK

A DAILY HANDFUL OF ALMONDS  
IS A DELICIOUS WAY TO MANAGE  
CRAVINGS AND HELP MAINTAIN A  
HEALTHY BODY WEIGHT.

Figure 5: Food processing and structure impact the metabolizing energy of almonds.

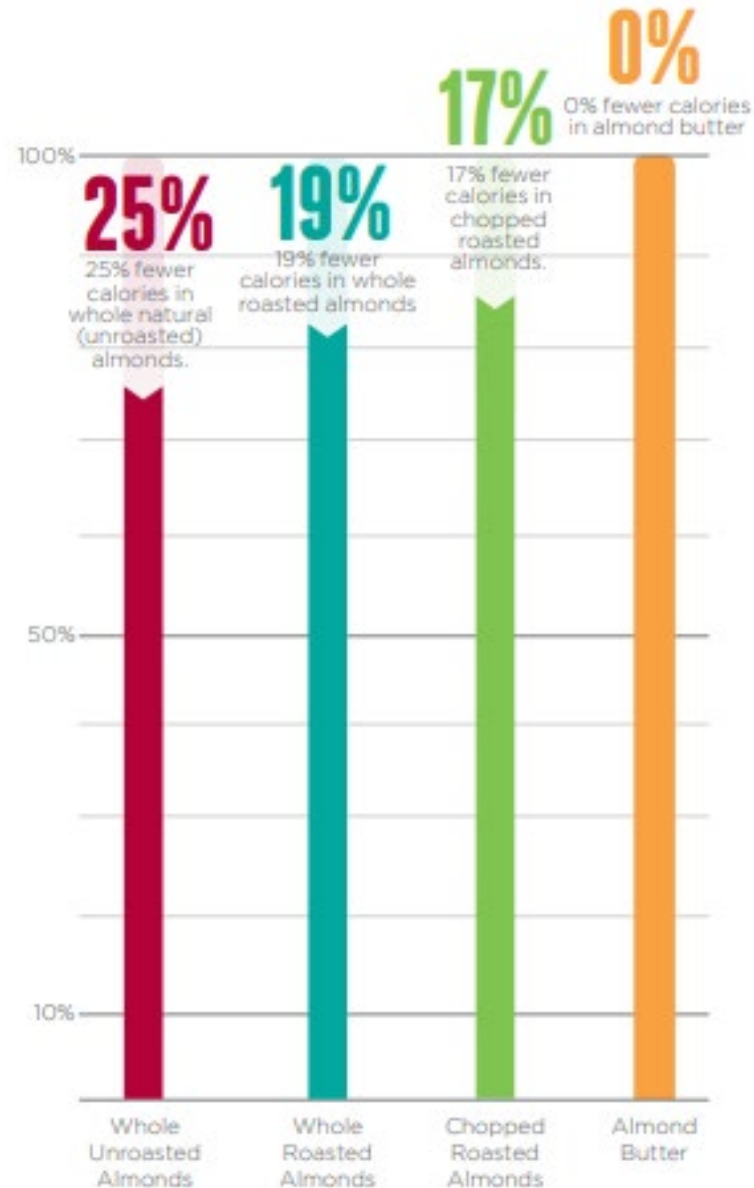


Figure 6: A midmorning snack of almonds generates satiety

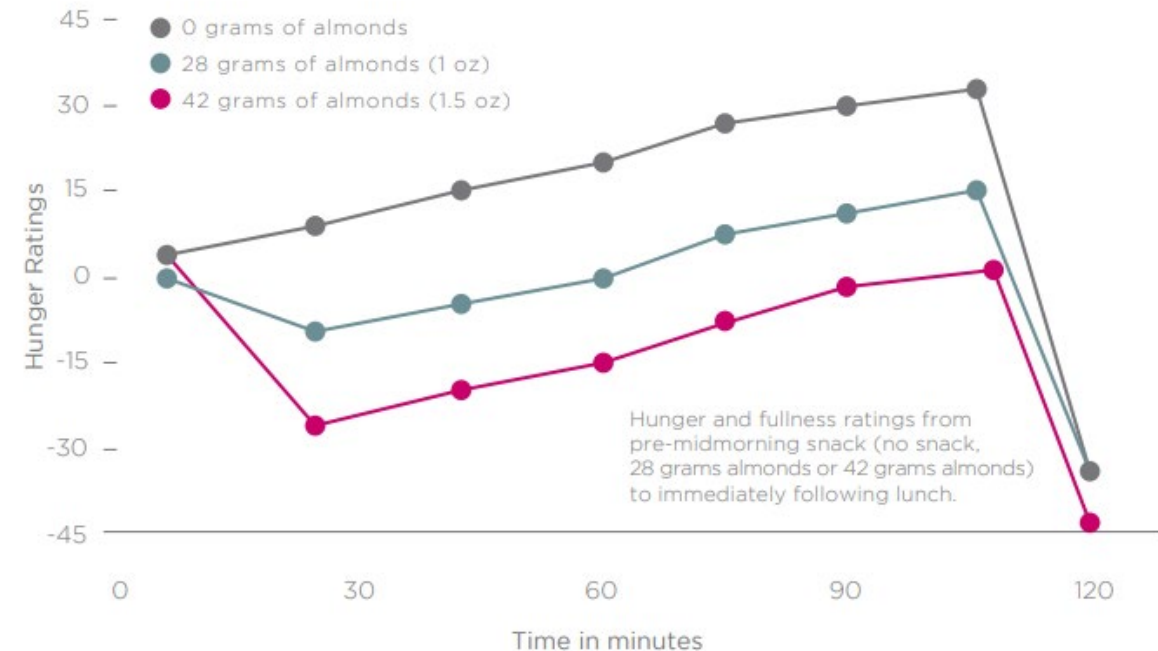
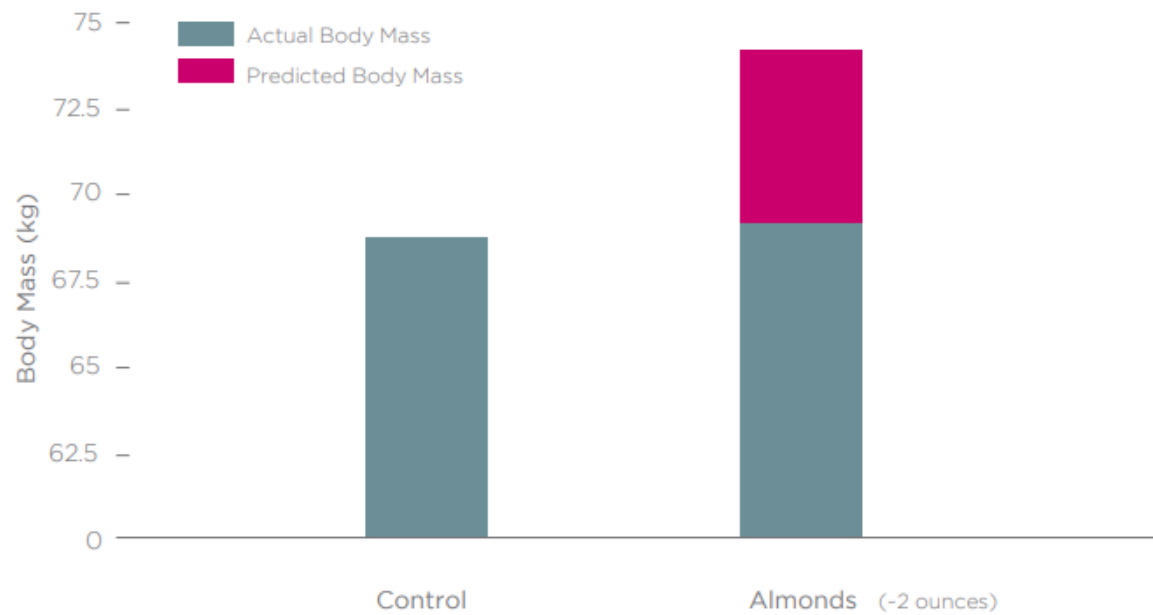


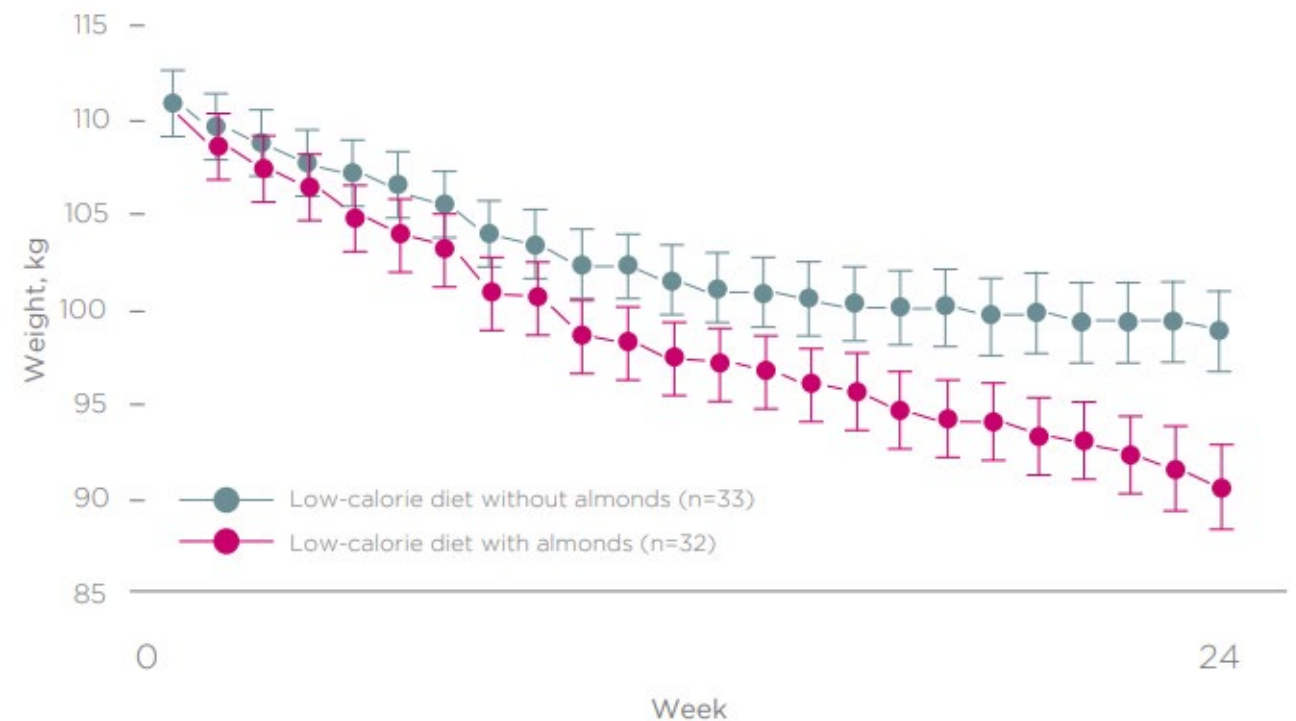
Figure 7: Changes in body composition due to the consumption of 344 calories per day of almonds for 10 weeks in healthy adult women (n = 20)



# ALMONDS: A SATISFYING WEIGHT-WISE SNACK

A DAILY HANDFUL OF ALMONDS IS A DELICIOUS WAY TO MANAGE CRAVINGS AND HELP MAINTAIN A HEALTHY BODY WEIGHT.

Figure 8: Weekly change in body weight in low-calorie diet with almonds vs. low-calorie diet without almonds





# NATURAL BEAUTY

With their 6 grams of energizing protein, 4 grams of hunger-fighting fiber and nutrients including magnesium and vitamin E, it's no wonder that almonds are known for being one of the healthiest snacks around. **Did you know that almonds could be one of the tastiest steps in your skincare routine, too?**





## ALMONDS: A BOOST FOR YOUR BEAUTY ROUTINE

Several key nutrients found in almonds are linked to skin health, making them a delicious addition to daily beauty regimens:

- Almonds are rich in antioxidant **vitamin E**, which may help protect cells from the damaging effects of free radicals caused by pollution, UV rays from the sun, cigarette smoke and other environmental and intrinsic factors. One serving of 23 almonds (about an ounce) provides 50% of your daily recommended vitamin E needs.
- You'll find 8% of the Daily Value for **zinc**. Zinc contributes to the integrity of healthy skin.
- Two B vitamins contribute to the maintenance of normal skin. Almonds offer 25% of the Daily Value for **riboflavin** and 6% of the Daily Value for **niacin**.
- Almonds are a good source of **copper**, which plays a role in skin and hair pigmentation.
- **Linoleic acid**, an essential fatty acid, helps prevent skin dryness. A one-ounce serving of almonds has 3.5 grams of linoleic acid.



The influence of food choices on skin health and appearance continues to be a growing field. Our findings emphasize the need to look at almonds as a whole food with multiple nutrient components, rather than oversimplifying potential benefits due to one nutrient.

- Dr. Raja Sivamani, dermatology researcher





## SKIN-DEEP FINDINGS

Researchers at the University of California, Davis, investigated the effects of daily almond eating on facial wrinkles and skin pigmentation.

Forty-nine healthy postmenopausal women with Fitzpatrick skin types I or II (the skin types most susceptible to sunburn) completed this six-month study. The women were randomly assigned to one of two groups:

- The intervention group, which ate almonds as a snack, accounting for 20% of total daily calorie intake, or 340 calories per day on average (about 2 one-ounce servings).
- The control group, which ate a nut-free snack that also accounted for 20% of calories: a fig bar, granola bar or pretzels.

Aside from these snacks, study participants ate their regular diets and did not eat any nuts or nut-containing products.



Skin assessments were made at the start of the study and at 8 weeks, 16 weeks and 24 weeks. At each of these visits, facial wrinkles and facial pigment intensity were assessed using high-resolution facial imaging and validated 3-D facial modeling and measurement. Skin hydration, transepidermal water loss (TEWL) and sebum excretion were also assessed. **Researchers found significant reductions in wrinkle severity and in overall facial pigment intensity in the group consuming almonds:**

- Wrinkle severity decreased by 15% at week 16 and by 16% at the end of the study.
- Overall facial pigment intensity decreased by 20% at week 16 and remained so at week 24.

**Transepidermal water loss, skin hydration and sebum excretion were measured on the forehead and cheeks in both groups during the study:**

- There were no changes in transepidermal water loss at any time point among the almond and control groups.
- At the end of the study, there were increases in skin hydration among both groups.
- Looking at sebum excretion, both groups showed a significant increase on the cheeks, but only those in the control group showed a significant increase in the forehead excretion rate.





There are a few limitations of the study to note: results do not provide insight into durations of eating almonds longer than 24 weeks. Additionally, the study participants were postmenopausal women with sun-sensitive Fitzpatrick skin types I and II, so results cannot be generalized to younger, male or higher Fitzpatrick skin type populations. And, although the snacks in both groups were calorie matched, they were not macronutrient matched.

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Source: Rybak I, Carrington AE, Dhaliwal S, Hasan A, Wu H, Burney W, Maloh J, Sivamani RK. Prospective Randomized Controlled Trial on the Effects of Almonds on Facial Wrinkles and Pigmentation. *Nutrients*. 2021; 13(3):785. <https://doi.org/10.3390/nu13030785>

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