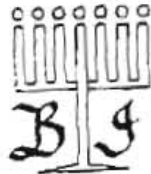


CongregationBethIsraelNassau.Org



C O N G R E G A T I O N

Beth Israel



141 HILTON AVENUE HEMPSTEAD, NEW YORK 11550 Tel: 516-489-1818



MARCH  
2020

ADAR - NISAN 5780  
אדר - ניסן תשס"פ

**Purim Invitation**

The Bible story of Queen Esther tells us of the beautiful queen who saved the Jewish people of Persia from extinction. A plan to destroy the Jews had been put into place by Haman, advisor to King Ahasuerus. Esther bravely appealed to her husband the king (who had been previously unaware that his queen was Jewish) to spare her people. Haman's wicked plot was foiled and, ever since, the holiday of Purim has recalled this joyous event. Celebrations are often in the form of masquerade balls with participants in elaborate costume. Traditionally, this is an opportunity to give tzedakah (charitable donations for the poor). In 1881, the Purim Association of New York City invited New York's Jewish elite to attend their Fancy Dress Ball to raise money for the Hebrew Benevolent and Orphan Asylum Society. This yearly event was the high point of upper class New York Jewry's social calendar.

MID-ISLAND NY 117  
27 FEB 2020 PM 7 L



FOREVER / USA

Congregation Beth Israel  
141 Hilton Avenue  
Hempstead, NY 11550

# Quick Studies

A snapshot of the latest research on diet, exercise, and more.

## Sugary Drinks & Diabetes



**B**oth sugary drinks and fruit juice may raise your risk of type 2 diabetes, and not just by leading to weight gain.

Researchers tracked roughly 192,000 men and women for up to 26 years. Those who consumed at least one daily 8 oz. serving of drinks that are high in either added or fruit sugars—which included soda, energy drinks, sports drinks, fruit drinks, and fruit juice—over four years had a 23 percent higher risk of type 2 diabetes than those who consumed less than one serving a week.

Weight gain explained roughly a quarter of the increased risk.

Although the scientists took many other factors into account, it's possible that something else about sugary-beverage drinkers explains their higher risk.

**What to do:** Replace sugary drinks with water, unsweetened coffee or tea, or low-fat milk. Replace fruit juice with whole fruit.

*Diabetes Care* 42: 2181, 2019

## Exercise & Heart Fat



**E**xcess fat around the heart is linked to a higher risk of heart disease. Could exercise trim that fat?

Danish researchers randomly assigned 39 sedentary people with abdominal obesity to aerobic training (high-intensity interval training on a stationary bike), strength training (3 to 5 sets of 10 medium-load exercises), or no exercise. Both exercise groups had supervised workouts for 45 minutes three times a week.

After 12 weeks, epicardial heart fat (which is next to the heart muscle) was reduced by 32 percent in the aerobic group and by 24 percent in the strength group. But only strength training reduced pericardial heart fat (which is in and on the membrane enclosing the heart).

**What to do:** This study can't prove that exercise trims heart fat because it was designed to find out how exercise curbs deep belly fat. But how many reasons do you need to get moving?

*JAMA Cardiol* 4: 178, 2019

## Waist Size & Liver Cancer

**Y**our waist, not just your weight, may affect your risk of liver cancer.

After pooling data on more than 1.1 million people, scientists reported that every 2 inch increase in waist size was linked to an 11 percent higher risk of liver cancer, even in people with a healthy weight. Hip size didn't matter.

**What to do:** Try to lose or not gain excess weight...or excess waist.

*Int. J. Cancer* 2019. doi:10.1002/ijc.32750



## What's a Normal Serving?



**D**o large servings of food skew your sense of what's normal?

Dutch researchers served 132 women either a small portion of lasagna (with about 290 calories) or a large portion (with 875 calories) for lunch.

The next day, the participants were told to eat as much as they wanted from a family-sized lasagna

(with 1,585 calories) for lunch. Those who had been served the smaller portion of lasagna on the first day ate 620 calories' worth of lasagna on the second day. Those who had been served the larger portion on the first day ate 765 calories' worth.

**What to do:** Don't let huge restaurant servings taint your sense of what's "normal." Take home the excess.

*Appetite* 11: 2845, 2019

## From the Desk of Rabbi Abe

The year is made of months, weeks, days, hours, minutes, and seconds, and our goal, as Jews, is to find as many moments as possible to make meaningful and lasting.

To that end, Judaism is chock-full of holidays to give our lives the momentum it needs to take stock of our lives at different intervals, and to figure out how to create holy moments from the mundane.

Last month, we had the holiday of Tu Beshvat, which commemorates nature and our relationship with ecology. The universe is made up of so many components, and we believe that all is connected and intertwined. We are nature and nature is us. At CBI, we celebrated with a very fine Seder where we studied, sang and played music, and ate a cornucopia of delicious fruits to remind us of this relationship.

This month we celebrate the holiday of Purim, which reminds us to always look to nature for miracles. The story of Purim happened in a fashion that seemed ordinary, but when broken down to its many parts, miracles abound.

Jews have always celebrated Purim as a time of unbridled joy, as a reminder of the miracles that happened so long ago in Shushan, Persia, when enemies wanted to eradicate the Jewish people in one great swoop. The fact that we're still here in 2020 is definitely cause for celebration.

We, at CBI, will be celebrating Purim on March 13 with an amazing cabaret-style spiel, interspersed with readings from the Megillah. There will be much revelry all around, and I look forward to seeing you all in costume and to be ready to celebrate our Jewishness in the 21st Century. And, yes, alcoholic beverages will be imbibed per Jewish custom surrounding this holiday.

As always at CBI, the Shabbat Musical service goes on as scheduled each Saturday morning at 9:30 am, and the Wednesday Torah class continues each week at noon. It would be an honor to see you there.

Warmly, and with blessings for much joy in this special time of year,

Rabbi Abe

**Yahrzeits, March, 2020**

LOUIS JONAS	03 01	MARVIN LEVY	03 17
ADRIENNE MANTIS	03 01	FANNIE KLEINE	03 18
MICHAEL KAREN	03 08	MORRIS GOLDSMITH	03 19
GEORGE GLASSER	03 07	CHARLOTTE LEVIN	03 19
MARVIN BERNSTEIN	03 08	ISAAC ROSENKRANZ	03 21
EFTIHIA SABBAS	03 08	ADELE SMALL	03 22
CLAIRE SCHRAETER	03 09	GEORGE COON	03 23
MEYER MOUER	03 09	ABRAHAM KAPUTKIN	03 23
SIDNEY NASS	03 11	LEE SCHOENFELD	03 24
EDITH BRANDES	03 12	ROSE SKULSKY	03 27
A.L. FRANK	03 12	JULIAN LEVI	03 28
MARVIN FRICKLAS	03 12	H. ROBERT LEVINE	03 30
RUTH VOLIN	03 15	SAMY BARUCH	03 31
FRANCES FEIGELMAN	03 16	SOLOMON JANVEY	03 31
MAX REASONBERG	03 16	SENDER LEVINE	03 31
		SEYMOUR WEITZ	03 31

---

**BEST WISHES TO OUR MARCH BIRTHDAYS**

ELLIS ABRAMS	RICHARD KRAUSS	STANLEY SMALL
KEN GOLDBERG	PATTY ROTHSTEIN	ARTHUR YALON
LOIS GLANZER		

---

THE CONGREGATION SENDS CONDOLENCES TO THE SKALKA AND ROSSMAN FAMILIES ON THE DEATH OF MOTHER, GRANDMOTHER AND GREAT GRANDMOTHER, RHODA HANNAH ROSSMAN.

THE CONGREGATION MOURNS THE DEATH OF OUR OLDEST MEMBER,  
LILLIAN NASS

APRIL 1, 1917 - FEBRUARY 14, 2020

REGULAR MEMBER OF OUR SABBATH MINYAN, ALWAYS GIVEN THE TASK OF LEADING THE CONGREGATION IN THE ASHREY PRAYER, BOARD MEMBER, AND JOURNAL CHAIRPERSON.

**MAY THEIR MEMORIES BE FOR A BLESSING**

## FROM THE JOURNAL IN THE YEAR LILLIAN WAS OUR HONOREE

### LILLIAN NASS

#### 2017-2020

Lillian Nass spent her early school years in Newark, New Jersey. Among her classmates were Florence Meyerowitz and Alexander Goldberg, who later married, moved to Hempstead, joined Congregation Beth Israel and each served as president.

Lillian studied at Uppsala, became a teacher, married Sidney Nass, moved to Brooklyn, then to Hempstead, where she followed her childhood friends to Beth Israel. Both Lillian and Sid became active, with Sid joining the Men's Club and the choir that performed at all services. In those days, we had daily minyans and Friday and Saturday services, plus all the holidays. Lillian was a full time teacher, a loving and busy mother, and an active participant in Sisterhood and the annual advertising journal, always a major fund raiser. In addition, she oversaw the temple gift shop that no longer exists.

Having served on the Board of Sisterhood, when the Congregation's Board of Trustees went co-ed, Lillian made the transition, and continues to this day.

The Goldbergs were active on the governing board of the Friends of Israel and arranged for Lillian to travel to Israel and to work as they did in support of the troops.

When Florence Goldberg gave up her chairmanship of the annual advertising journal, Lillian took on that role and ran the publication for many years. She oversaw its change from a quid pro quo for ads (solicitors receiving credit towards a dinner or other reward) to a full fledged fund raiser with all ad funds going to the temple. There were many solicitors and you can bet that they wanted full credit for their efforts, even if the only reward was a mention.

Yes, bright, chic, opinionated Lillian is 100 years old, but age neither stops nor limits her. She lives in an apartment in Lynbrook, plays mah jongg with a group there and leads a current event discussion group at the Lynbrook library, is a regular at Sabbath services and frequently leads English readings.

# Choose Wholesome, Healthy Hummus as a Spread or Snack

*Made from chickpeas and tahini, hummus contains healthy nutrients such as fiber and protein.*

**H**ummus is a healthy, dense snack and a great alternative to high-calorie, high-saturated fat dips and spreads. Made from chickpeas (garbanzo beans) and tahini (ground sesame seeds), hummus is under 30 calories per serving (2 tablespoons) and less than 3 grams (g) of fat and 1 g of saturated fat. It also contains around 3-4 g of potassium, 1 g each of fiber and protein, and small amounts of iron and magnesium.

"Consumers of chickpeas and/or hummus have been shown to have higher nutrient intakes of dietary fiber—which promotes satiety and benefits digestive health, polyunsaturated fatty acids, vitamins A, C, and E, folate, magnesium, potassium, and iron as compared to non-consumers," explains Morgan Dickison, a registered dietitian nutritionist at Weill Cornell Medicine's Comprehensive Weight Control Center. "Hummus is a complex carb, which provides long-lasting energy and reduces glucose spikes, Dickison says. Also, "a plant-based diet can help prevent chronic diseases."



### Creative Ways to Eat Hummus

It's robust enough to eat plain, but many people dress it up with other healthy ingredients such as garlic, roasted red peppers, and even chocolate. It also comes in organic brands, is non-genetically modified, and is naturally gluten-free.

Use hummus on anything you might spread mayonnaise, butter, or peanut butter on, such as a "veggie wrap, a Greek salad, or an endive filling; or blend it with avocado on the top of a burger," says Dickison.

### Watch the Sodium


Two tablespoons of hummus can have as much as 130 milligrams (mg) of sodium and a half-bag of chips dipped in hummus can make up more than half your daily sodium requirement. To conserve, just dip the tip of your snack food into the hummus to enjoy the flavoring.

Baba Organic Hummus is made with all-natural ingredients, but did not make our list because it contains 130 mg of sodium per serving (2 tablespoons).

Cedar's Organic Hummus is considered by taste-testers to be one of the best in flavor; however, a serving of "original" contains 125 mg of sodium. Veggicopia Plain Hummus has 187 mg of sodium, while Whole Foods Original

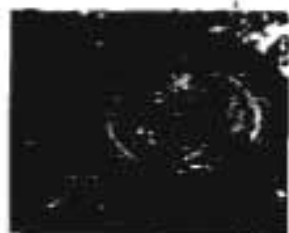
Hummus, which is very healthy otherwise, contains 160 mg of sodium. The items in our list below have 120 mg of sodium or less.

### Less Is More

"Look for all-natural ingredients (garbanzo beans or chickpeas and tahini should be first on the list), and beware of brands with added flavor such as caramelized onion and sweet chili. They will likely have added sugar," Dickison warns. 

### Make Your Own Hummus

Blend garbanzo beans and ground sesame seeds with 2 tablespoons of olive oil and skip the sodium, additives, and preservatives. Also, store-bought hummus tends to use canola, soybean, or safflower oil to reduce cost, but olive oil has a healthier fat profile, says Dickison. Blend foods to create different flavors (for example: try beets, avocados, garlic, pumpkin, sun-dried tomatoes, roasted red peppers, spinach, olives, cilantro, lemon, pine nuts, or jalapeños).



<b>SUPERMARKET SLEUTH HUMMUS</b>	<b>SERVING</b> 2 TBSP/28-30 G	<b>CALORIES</b>	<b>FAT</b> (g)	<b>SAT FAT</b> (g)	<b>SODIUM</b> (mg)	<b>CARB</b> (g)	<b>FIBER</b> (g)	<b>SUGAR</b> (g)	<b>PROTEIN</b> (g)
Delighted By Chocolate Mint Fudge		60	2.5	2	35	9	1	4	1
Cava Roasted Garlic		50	2.5	0	75	6	1	0	2
Roots Roasted Garlic		80	6	0	75	6	2	1	2
Roots Original		60	6	0	80	6	2	1	2
Cava Traditional Organic		45	3	0	90	3	<1	0	2
Pita Pal Organic Basic & Sun-Dried Tomatoes		60	2.5	0	90	8	2	1	3
Lily's Roasted Red Pepper		50	2.5	<.5	100	5	1	<1	2
Wild Garden, All Flavors		45	2	0	100	5	2	0	2
Lily's Cracked Peppercorn		50	3	0	105	5	<.2	<1	2
Hope Organic Sea Salt & Olive Oil		70	4.5	1	120	4	1	1	2

Products are in order by sodium count. g=gram, mg=milligram, sat fat=saturated fat, carb=carbohydrates. Source: Food packages and company websites. Product images courtesy of manufacturers.

# Rabbi Gittelsohn's Iwo Jima Sermon

=====

DISTRIBUTED AT A RECENT JWV MEETING IN MERRICK, NY

=====

*A rabbi's eulogy for World War II heroes became famous after a bigoted attempt to ban it.*

BY MICHAEL FELDBERG

The fight for Iwo Jima in 1945 was one of the bloodiest of World War II. A tiny island in the Pacific dominated by a volcanic mountain and pockmarked with caves, Iwo Jima was the setting for a five-week, nonstop battle between 70,000 American Marines and an unknown number of deeply entrenched Japanese defenders. The courage and gallantry of the American forces, climaxed by the dramatic raising of the American flag over Mount Suribachi, is memorialized in the Marine Corps monument in Washington, DC. Less remembered, however, is that the battle occasioned an eloquent eulogy by a Marine Corps rabbi that has become an American classic.

Rabbi Roland B. Gittelsohn (1910-1995), assigned to the Fifth Marine Division, was the first Jewish chaplain the Marine Corps ever appointed. The American invading force at Iwo Jima included approximately 1,500 Jewish Marines. Rabbi Gittelsohn was in the thick of the fray, ministering to Marines of all faiths in the combat zone. He shared the fear, horror and despair of the fighting men, each of whom knew that each day might be his last. Roland Gittelsohn's tireless efforts to comfort the wounded and encourage the fearful won him three service ribbons.

When the fighting was over, Division Chaplain Warren Cuthriell, a Protestant minister, asked Rabbi Gittelsohn to deliver the memorial sermon at a combined religious service dedicating the Marine Cemetery. Cuthriell wanted all the fallen Marines—black and white, Protestant, Catholic, and Jewish—honored in a single, nondenominational ceremony. Unfortunately, racial and religious prejudice was strong in the Marine Corps, as it was throughout America. According to Rabbi Gittelsohn, the majority of Christian chaplains objected to having a rabbi preach over predominantly Christian graves. The Catholic chaplains, in keeping with church doctrine, opposed any form of joint religious service.

To his credit, Cuthriell refused to alter his plans. Gittelsohn, on the other hand, wanted to save his friend Cuthriell further embarrassment and so decided it was best not to deliver his sermon. Instead, three separate religious services were held. At the Jewish service, to a congregation of 70 or so who attended, Rabbi Gittelsohn delivered the powerful eulogy he originally wrote for the combined service:

Here lie men who loved America because their ancestors generations ago helped in her founding, and other men who loved her with equal passion because they themselves or their own fathers escaped from oppression to her blessed shores. Here lie officers and men, Negroes and whites, rich men and poor . . . together. Here are Protestants, Catholics, and Jews together. Here no man prefers another because of his faith or despises him because of his color. Here there are no quotas of how many from each group are admitted or allowed. Among these men, there is no discrimination. No prejudices. No hatred. Theirs is the highest and purest democracy . . .

Whosoever of us lifts his hand in hate against a brother, or who thinks himself superior to those who happen to be in the minority, makes of this ceremony and the bloody sacrifice it commemorates, an empty, hollow mockery. To this, then, as our solemn duty, sacred duty do we the living now dedicate ourselves: to the right of Protestants, Catholics, and Jews, of white men and Negroes alike, to enjoy the democracy for which all of them have here paid the price ...

We here solemnly swear that this shall not be in vain. Out of this and from the suffering and sorrow of those who mourn this will come, we promise, the birth of a new freedom for the sons of men everywhere.

Among Gittelsohn's listeners were three Protestant chaplains so incensed by the prejudice voiced by their colleagues that they boycotted their own service to attend Gittelsohn's. One of them borrowed the manuscript and, unknown to Gittelsohn, circulated several thousand copies to his regiment. Some Marines enclosed the copies in letters to their families. An avalanche of coverage resulted. Time magazine published excerpts, which wire services spread even further. The entire sermon was inserted into the *Congressional Record*, the Army released the eulogy for short-wave broadcast to American troops throughout the world, and radio commentator Robert St. John read it on his program and on many succeeding Memorial Days.

In 1995, in his last major public appearance before his death, Gittelsohn reread a portion of the eulogy at the 50th commemoration ceremony at the Iwo Jima statue in Washington, D.C. In his autobiography, Gittelsohn reflected, "I have often wondered whether anyone would ever have heard of my Iwo Jima sermon had it not been for the bigoted attempt to ban it."

---

The JWV is the oldest continually active veterans organization in the USA with 400 chapters around the country. Originally organized by ex-Civil War soldiers in 1896 as the Hebrew Union Veterans Association, in response to an anti-Semitic rumor that Jews did not fight in that war. The canard is still repeated today about each of our wars. Combatting Anti-Semitism is still on the agenda today, as well as taking care of our Jewish veterans in hospitals, providing Jewish services and kosher food, healing services and clothing. They also provide Kosher For Passover care packages to overseas chaplains.

Although their numbers continue to dwindle with the passage of time, recent political victories include the passage of a veterans tuition benefit and a bill increasing benefits for surviving spouses. The National Museum of American Jewish Military History is a lasting legacy.



Star of David Memorial Chapels, Inc.  
1236 Wellwood Avenue • West Babylon, NY 11704  
631-454-9600 • 866-95-SHALOM  
[starofdavidchapel.com](http://starofdavidchapel.com)



## THANK YOU FOR YOUR CONTRIBUTIONS

GAYLE AND MURRAY WEITZ, to the Rabbi's Discretionary Fund  
THELMA AND RICHARD ZIMMERMAN, in memory of Lillian Nass  
ALAN MANTIS, in fond memory of Maurice Siidmarc and Lillian Nass  
SONDRA BERNSTEIN, at the yahrzeits of my mother, Ruth Volin and my husband, Marvin Bernstein.

ENID CARUTH at the yahrzeits of Fannie Kleine and Charlotte Levin.

NANCY AND TERRY GOLDSMITH, in memory of Dorothy Goldsmith from her loving family—Terry, Nancy, 4 grandchildren, 4 great grandchildren.

ALAN MANTIS at the yahrzeits of my wife, Adrienne, and my cousin Marvin Fricklas.

ROBIN CINNAMON, donation to the Kiddush.

MARVIN BERNSTEIN, in memory of Maurice Siidmarc, Benjamin Soblick, Lillian Nass

ELI SOBlick, in memory of my brother Ben

MATILDA LOVINGER, at the yahrzeit of my brother, Claude Herscovici

ROBIN CINNAMON, in memory of Ben Soblick

MARIANNE BAKER, in memory of Benjamin Soblick and Lillian Nass

ALAN MANTIS, in memory of Ben Soblick.

AMY ZAUM, at the yahrzeit of my mother, Blanche Zaum.

GAIL BRODER KATZ, in memory of Judge Larry Goldstein and Maurice Siidmarc.

SUSAN BASS, in memory of Lillian Nass.

MATILDA LOVINGER, in memory of Lillian Nass.

Yashar, the Attorneys' and Judges' Chapter of Hadassah

presents

### The Rise of Antisemitism: Stemming the Tide of Hate

Join us for an important and informative evening as Michael Cohen, Eastern Director of the Simon Wiesenthal Center and Tracey Keeton of the Hate Crimes Bureau of the Nassau County District Attorneys' Office discuss the recent rise in antisemitism in our communities and the world around us.

March 16, 2020

6:00 pm

Nassau County Bar Association

15 West Street, Mineola, New York

Light dinner and refreshments will be served.

Couvert \$18 per person

**RSVP** by mailing your check payable to Yashar Hadassah to  
Yashar c/o Joi Aberle Esq., 228 First Street, Apt 2J, Mineola, New  
York 11501.

If you have any questions, please email  
vasharhadassah2020@gmail.com



**Guttermans**  
FUNERAL DIRECTORS SINCE 1892 INC

**One of The Largest Family Owned &  
Operated Jewish Funeral Homes  
Serving Long Island, New York & Florida**

**Directors:**

- \* STEWART GUTTERMAN • PHILIP GUTTERMAN
- STEVEN KANOWITZ • \*HOWARD C. KOTKIN
- \* ROBERT SHERMAN • \* ELLIOTT H. WOLFE

**Chapels in:**

ROCKVILLE CENTRE, L.I.: 175 N. Long Beach Rd. • 516-764-9400  
WOODBURY, L.I.: 8000 Jericho Turnpike • 516-921-5757  
BROOKLYN: 1283 Coney Island Avenue • 718-284-1500

**In Florida:**

GUTTERMAN-WARHEIT MEMORIAL CHAPEL  
1-800-992-9262  
SERVING MIAMI-DADE, BROWARD, PALM BEACH & MARTIN COUNTIES

**Arrangements for Out-of-State Burials**

*\* Of Blessed Memory*

**MONUMENTS BY GUTTERMAN'S**

www.guttermansinc.com

# Taking the beef out of burgers

*Sales are booming for alternative meats. Are plant-based burgers just a fad?*

## Why are meatless burgers so popular?

Food scientists believe they've achieved a kind of alchemy, making plants look and taste like meat. Global sales suggest they've largely succeeded. All-plant burgers, nuggets, meatballs, and sausage patties exploded in popularity last year, driven by California-based Beyond Meat and Impossible Foods. Beyond had 2019's most successful IPO and gained a presence in 20,000 U.S. grocery stores plus 53,000 fast-food restaurants such as Dunkin' Donuts and Carl's Jr., while McDonald's is testing a Beyond Burger in Canada. Burger King's Impossible Whopper and White Castle's Impossible Sliders were almost too successful, causing a supply crisis. Overall U.S. restaurant sales of plant-based meat grew by 400 percent last year; combine those with supermarket sales, and consumers spent nearly \$1 billion on these products in 2019. Plant-based burgers attract eaters who are health conscious and/or environmentally concerned but aren't willing to give up familiar tastes and textures for quinoa and seitan. Ninety-five percent of Impossible's customers eat meat; in taste tests, half of them can't tell Impossible Burgers from the real thing.

## What's their secret?

"Meat analogues" such as tofu go back 2,000 years, but these are not your father's frozen veggie burgers. The new faux burgers are engineered to imitate the way ground meat sizzles on the grill, bleeds in the middle, and crumbles in your mouth. That's no small feat, considering cooked beef contains 4,000 different molecules, about 100 of which create its smell and umami-rich flavor. Impossible Foods simulates that pinkish color and savory flavor with heme, the iron-carrying molecule in blood and some plant roots. The heme is created by genetically modifying yeast with soy DNA in gigantic tanks.

## What else are they made of?

The new burgers vary in composition, but are largely made of plant proteins—usually soy, but sometimes pea, bean, or wheat—and plant fats. These ingredients are cooked in big pressure cookers, which use low heat and compression to replicate the fibrous texture of meat. The first challenge in creating a plant-based burger is to make a tasteless patty, getting rid of so-called off-flavors. (Pea protein is said to taste of urine.) "Once we cracked the code on meat flavor," said Impossible Foods scientist Laura Kliman, "if you change a few of the ratios and ingredients, it's not that hard to get fish or pork or chicken." Impossible Burgers have 21 ingredients—mostly soy and



A Beyond Burger: Pea protein, beetroot juice, and fat

potato proteins, plus coconut and sunflower oils. Beyond Burgers have 18 ingredients, a mixture of isolated pea protein, mung bean, and rice proteins. Beetroot juice provides the "bleeding" effect. The thickener methylcellulose, potato starch for texture, and the salt substitute potassium chloride are also used. Beyond Burgers get the marbled look of ground beef from coconut oil and cocoa butter whipped into tiny globules of fat.

## Is that healthier than meat?

Yes and no. Consuming meat is believed to increase the risk of cardiovascular disease and colorectal cancer, and humans can develop unsafe resistance to antibiotics by eating animals fed those drugs. Commercial beef, pork, and poultry often carry bacteria and viruses from fecal matter and cause illness if not properly cooked or handled. Critics of alternative meat, however, say that companies are exploiting the healthy sound of "plant-based" while providing heavily engineered products. Whole Foods CEO John Mackey, for example, has warned customers that these burgers "are super, highly processed foods." Meatless burgers are cholesterol free and contain about the same calorie count as hamburgers but have more sodium: The Impossible Whopper has 1,240 milligrams of sodium, 260 more than the beef version. Coconut oil gives Beyond and Impossible Burgers saturated fat levels similar to beef, and their proteins are considered less nutritious. Impossible's recipe depends on soy, which can mimic estrogen in the body, but food scientists say it's safe to consume in moderate quantities.

Environmentally, eating 4 pounds of beef contributes as much to global warming as flying from New York to London, and the average American eats more than that each month. There are many ways of producing meat, but it's clear that the annual farming and slaughter of 50 billion animals for meat worldwide leaves a massive footprint in terms of land use, crop consumption, emissions, and water pollution. In the past 25 years, an area larger than South America has been razed for cattle grazing, and cows releasing methane from digesting grains and grass—mostly through burps—causes two-thirds of the livestock sector's greenhouse gas emissions. A landmark report in *Science* found that avoiding meat and dairy is the "single biggest way" to reduce one's environmental impact. A recent University of Michigan study found that a plant-based burger generates 90 percent less greenhouse gas, requires 46 percent less energy, and has 99 percent less impact on water scarcity than a quarter pound of U.S. beef. CEO Pat Brown says that's Impossible Foods' primary purpose. "We see our mission as the last chance to save the planet from environmental catastrophe," he says.

## The environmental impact of livestock

Environmentally, eating 4 pounds of beef contributes as much to global warming as flying from New York to London, and the average American eats more than that each month. There are many ways of producing meat, but it's clear that the annual farming and slaughter of 50 billion animals for meat worldwide leaves a massive footprint in terms of land use, crop consumption, emissions, and water pollution. In the past 25 years, an area larger than South America has been razed for cattle grazing, and cows releasing methane from digesting grains and grass—mostly through burps—causes two-thirds of the livestock sector's greenhouse gas emissions. A landmark report in *Science* found that avoiding meat and dairy is the "single biggest way" to reduce one's environmental impact. A recent University of Michigan study found that a plant-based burger generates 90 percent less greenhouse gas, requires 46 percent less energy, and has 99 percent less impact on water scarcity than a quarter pound of U.S. beef. CEO Pat Brown says that's Impossible Foods' primary purpose. "We see our mission as the last chance to save the planet from environmental catastrophe," he says.

## Is the meat industry alarmed?

Stanford University biochemist Patrick Brown, who founded Impossible Foods (see box), says it should be. "We plan to take a double-digit portion of the beef market within five years," he said, "and then we can push that industry, which is fragile and has low margins, into a death spiral." That's unlikely. Americans on average eat three hamburgers a week, and the combined annual revenue of the three largest U.S. meatpacking companies is about \$200 billion. Still, the meat industry clearly feels threatened: Lobbyists convinced 12 state legislatures last year to ban products from using words such as "burger" and "meat" if they don't come from animals. But to hedge their bets and to take advantage of the boom, Perdue, Nestlé, Kellogg, and meat giant Tyson Foods are developing their own plant-based or hybrid burgers. As Tyson's former CEO Tom Hayes said, "If you can't beat 'em, join 'em, right?"