



# VITALS

*in the kitchen*



2024-2025 Culinary Medicine Interest Group Executive Board

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# ABOUT US

**T**he Culinary Medicine Interest Group focuses on the importance of integrating nutrition and culinary skills within medicine.

Our mission is to increase the number of future physicians who have an understanding, appreciation, and skill set in food preparation, clinical and community nutrition, and lifestyle management. We also aim to supplement the medical curriculum to provide students with a better idea of how to incorporate nutrition - that is culturally competent and consistent with real-world social constraints - into future patient care.



# Nutrition as a Social Determinant of Health

*Overview*



# Nutrition as a Social Determinant of Health

## What are the social determinants of health?

The World Health Organization (WHO) defines the social determinants of health as the “non-medical conditions in which people are born, work, and live” [1]. Examples of social determinants of health include geographic location, socioeconomic status, and educational attainment [1]. These factors have a direct impact on access to healthcare and health outcomes [1].

## Why is nutrition a social determinant of health?

While nutrition has traditionally been viewed as individual decisions, our dietary choices are actually reflective of numerous individual, cultural, societal, and systemic influences [1]. This is evidenced by the association between food insecurity and poor health outcomes [2]. It is believed that unhealthy diets contribute to 1 out of 5 deaths globally [3]. Multiple studies have also demonstrated that food insecurity also increases the risk of developing chronic diseases [2], [3]. Food insecurity has even been shown to influence mental health outcomes, with the United States Department of Agriculture (USDA) reporting that adults with mental health disabilities are nearly five times more likely to experience food insecurity [2].



# Nutrition as a Social Determinant of Health

## Nutrition and Systemic Inequality

Nutrition is intertwined with other social determinants of health, including poor housing, limited access to healthy foods, and limited public transportation [4]. Together, these factors intensify health disparities among marginalized communities [4]. In the United States, structural inequalities have led to widespread racial and economic segregation in many neighborhoods [4]. As a result, these communities frequently have limited access to affordable, nutritious foods, while processed and energy-dense options are readily available [4]. This disproportionately impacts low-income, predominantly minority neighborhoods [4]. In these communities, grocery stores that carry fresh produce are often costly and limited in quantity while fast food restaurants are abundant [4]. This is associated with increased rates of chronic diseases such as diabetes, hypertension, and cardiovascular disease [4].

It is also important to consider the psychological impact of discrimination, racism, and inequality on nutritional health disparities [4]. For instance, studies of African Americans with hypertension suggest that individuals who experience racism are more likely to adopt unhealthy eating habits and have poor nutrition [4].



# Nutrition as a Social Determinant of Health

## Interventions

Recognizing nutrition as a social determinant of health is essential in order to reduce food insecurity and improve health outcomes in marginalized populations. This requires a multifaceted approach that combines policy reforms to make healthy foods more affordable, urban planning strategies to improve access to grocery stores, and community-based interventions to promote nutritional education. This must be combined with efforts to address systemic inequalities, which continue to reinforce nutritional disparities.





# References

- [1] Jiao L. Social Determinants of Health, Diet, and Health Outcome. *Nutrients*. 2024 Oct 26;16(21):3642. Available from: <https://www.mdpi.com/2072-6643/16/21/3642>
  
- [2] National Alliance on Mental Illness. Social determinants of health: Food security. Available from: <https://www.nami.org/advocacy/policy-priorities/supporting-community-inclusion-and-non-discrimination/social-determinants-of-health-food-security/>
  
- [3] Amegbletor DY, Goldberg DM, Pope DA, Heckman BW. Food and Nutrition Security as Social Determinants of Health: Fostering Collective Impact to Build Equity. *Primary Care: Clinics in Office Practice*. 2023 Dec 1;50(4):633–44.
  
- [4] Agurs-Collins T, Alvidrez J, Ferreira SE, Evans M, Gibbs K, Kowtha B, et al. Perspective: Nutrition Health Disparities Framework: a Model to Advance Health Equity. *Advances in Nutrition*. 2024 Mar 1;15(4):100194–4.



# *Journal Reviews*





# *Impact of Produce Prescriptions on Diet, Food Security, and Cardiometabolic Health: A Multisite Evaluation of 9 Produce Prescriptions Programs in the United States (Journal Review)*

In the United States, poor diet contributes substantially to the burden of disease, directly increasing the incidence of cardiovascular disease, diabetes, and other diet-related diseases. These challenges are particularly pronounced in marginalized communities, where health disparities are already present. In response, many have advocated for “Food as Medicine” interventions, which seek to improve health outcomes making healthy foods more accessible. One example of such an intervention is produce prescription programs, in which low-income patients at-risk of developing cardiovascular disease or diabetes receive financial support in order to obtain nutritious foods. These programs are designed with the hope that addressing food insecurity will help reduce health disparities.

## **References**

Hager, K., Du, M., Li, Z., Mozaffarian, D., Chui, K., Shi, P., Ling, B., Cash, S. B., Foltz, S. C., & Zhang, F. F. (2023). Impact of produce prescriptions on diet, food security, and cardiometabolic health outcomes: A multisite evaluation of 9 produce prescription programs in the United States. *Circulation: Cardiovascular Quality and Outcomes*, 16(9). <https://doi.org/10.1161/circoutcomes.122.009520>

This study analyzed data from 22 produce prescription programs in the United States between 2014 and 2020. This included 3,881 subjects (2,064 adults and 1,817 children) who were either diagnosed with or at-risk of developing cardiometabolic disease. On average, participants received \$63/month in order to purchase nutritious foods at grocery stores or farmers markets.

Upon participating in produce prescription programs for 6 months, the odds of being food insecure decreased by one-third in both children and adults. This also led to an increase in fruit and vegetable intake and an overall improvement in self-reported health status. Among adults, participating in produce prescription programs was associated with decreases in Hemoglobin A1c, systolic and diastolic blood pressure, and body mass index (BMI).

This study demonstrates the effectiveness of prescription produce programs in addressing food insecurity and nutrition as a social determinant of health. By making nutritious foods more accessible, these interventions may serve as a valuable tool in preventing cardiometabolic disease and addressing health disparities, especially among marginalized populations.

To learn more about produce prescription programs: <https://nppc.health/>

#### References

Hager, K., Du, M., Li, Z., Mozaffarian, D., Chui, K., Shi, P., Ling, B., Cash, S. B., Foltz, S. C., & Zhang, F. F. (2023). Impact of produce prescriptions on diet, food security, and cardiometabolic health outcomes: A multisite evaluation of 9 produce prescription programs in the United States. *Circulation: Cardiovascular Quality and Outcomes*, 16(9), e009520. <https://doi.org/10.1161/CIRCOUTCOMES.122.009520>



# *Food to Overcome Outcomes Disparities: A Randomized Controlled Trial of Food Insecurity Interventions to Improve Cancer Outcomes (Journal Review)*

Nutrition is an important determinant of health outcomes in individuals with cancer. These patients are already immunocompromised and more susceptible to infections, a risk that can be worsened by poor nutrition. Prior research suggests that food insecurity is associated with delays in care, reducing survival rates and lowering quality of life among cancer patients.

This study examined treatment adherence and health outcomes among 117 food-insecure cancer patients across four safety-net cancer centers with clinic-based food pantries in New York City.

Participants were randomly assigned to one of three interventions: (1) clinic-based food pantry only, (2) food vouchers plus clinic-based food pantry, or (3) home grocery delivery plus clinic-based food pantry.

## **References**

HGany, F., Melnic, I., Wu, M., Li, Y., Finik, J., Ramirez, J., Blinder, V., Kemeny, M., Guevara, E., Hwang, C., & Leng, J. (2022). Food to overcome outcomes disparities: A randomized controlled trial of food insecurity interventions to improve cancer outcomes. *Journal of Clinical Oncology*, 40(31), 3603-3612. <https://doi.org/10.1200/jco.21.02400>

All three interventions improved food security and resulted in high treatment completion rates, with the highest observed in the voucher plus pantry group (94.6%). The researchers hypothesized that the vouchers were particularly effective because they were easy to use and gave patients more control over their food choices. In addition, patients in the pantry-only and delivery plus pantry groups reported significant improvements in quality of life and reductions in symptoms of depression.

Overall, these results are promising and suggest that implementing interventions to address food insecurity may increase treatment compliance among cancer patients. This highlights the importance of integrating food support programs with cancer care to improve health outcomes.

To learn more about one clinic-based food pantry in New York City, check out the Food to Overcome Outcome Disparities (FOOD) program at Memorial Sloan Kettering:

<https://www.mskcc.org/departments/psychiatry-behavioral-sciences/immigrant-health/addressing-socioeconomic-determinants-health/food-overcome-outcome-disparities>

#### References

HGany, F., Melnic, I., Wu, M., Li, Y., Finik, J., Ramirez, J., Blinder, V., Kemeny, M., Guevara, E., Hwang, C., & Leng, J. (2022). Food to overcome outcomes disparities: A randomized controlled trial of food insecurity interventions to improve cancer outcomes. *Journal of Clinical Oncology*, 40(31), 3603-3612. <https://doi.org/10.1200/jco.21.02400>





# CHEF'S CORNER



## Chickpea Salad with Balsamic Vinaigrette

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### Chickpea Salad

- 1 (8 oz) can of chickpeas, drained and rinsed
- ½ large red onion, diced
- ½ large bell pepper, diced
- 1 medium cucumber, diced
- 10-12 cherry tomatoes, halved

### Balsamic Vinaigrette

- ¼ cup olive oil
- ¼ cup of balsamic vinegar
- 1 teaspoon honey or agave nectar
- 1 garlic clove, minced
- Salt and pepper to taste
- Optional: ¼ teaspoon oregano

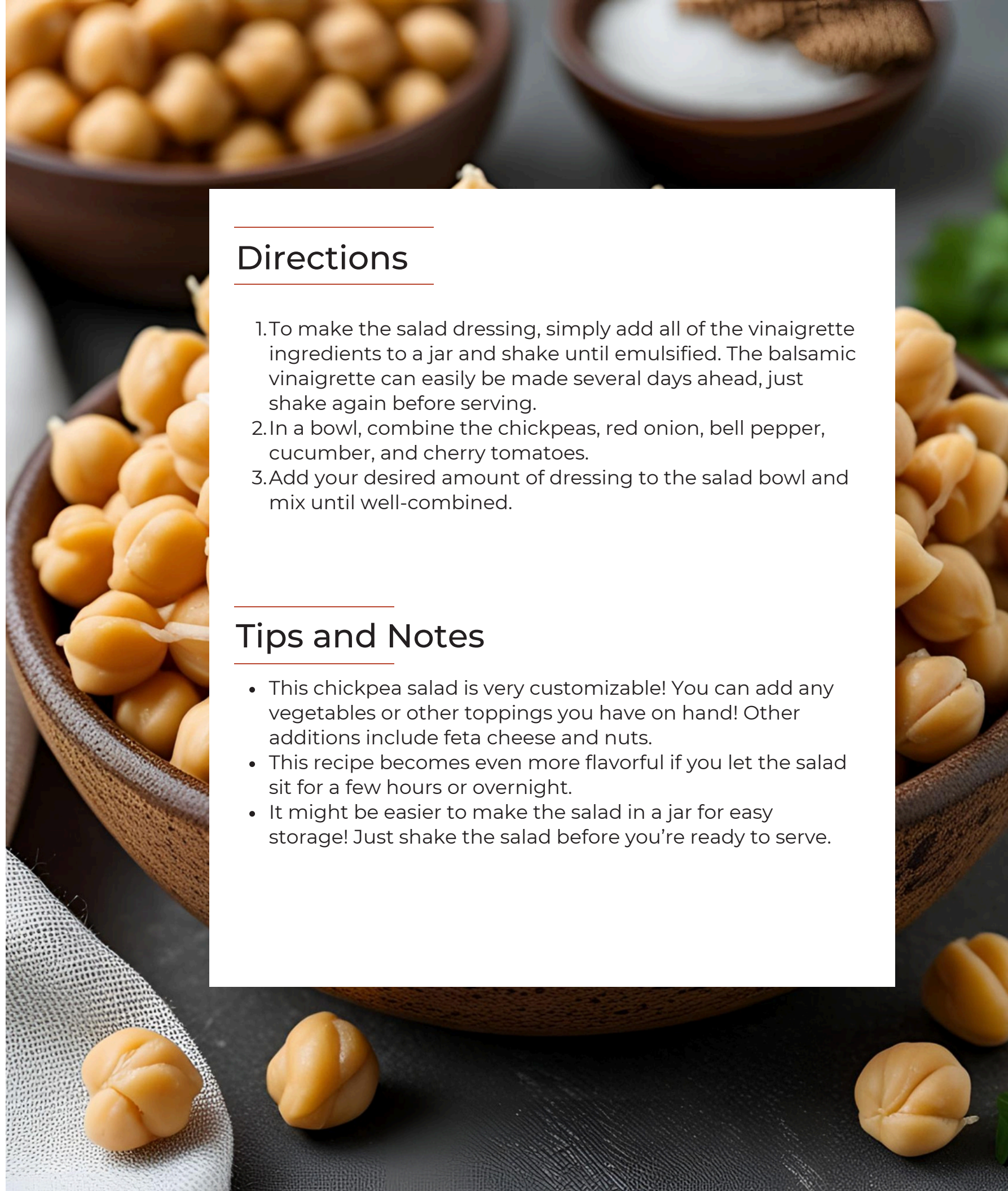


### Directions

1. To make the salad dressing, simply add all of the vinaigrette ingredients to a jar and shake until emulsified. The balsamic vinaigrette can easily be made several days ahead, just shake again before serving.
2. In a bowl, combine the chickpeas, red onion, bell pepper, cucumber, and cherry tomatoes.
3. Add your desired amount of dressing to the salad bowl and mix until well-combined.

### Tips and Notes

- This chickpea salad is very customizable! You can add any vegetables or other toppings you have on hand! Other additions include feta cheese and nuts.
- This recipe becomes even more flavorful if you let the salad sit for a few hours or overnight.
- It might be easier to make the salad in a jar for easy storage! Just shake the salad before you're ready to serve.





# COMMUNITY SPOTLIGHT

## Organizations Addressing Food Insecurity in Westchester County

### County Harvest

- Mission: Each week, supermarkets, restaurants, caterers, and other businesses discard large amounts of unsold food, much of which is still fresh and safe to eat. County Harvest “rescues” this surplus, delivering items to local soup kitchens, food pantries, and homeless shelters. In doing so, this nonprofit organization reduces food wastage while ensuring healthy, nutritious meals reach those in need.
- Email: [help@countryharvest.org](mailto:help@countryharvest.org)
- Phone: (914)-334-0741
- Website: <https://countyharvest.org/>

### Hillside Food Outreach – Food Bank

- Mission: This innovative “delivery-only food pantry” provides fresh, healthy foods directly to those in need. This unique approach is especially beneficial for individuals and families with chronic diseases or disabilities, which can make traveling to traditional food pantries difficult.
- Email: [info@hillsidefoodoutreach.org](mailto:info@hillsidefoodoutreach.org)
- Phone: (914)-747-0095
- Website: <https://hillsidefoodoutreach.org/>



# COMMUNITY SPOTLIGHT

## Organizations Addressing Food Insecurity in Westchester County

### Feeding Westchester

- Mission: This nonprofit organization works closely with numerous community partners across Westchester County to provide health, nutritious meals to individuals facing food insecurity. In addition, Feeding Westchester also offers nutrition education and support with applying for SNAP benefits.
- Email: [partnersinfo@feedingwestchester.org](mailto:partnersinfo@feedingwestchester.org)
- Phone: (914)-923-1100
- Website: <https://feedingwestchester.org/>
- Address: 200 Clearbrook Road, Elmsford, NY 10523

### HOPE Community

- Mission: This soup kitchen and food pantry provides nutritious meals to individuals and families experiencing food insecurity in Westchester County. HOPE Community is unique in that it also has a Kosher Pantry that is available twice a month.
- Email: [pantry@hope-cs.org](mailto:pantry@hope-cs.org)
- Phone: (914)-636-4010
- Website: <https://www.hopecommunityservices.org/food-services>





# CULINARY MEDICINE ANNOUNCEMENTS

## WELCOME TO CULINARY MEDICINE AT NYMC!

Welcome back to another exciting school year! We are eager to continue working towards our goals throughout the busy year ahead.

Right now, our plates are full with: Speaker events, Culinary classes, Research opportunities, Area of Concentration coursework, Vitals in the Kitchen (our newsletter and podcast), Greater Westchester volunteer efforts, Clinical shadowing, Patient education, NYMC community engagement, and many more unique opportunities to come!

If any of these areas piqued your interest, please sign up for our listserv and apply to join our team via the following link:

<https://forms.gle/Bp8bAe1S93qpPWJA>



## PICTURES FROM OUR RECENT EVENT



*the heart healthy*  
**TEACHING  
KITCHEN**

SAMPLE TASTING

**RADISH SALAD**  
RADISHES, LEMON  
THYME VINAGRETTE

**PINK PASTA**  
SAUCE: RED BEETS,  
CASHEWS, ROSEMARY

**RASPBERRY SORBET**  
RASPBERRIES,  
LIME, HONEY







# Thank you for reading!