Food insecurity in a high-income country: The Israeli experience

TAU Food Safety & Security Summer Institute – July 2nd 2019

Aron Troen, DPhil
Director, Nutrition and Brain Health Laboratory
Institute of Biochemistry Food & Nutrition Science
The Robert H. Smith Faculty of Agriculture, Food and Environment
The Hebrew University of Jerusalem
aron.troen@mail.huji.ac.il
I am from:
A) Israel or the Middle East
B) Europe
C) The Americas
D) Asia
E) Africa
F) Australia

https://FoodSecurity.participoll.com/
Access to ample, affordable, nutritious food is a basic human right

A) Strongly Agree
B) Agree
C) Neither Agree nor Disagree
D) Disagree
F) Strongly Disagree

https://FoodSecurity.participoll.com/
Poverty is inevitable. Some people will always struggle to get enough food but as long as they are not starving they can’t all be helped.

A) Strongly Agree
B) Agree
C) Neither Agree nor Disagree
D) Disagree
F) Strongly Disagree

https://FoodSecurity.participoll.com/
It is the government’s responsibility to ensure that no one goes hungry.

A) Strongly Agree
B) Agree
C) Neither Agree nor Disagree
D) Disagree
F) Strongly Disagree

https://FoodSecurity.participoll.com/
It is not the government’s job – it is better that individuals in society ensure that their fellow citizens do not go hungry.

A) Strongly Agree  
B) Agree  
C) Neither Agree nor Disagree  
D) Disagree  
F) Strongly Disagree

https://FoodSecurity.participoll.com/
We waste more than enough food to feed those in need. Food insecurity and hunger is best understood as a problem of inefficient and inequitable distribution.

A) Strongly Agree
B) Agree
C) Neither Agree nor Disagree
D) Disagree
F) Strongly Disagree

https://FoodSecurity.participoll.com/
“Give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime”

A) Strongly Agree
B) Agree
C) Neither Agree nor Disagree
D) Disagree
F) Strongly Disagree

https://FoodSecurity.participoll.com/
Food assistance programs are wasteful and corrupt. Many people abuse the system to obtain benefits through fraud.

A) Strongly Agree
B) Agree
C) Neither Agree nor Disagree
D) Disagree
F) Strongly Disagree

https://FoodSecurity.participoll.com/
Welfare entitlements cost too much and encourage poverty. Better to fund employment and create jobs to fund welfare and food banking.

A) Strongly Agree
B) Agree
C) Neither Agree nor Disagree
D) Disagree
F) Strongly Disagree

https://FoodSecurity.participoll.com/
The government should not pay for people who are poor because they make bad choices – they have too many children and don’t work.

A) Strongly Agree
B) Agree
C) Neither Agree nor Disagree
D) Disagree
F) Strongly Disagree

https://FoodSecurity.participoll.com/
Charitable and Philanthropic Food Banks are invaluable:

- They foster social responsibility and solidarity
- They alleviate real and immediate suffering

A) Strongly Agree
B) Agree
C) Neither Agree nor Disagree
D) Disagree
F) Strongly Disagree

https://FoodSecurity.participoll.com/
Food banks do more harm than good:

- They are ineffective and cannot meet the nutritional needs of the poor.
- Donated and redistributed food is usually unhealthful.
- They harm the recipients’ dignity.
- They encourage chronic dependence on food-aid rather than emergency use only.
- They falsely ease their donors’ conscience allowing them to look away from real need and relieve pressure on politicians, allowing governments to evade responsibility for dealing with the root causes of poverty.

A) Strongly Agree
B) Agree
C) Neither Agree nor Disagree
D) Disagree
F) Strongly Disagree

https://FoodSecurity.participoll.com/
My personal experience of food insecurity:

A. I don’t know any one who experienced food insecurity
B. I know of people who have struggled at times to put food on the table for themselves and their families
C. I personally know people who have experienced hunger and food insecurity
D. I have been hungry and food insecure myself
E. I prefer not to answer

https://FoodSecurity.participoll.com/
“Food security” exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life.

Food insecurity is the absence of these conditions

Worried food would run out
Food bought did not last
Could not afford balanced meal
Cut size of meal or skipped meal
Cut or skipped meal in 3+ months
Ate less than felt should
Hungry but did not eat
Lost weight
Did not eat whole day
Did not eat whole day 3+ months

The Pillars of Food Security

Availability:
The “supply side” of food security. Determined by: food production, stock levels and net trade. Global/national level.

Access:
Physical, social and economic access. Economic access is determined by: incomes, expenditure, markets and prices. Often household level.

Utilization:
good care and feeding practices, food preparation, diversity of the diet and intra-household distribution of food. This determines the nutritional status of individuals.

Israel’s Silicon Wadi
Lessons from the Start-up Nation
Opinion // The Real Israel Isn’t Startup Nation, It’s Poverty Row

Only 8% of our labor force is employed in high-tech, but a fifth of the country lives under the poverty line

David Rosenberg | Send me email alerts

Jan 01, 2019 10:08 PM

Searching for food in a dumpster in Yeruham  Credit: Eliyahu Hershkovitz
FAO map of world food supply 2013

Kcal per capita per day

Per Capita Food Supply in Israel 1993-2013

Per Capita Fat & Protein Supply in Israel 1993-2013

Per Capita Fruit & Veg Supply 2014

Energy

Per Capita Food Supply in Israel 1993-2013

3800 kcal/d

Per Capita Fat & Protein Supply in Israel 1993-2013

160 g/d

3800 kcal/d

140

160

509.2 gr/capita/day

100

549.2 gr/capita/day

120

140

120

140
Net national income (NNI) is defined as gross national income minus the depreciation of fixed capital assets (dwellings, buildings, machinery, transport equipment and physical infrastructure) through wear and tear and obsolescence. This indicator is available in different measures: NNI in US dollars and US dollars per capita, at current prices and current PPPs; as an index (OECD nominal NNI per capita = 100) and...
Poverty rate

The poverty rate is the ratio of the number of people (in a given age group) whose income falls below the poverty line; taken as half the median household income of the total population. It is also available by broad age group: child poverty (0-17 years old), working-age poverty and elderly poverty (65 years or more). However, two countries with the same poverty rates may differ in terms of the relative income-level of the poor.

Latest publication

In It Together: Why Less Inequality Benefits All

Publication (2015)
Food insecurity is prevalent in Israel

12,000 households surveyed

18.8% food insecure 8.6% severely food insecure

755,000 children - more than a third of the children in Israel

Socioeconomic and demographic factors associated with food insecurity:

- Need for income support
- Unemployment
- More than 4 children
- Single parent
- Arabs and Orthodox Jews
- Lower levels of education
- Disability

Food Insecurity Rate By Household Per-Capita Income

- Food insecurity rate
- Severe food insecurity rate

% Food Insecure Households

Household per-capita income (NIS)
Prevalence of Food Insecurity Israel 2014

- Sectorial rates are higher in weaker societal groups than total rates.
- This affects the political will to solve the problem, and also the solutions offered.
Map of Food Insecurity in Israel

**Haifa**
- Total: 27.7%
- Severe: 13.8%
  - Children: 27.7%
  - Households: 17.4%
  - People: 21.1%

**North**
- Total: 38.5%
- Severe: 16.5%
  - Children: 38.5%
  - Households: 21.6%
  - People: 27.7%

**Tel Aviv**
- Total: 26.4%
- Severe: 8.7%
  - Children: 26.4%
  - Households: 14.5%
  - People: 18.2%

**Jerusalem**
- Total: 39.1%
- Severe: 11%
  - Children: 39.1%
  - Households: 26.1%
  - People: 32.1%

**South**
- Total: 38.5%
- Severe: 16.5%
  - Children: 38.5%
  - Households: 21.6%
  - People: 27.7%
Want in the midst of plenty...

“Food insecurity” in Israel is due to lack of access, not lack of availability.

Hunger is due to Poverty
What are the causes? What are the consequences? What can be done? Who is responsible?
Household food insecurity

Life Consequences
Disability, age, income, marital status, number of children, etc

Resource allocation

Coping strategies
Food aid, reduction of food quality and quantity

Outcomes
Nutrition
Health
Household expenditure on food as % of income

The expenditure gap results in health disparities

Lower Income is Associated with Less Fruit and Vegetables Consumption

“With the decline in income, households ... are likely to find it challenging to consume sufficient amounts of milk and dairy products, and especially fruit and vegetables, which are the basis for a healthy Mediterranean diet.”

The “Double Burden” of Food Insecurity

Food Insecurity

Malnutrition
Overnutrition + Undernutrition

Micronutrient deficiencies

Preventable Morbidity!
Suboptimal growth and development
Chronic illness
The demographic and morbidity characteristics of a population receiving food support in Israel

Survey among food-aid recipients in national FS pilot
~80% food insecure, ~50% severely food insecure

<table>
<thead>
<tr>
<th></th>
<th>Anemia</th>
<th>Hyperlipidemia</th>
<th>Diabetes</th>
<th>Heart Disease</th>
<th>Hypertension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalence</td>
<td>34.8%</td>
<td>25.7%</td>
<td>17.4%</td>
<td>11.9%</td>
<td>21.8%</td>
</tr>
<tr>
<td>Odds Ratio - Living in Food Insecure Household</td>
<td>0.97</td>
<td>2.42</td>
<td>1.82</td>
<td>4.65</td>
<td>3.06</td>
</tr>
<tr>
<td>Odds Ratio - Food Insecurity Scale Score</td>
<td>1.05</td>
<td>1.2</td>
<td>1.16</td>
<td>1.31</td>
<td>1.21</td>
</tr>
</tbody>
</table>
Food Waste in Israel

2.3 million tons of food was wasted in Israel in 2017

1.1 million tons of food can be rescued

3.8 Billion NIS Food waste, up to and including the industrial stage

19.3 Billion NIS Food Loss Value

15.5 Billion NIS Food waste during distribution and consumption

Food Waste Constitutes 1.6% of Domestic Production

Food Rescue = Alternative to Food Production

During the growth, production, distribution and marketing of food in Israel, approximately 33% of domestically produced food is lost, becoming waste or surplus. Food rescue is an economic act of transforming this surplus food, that would otherwise have zero or negative value, into food that is distributed for the consumption of underprivileged populations.

Economically speaking, food rescue should be viewed as a viable alternative to excess food production. However, in contrast to the usual food production processes, the raw materials required for food rescue are surpluses that would otherwise be wasted.

Consequently, food rescue produces food without utilizing the resources necessary during production, while also preventing the majority of the detrimental environmental impact attributed to the production process. Food rescue is a winning formula for producing food without significant reliance on natural resources, land or water pollution, and use of fertilizers or pesticides.

Food Rescue Benefits

<table>
<thead>
<tr>
<th>Product</th>
<th>Food Production</th>
<th>Food Rescue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutritional Value</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Land Use</td>
<td>Yes</td>
<td>Negligible</td>
</tr>
<tr>
<td>Water Use</td>
<td>Yes</td>
<td>Negligible</td>
</tr>
<tr>
<td>Greenhouse Gas Emissions During Production</td>
<td>Yes</td>
<td>None</td>
</tr>
<tr>
<td>Use of Fertilizers and Pesticides</td>
<td>Yes</td>
<td>None</td>
</tr>
<tr>
<td>Logistics, Distribution and Transportation Costs</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* May be aesthetically favored

Food Waste in Israel

### Food Waste in Israel

<table>
<thead>
<tr>
<th>Household Loss (monthly NIS)</th>
<th>Growing Stage</th>
<th>Packaging</th>
<th>Industry</th>
<th>Retail &amp; Distribution</th>
<th>Consumption</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruit &amp; Vegetables</td>
<td>68</td>
<td>23</td>
<td>2</td>
<td>69</td>
<td>131</td>
<td>293</td>
</tr>
<tr>
<td>Grains &amp; Legumes</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>21</td>
<td>131</td>
<td>156</td>
</tr>
<tr>
<td>Meat, Fish &amp; Eggs</td>
<td>10</td>
<td>2</td>
<td>13</td>
<td>47</td>
<td>102</td>
<td>174</td>
</tr>
<tr>
<td>Milk &amp; Dairy</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>17</td>
<td>27</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>83</strong></td>
<td><strong>27</strong></td>
<td><strong>17</strong></td>
<td><strong>142</strong></td>
<td><strong>381</strong></td>
<td><strong>650</strong></td>
</tr>
</tbody>
</table>

Food Waste Prevention Hierarchy

Most preferable option

Prevention
- Waste of raw materials, ingredients and product arising is reduced – measured in overall reduction in waste.
- Redistribution to people.
- Sent to animal feed

Recycling
- Waste sent to anaerobic digestion; or
- Waste composted

Recovery
- Incineration of waste with energy recovery.

Disposal
- Waste incinerated without energy recovery.
- Waste sent to landfill.
- Waste ingredient/product going to sewer.

Least preferable option
A Technical and Policy Case Study of Large-Scale Rescue and Redistribution of Perishable Foods by the “Leket Israel” Food Bank

Dana Philip, BSc¹, Smadar Hod-Ovadia, BSc, RD², and Aron M. Troen, DPhil¹

Abstract

Background: Food banks seeking to rescue and redistribute highly nutritious perishable foods to simultaneously alleviate food insecurity and reduce food waste often encounter practical, ethical, and political dilemmas.

Objectives: Here, we present a case study of “Leket Israel,” an Israeli food bank that uses an effective large-scale logistical model for the rescue and redistribution of perishable food and discuss the challenges and solutions it offers.

Results: The organization operates in a rich country plagued with poverty and inequality, where the government passively encourages nongovernmental organizations to respond to the serious and growing problem of food insecurity. Operating under a business-to-business model, Leket Israel distributes food via intermediary nonprofit organizations (NPOs), enriching the food they provide with food subsidies. Food is obtained through an Agricultural Cloning project, Self Coverage, Exporting,
Leket Israel

- The largest food bank in Israel.

- Treats food insecurity as a logistical problem. Reduces food loss and waste.

- An umbrella organization, distributing food to 180 partnering food agencies nationwide.

Philip et al, Food and Nutrition Bulletin, 1-14, 2017
## Food distribution in Kg by food group

<table>
<thead>
<tr>
<th>Food groups</th>
<th>2014</th>
<th>2015 Jan-June</th>
<th>2014</th>
<th>2015 Jan-June</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(kg)</td>
<td>(%)</td>
<td>(Kg)</td>
<td>(%)</td>
</tr>
<tr>
<td>Dairy</td>
<td>150,037</td>
<td>1%</td>
<td>50,782</td>
<td>1%</td>
</tr>
<tr>
<td>CHO rich foods</td>
<td>648,131</td>
<td>6%</td>
<td>375,976</td>
<td>4%</td>
</tr>
<tr>
<td>Protein rich foods</td>
<td>305,283</td>
<td>3%</td>
<td>158,102</td>
<td>2%</td>
</tr>
<tr>
<td>Fruit and Vegetables</td>
<td>10,169,917</td>
<td>88%</td>
<td>7,746,491</td>
<td>91%</td>
</tr>
<tr>
<td>Sweets</td>
<td>301,440</td>
<td>3%</td>
<td>111,468</td>
<td>1%</td>
</tr>
<tr>
<td>Fat rich foods</td>
<td>17,171</td>
<td>0%</td>
<td>7,669</td>
<td>0%</td>
</tr>
<tr>
<td>Spice and misc.</td>
<td>24,926</td>
<td>0%</td>
<td>19,223</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>11,616,905</td>
<td>100%</td>
<td>8,469,711</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Philip et al, Food and Nutrition Bulletin, 1-14, 2017*
Known and Unknowns

Philip et al, Food and Nutrition Bulletin, 1-14, 2017
Unanswered Questions

• Does the donated food meet the recipients needs and desires?
• Do recipients eat the food?
• Does it improve their -
  – nutritional status?
  – subjective sense of food security?
  – health?
  – economic status?
• What factors influence these outcomes?
• How should nutrition quality of the aid-packages and recipient diets be measured?
Long Term Objectives

• Assess food security, nutritional needs and status and health of food pantry users

• Evaluate Food Banks’ impact on the well-being of food-pantry users (in other words, the influence of food-basket content & quality on individual food-pantry user outcomes).

• Identify opportunities for food banks to improve aid-recipients’ well-being.
Aims - Feasibility phase

Proof of concept study:
Develop and optimize feasible methodology for scalable definitive research on food insecure populations in Israel
Food-Aid Quality Correlates Positively With Diet Quality of Food Pantry Users in the Leket Israel Food Bank Collaborative

Dana Efrat Philip¹, Ghada Baransi¹, Danit R. Shahar² and Aron M. Troen*¹

¹ The Nutrition and Brain Health Laboratory, The Institute of Biochemistry Food Science and Nutrition, The Robert H. Smith Faculty of Agriculture, Food and Environment, The Hebrew University of Jerusalem, Rehovot, Israel. ² Department of Public Health, Faculty of Health Sciences, The S. Daniel Abraham International Center for Health and Nutrition, Ben-Gurion University of the Negev, Beersheba, Israel

Introduction: In many affluent countries, including Israel, networks of food banks and pantries have increasing responsibility to alleviate endemic poverty and food insecurity. While they may relieve acute hunger, their long-term influence on health and well-being is poorly understood.

Methods: An exploratory cross-sectional telephone survey assessed both adequacy and quality of food aid provided via food pantries in the Leket Israel food bank network, in relation to recipients’ dietary needs and health. The quality of food baskets and recipient diets were given a Healthy Portions Score (HPS) to measure compliance with Government guidelines for a “Basic Healthy Food Basket,” and a Nutrient Density Score (NDS) to capture how well the food achieved the recommended dietary allowance (RDA) for vital macro and micronutrients. A total of 105 pantry users were surveyed from 16 pantries around the country.
**Design and Methods**

- **Survey, cross-sectional study**
- **Convenient sampled pantries and clients**
- **Inclusion/exclusion criteria pantries and clients**
- **Recruitment goals: n=100 (feasibility phase)**
- **Telephone interview**
- **Languages: Hebrew and Arabic**

---

**The questionnaire is comprised of:**
- verbal confirmation of consent
- a demographic questionnaire
- a food security questionnaire (FFQ)
- self-reported anthropometric measurements and health (MABAT)
- questions relating to individual knowledge and attitudes about nutrition (MABAT)

---

Healthy Portion Score

a. The number of portions for a given FFQ/basket food item:

\[
\frac{\text{weight}_i}{\text{portion}_{\text{wt}}} \quad \text{OR} \quad \frac{\text{calcium}_i}{\text{portion}_{\text{Ca}}} \quad \text{OR} \quad \frac{\text{fat}_i}{\text{portion}_{\text{fat}}}
\]

b. Healthy Portions Score:

\[
\frac{\text{portion}_{\text{grains}} + \text{portion}_{\text{fruit}} + \text{portion}_{\text{veg}} + \text{portion}_{\text{meat}} + \text{portion}_{\text{dairy}} + \text{portion}_{\text{fat}}}{\text{energy}_{\text{total}}}
\]

Details of the foods in the various food groups

<table>
<thead>
<tr>
<th>Food group</th>
<th>Foods included in the group</th>
<th>Foods not included in the group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole grains</td>
<td>Whole wheat bread, pita, noodles, potatoes, rice</td>
<td>Breakfast cereals, baked goods, crackers</td>
</tr>
<tr>
<td>Fruit and vegetables</td>
<td>Fresh and cooked vegetables and fruit</td>
<td>Fresh juice, dried fruit</td>
</tr>
<tr>
<td>Protein-rich foods</td>
<td>Milk, yogurt, white and yellow cheese, meat, chicken, turkey, fish, eggs, legumes</td>
<td>Puddings, ice cream, cream, peanuts, sunflower and other seeds, fatty meats</td>
</tr>
<tr>
<td>Foods high in fat</td>
<td>Oil, nuts, avocado, tehina</td>
<td>Margarine, butter and foods high in fat and transfats</td>
</tr>
</tbody>
</table>

# Daily recommended nutritional servings

<table>
<thead>
<tr>
<th>Age (years) and gender</th>
<th>Recommended caloric intake</th>
<th>Whole grains</th>
<th>Vegetables</th>
<th>Fruit</th>
<th>Protein-rich foods</th>
<th>Fatty foods</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-3*</td>
<td>1,300</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>4-6</td>
<td>1,800</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>7-10</td>
<td>2,000</td>
<td>8</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>11-14</td>
<td>2,500</td>
<td>10</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>15-18 (boys)</td>
<td>3,000</td>
<td>11</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>19-24 (boys)</td>
<td>2,900</td>
<td>11</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>25-50 (men)</td>
<td>2,900</td>
<td>11</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>51+ (men)</td>
<td>2,300</td>
<td>9</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11-24 (women)</td>
<td>2,200</td>
<td>9</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>25-50 (women)</td>
<td>2,200</td>
<td>9</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>51+ (women)</td>
<td>1,900</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Nutrition Density Score

- Individual NDS

\[
\sum \left\{ \frac{\text{Nutrient}_i}{\text{RDA}_i} \right\} \times \frac{100}{16} \times \frac{100}{\text{Weight}}
\]

- Basket NDS

\[
\sum \left\{ \frac{\text{Nutrient}_i}{\text{hRWA}_i} \right\} \times \frac{100}{16} \times \frac{100}{b\text{Weight}}
\]

## Characteristics of the food pantries participating in this study

<table>
<thead>
<tr>
<th>NPO</th>
<th>Main population served</th>
<th>Geographical area</th>
<th>Number of households served</th>
<th>Type of food distributed</th>
<th>Number of aid-recipients recruited for the study</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jewish mixed</td>
<td>North</td>
<td>80</td>
<td>FV</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Jewish mixed</td>
<td>North</td>
<td>95</td>
<td>FV, DF, D</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>Jewish elderly</td>
<td>South</td>
<td>50</td>
<td>FV</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>Druze</td>
<td>North</td>
<td>120</td>
<td>FV, DF</td>
<td>9</td>
</tr>
<tr>
<td>5</td>
<td>Bedouin</td>
<td>South</td>
<td>1500</td>
<td>FV, FD, D, M</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Muslim Arab</td>
<td>Center</td>
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<td>FV, DF, M</td>
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<td>FV, DF, D, Egg, M</td>
<td>7</td>
</tr>
<tr>
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<td>380</td>
<td>FV, DF, D, M</td>
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<td>FV, DF, M</td>
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<td>FV, DF, D</td>
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<td>Jewish mixed</td>
<td>North</td>
<td>400</td>
<td>FV, DF, D, M</td>
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<td>FV, DF</td>
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<td>Jewish mixed</td>
<td>South</td>
<td>380</td>
<td>FV, DF, D, M</td>
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</tbody>
</table>

Study population flow chart

N turned to by NPO staff = unknown

N signed consent = 152

N started interview = 106

N finished interview = 105

N with extracted FFQ data = 100

N with 600 < Energy intake < 4000 kcal/d = 90

N with complete data for entire survey = 53

Household Food Security

- Food secure: 38%
- Food insecure without hunger: 17%
- Food insecure with moderate hunger: 8%
- Food insecure with severe hunger: 37%

General Health

- Good: 42%
- Not so good: 28%
- Very good: 15%
- Not good at all: 15%

Body Mass Index

- Underweight (<18.5)
- Normal weight (18.5-24.9)
- Over-weight (25-29.9)
- Obesity (>30)

Non Communicable Diseases

- High blood pressure: 40%
- Anemia: 36%
- High cholesterol: 33%
- Triglycerides: 23%
- Osteoporosis: 11%
- Cancer: 11%
- Diabetes: 6%
- Stroke: 1%

### Dietary intake of study participants in relation to recommended daily allowance (RDA).

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Mean Intake of Cohort as % of RDA</th>
<th>% of Participants Whose Diet Doesn’t Meet the RDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin D</td>
<td>97</td>
<td></td>
</tr>
<tr>
<td>Vitamin E</td>
<td>97</td>
<td></td>
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<tr>
<td>Total Healthy Portions</td>
<td>93</td>
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<tr>
<td>Calcium</td>
<td>81</td>
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<tr>
<td>Folate</td>
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<tr>
<td>Magnesium</td>
<td>89</td>
<td></td>
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<tr>
<td>Dietary Fiber</td>
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<td></td>
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<tr>
<td>Total Fruit &amp; Vegetable Portions</td>
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<td></td>
</tr>
<tr>
<td>Iron</td>
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<td></td>
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<tr>
<td>Thiamin</td>
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<td>Pantothenic Acid</td>
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<tr>
<td>Vitamin A</td>
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<td>Energy</td>
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<td>Vitamin B6</td>
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<tr>
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<td>Vitamin B12</td>
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<td>Vitamin C</td>
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<tr>
<td>Riboflavin</td>
<td>177</td>
<td></td>
</tr>
</tbody>
</table>

- **Mean Intake of Cohort as % of RDA**
- **% of Participants Whose Diet Doesn’t Meet the RDA**

Basket contribution to household dietary requirements

- Vitamin D: 13% household requirement, 100% food aid basket
- Calcium: 8% household requirement, 100% food aid basket
- Vitamin E: 28% household requirement, 99% food aid basket
- Energy: 30% household requirement, 99% food aid basket
- Magnesium: 3.8% household requirement, 96% food aid basket
- Total healthy portions: 36% household requirement, 94% food aid basket
- Thiamin: 51% household requirement, 92% food aid basket
- Dietary Fiber: 50% household requirement, 89% food aid basket
- Protein: 55% household requirement, 89% food aid basket
- Vitamin B12: 360% household requirement provided by average food aid basket
- Niacin: 70% household requirement, 83% food aid basket
- Pantothenic acid: 82% household requirement, 91% food aid basket
- Riboflavin: 81% household requirement, 113% food aid basket
- Vitamin B6: 80% household requirement, 79% food aid basket
- Folate: 79% household requirement, 117% food aid basket
- Iron: 76% household requirement, 90% food aid basket
- Total fruit & vegetable portions: 73% household requirement, 87% food aid basket
- Vitamin C: 53% household requirement, 110% food aid basket
- Vitamin A: 51% household requirement, 110% food aid basket

% of household requirement provided by average food aid basket.

% of baskets not meeting HH requirement.

NGOs Play an Important Role in National Policy

Until 2015, Israeli government left food security to the third (private) sector.

New national plan:
• Regulate third sector activity with partial funding.
• Use existing logistic infrastructure (Leket Israel and Latet)
The big questions remain:

... Even if food banks can help improve some aspects of their clients’ nutrition and food security...

- Are food banks ethical solutions to food insecurity? What are the alternatives?
- Are food banks ethical solutions to food waste?
- Should food banking be improved and encouraged?
- What is the appropriate relationship between civil society and government in addressing food insecurity?
- Are these qualms the privileged skepticism of the wealthy? What might a just and equitable solution to food insecurity look like? How likely are they to be realized?
- What research is needed?
Thanks to...

Our study participants & Nutrition and Brain Health Laboratory
Dana Efrati-Philip, MSc
Ghada Baransi, MSc
Janetta Azarieva, PhD

Hebrew University
Prof. Elliot Berry

Leket Israel
Smadar Hod Ovadia (Leket Israel)
Gidi Kroch (Leket Israel)

Atzum
Rabbi Levi Lauer

Ministry of Health
Prof. Ronit Endevelt

National Nutrition Security Council
Prof. Dov Chernichovsky
Thank You for Your Attention