Additional Resources
7. Drewnowski, A. Unpublished data presented at the Experimental Biology meeting 29 April 2014, University of Washington Center for Obesity Research and University of Washington, Seattle, WA
Resources

8. USDA. Diet quality of children age 2-17 years as measured by the healthy eating index-2010. Nutrition Insights. 2013
## Review Studies

- A comprehensive review of 21 studies, including qualitative review, concluded that there is no systematic association between consumption of 100% fruit juice and overweight in children or adolescents. Data do support consumption of 100% fruit juice in moderate amounts (O’Neil and Nicklas 2008)

### Cross-Sectional Studies

#### No Association (Null findings)

- Intake of OJ not significantly related to children’s BMI (Dennison et al. 1999)
- BMI not significantly associated with consumption of citrus juice in children and adolescents (Forshee et al. 2003)
- Weight status in children had no association with the amount of 100% fruit juice consumed (O’Connor et al. 2006)
- Fruit juice not associated with BMI in adolescents (Vagstrand et al. 2009)
- Adult consumers of 100% fruit juice, relative to nonconsumers, had lower mean BMI and lower waist circumference (Pereira & Fulgoni 2010)
- Inverse association between fruit juice consumption and BMI in adults (Akhtar-Danesh et al. 2010)
- No association between 100% fruit juice consumption and obesity in Mexican American children living in San Francisco (Beck et al. 2013)
- No association between fruit juice+nectar consumption and BMI in a large European cohort of adults (EPIC) (The InterAct Consortium 2013)
- Intake of 100% fruit juice was not associated with overweight or obesity in Greek school children and adolescents age 7-15 years (Papandreou et al. 2013)

#### Inverse Association

- Lower WC with OJ (children) (O’Neil et al. 2011)
- Lower risk for overweight/obesity with OJ (adults) (O’Neil et al. 2012)
- Lower BMI, WC, % body fat with OJ (adults) (Wang et al. 2012)

## Longitudinal Studies

### No Association (Null findings)

- No statistically significant difference in child height, BMI or ponderal index related to juice consumption (Skinner et al. 1999)
- Growth velocity, BMI, and height standard deviation score were not related to fruit juice consumption in young children (Alexy et al. 1999)
- No relationship between longitudinal juice consumption and BMI or ponderal index in young children (Skinner and Carruth 2001)
- Consumption of 100% fruit juice not predictive of change of BMI in children and adolescents (Field et al. 2003)
- No relationship between 100% fruit juice consumption and weight gain in boys or girls (Berkey et al. 2004)
- No relationship between fruit juice consumption and weight change or in consumption of ≥12 oz juice/day and overweight in preschool children (Newby et al. 2004)
- No relationship between 100% fruit juice consumption and BMI z-score children from Nebraska (Blum et al. 2005)
- 100% fruit juice consumption was not associated with BMI in young girls (Striegel-Moore et al. 2006)
- Fruit juice consumption at age 5 or 7 years did not predict weight or adiposity at age 9 years in children living in England (Johnson et al. 2007)
- No association with OJ and change in BMI over 5 years in adolescents (Vanselow et al. 2009)
- No association between 100% fruit juice consumption and high WC in young adults (Duffey et al. 2010)

### Clinical Studies (anthropometrics not necessarily a primary outcome measure)

#### No Association (Null findings)

- No negative effect with OJ and BMI or WC (Cesar et al. 2010a), body weight and BMI (Basile et al. 2010), and BMI (Morand et al. 2011)
- No body composition changes with OJ (Simpson et al. 2012 abstract)

#### Inverse Association

- Lower WC with OJ (Basile et al. 2010)
Studies Reporting POSITIVE ASSOCIATION Between 100% Fruit Juice & Overweight/Obesity

**Cross-Sectional Studies**
- Frequency of fruit juice consumption associated with obesity in Puerto Rican children (Tanasescu et al. 2000; case-control study)
- Juice intake was positively related to risk of overweight in Mexican-American preschool children (Melgar-Quinonez et al. 2004)
- Greater intakes of fruit juice/drinks associated with higher likelihood for overweight/obesity in children (Sanigorski et al. 2007)

**Longitudinal Studies**
- In children overweight at baseline, higher intakes of fruit juice were associated with higher risk for overweight (Welsh et al. 2005)
- Among children who were initially either at risk for overweight or overweight, increased fruit juice intake was associated with excess adiposity gain (Faith et al. 2006)
- Change in 100% fruit juice was positively associated with change in BMI in adolescent girls; no association with boys (Libuda et al. 2008)
- Consumption of 100% fruit juice was associated with statistically significant 4-year weight gain in men and women (Mozaffarian et al. 2011)
- Increasing intakes of 100% fruit juices were associated with long-term weight gain in three separate large prospective cohorts in US men and women. Replacement of fruit juice with water was associated with lower long-term weight gain (Pan et al. 2013)
### Sample of Recent Studies on Adults and Juice Consumption

<table>
<thead>
<tr>
<th>Beverage</th>
<th>Study Type</th>
<th>Sample Size</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% Fruit Juice</td>
<td>Longitudinal (CARDIA)</td>
<td>n=2,774</td>
<td>No association with high waist circumference</td>
</tr>
<tr>
<td>100% Fruit Juice</td>
<td>Cross sectional (NHANES)</td>
<td>n=14,196</td>
<td>Lower mean BMI and (NHANES) waist circumference in consumers vs non-consumers</td>
</tr>
<tr>
<td>Fruit Juice</td>
<td>Cross sectional Canadian Community Health Survey</td>
<td>n=15,392</td>
<td>Inverse association with BMI</td>
</tr>
<tr>
<td>Fruit Juice</td>
<td>Prospective cohort (Nurses’ Health Study I and II, Health Professional Follow-up Study)</td>
<td>n=120,877</td>
<td>Positive association with weight gain in each 4-year period</td>
</tr>
<tr>
<td>Fruit Juice</td>
<td>Prospective cohort (Nurses’ Health Study I and II, Health Professional Follow-up Study)</td>
<td>n=124,988</td>
<td>Higher Intake associated with long term weight gain</td>
</tr>
</tbody>
</table>

References:
- Duffey, 2010
- Pereira and Fulgoni, 2010
- Aktar-Danesh, 2010
- Mozaffarian, 2011
- Pan, 2013