



**Celebrating Childhood!**  
**Optimizing keiki health and happiness**  
***Turning education to action***

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# Christopher:

- 4 years old Filipino American boy comes to clinic for a Well-Child exam
- His mother says he is very healthy
  - Active
  - Eats well
- Weight = 41 lbs
- Height = 39 inches
- Otherwise his exam is normal



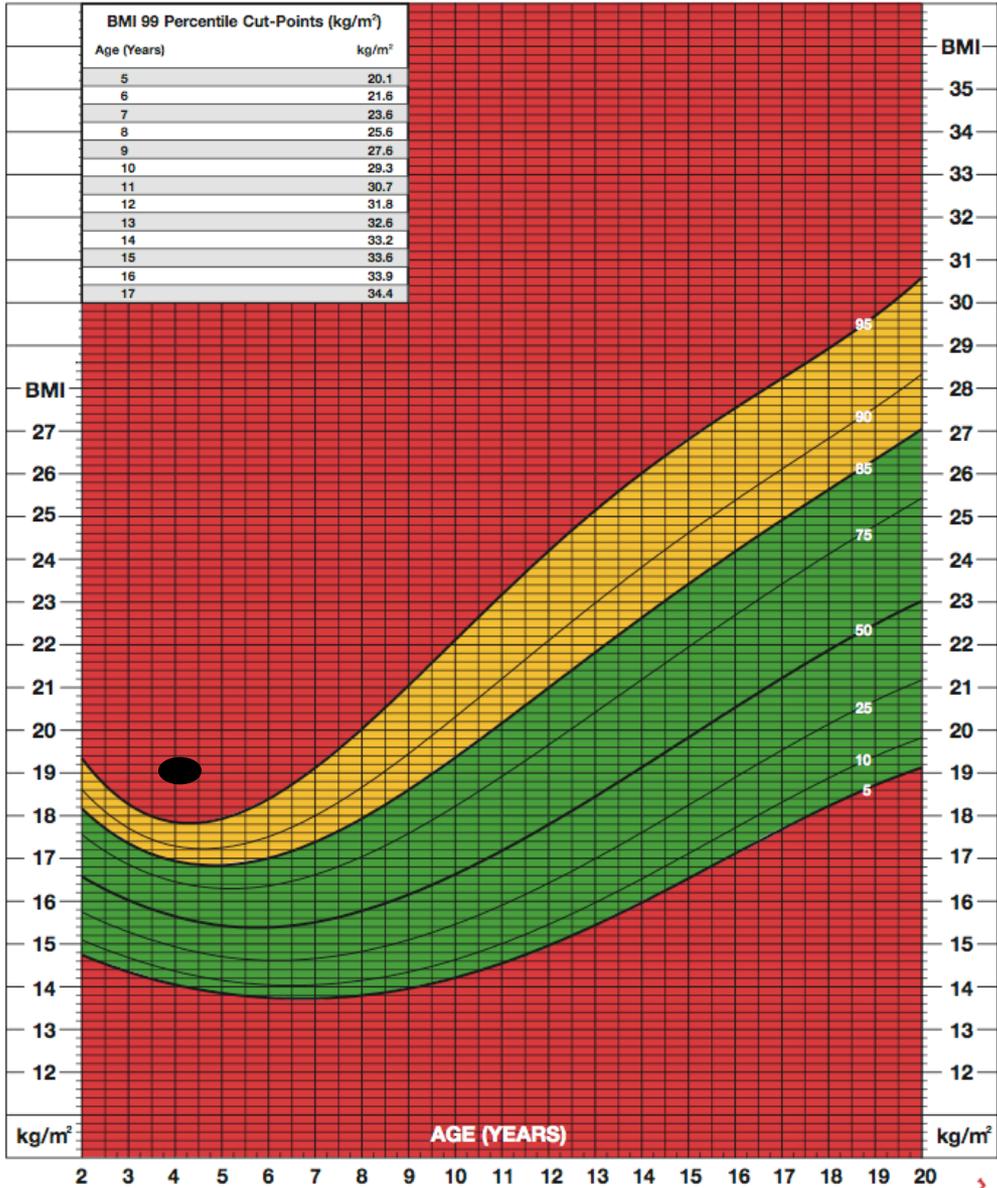
# 2 to 20 years: Boys Body mass index-for-age percentiles

metric system:  $\text{weight}(\text{kg})/[\text{height}(\text{m})]^2$   
English system:  $\text{weight}(\text{lb})/[\text{height}(\text{in})]^2 \times 703$

**Height is 39 inches**  
**Weight is 41 pounds**

$$\text{BMI} = \frac{\text{weight (kg)}}{[\text{height(meters)}]^2}$$

**Body Mass Index = 19**



# So what?



- Obesity is the common chronic disease in childhood
- Obese children are at significantly higher risk of developing cardiovascular disease, diabetes and stroke later in life
- If a child is overweight or obese in childhood, adult obesity is more likely and more severe



# Childhood Obesity

- Begins VERY early
- Pregnancy
  - Maternal diabetes
  - Maternal obesity
- Early childhood
  - Birthweight
    - Small for gestational weight
    - Large for gestational weight
  - Rapid growth in early childhood
    - Crossing major percentile lines (Ex: 25%→50%)
  - Breastfeeding vs. bottle feeding
  - Other factors...

# 2009-2010

	≥ 85%	≥ 95%	≥ 97%
All	31.8%	16.9%	12.3%
6-19 years	33.2%	18.2%	13.0%
2-5 years	26.7%	12.1%	9.7%
White 2-5 years	23.8%	9.2%	7.5%
Black 2-5 years	28.9%	18.9%	14.4%
Hispanic 2-5 years	33.1%	16.2%	13.0%

Ogden et al , JAMA 2012 Funding for this project was provided by the HMSA Foundation.

# Current State of Hawaii's Children Health

- Unclear - no regular BMI surveillance screening
- BMI collected at school entry but data is not analyzed systematically
- Pobutsky et al. Hawaii Medical Journal, Oct 2006
  - Form 14 data at school entry (2002-2003)
  - N=10,199
  - 28.5% of Hawaii's children at school entry are overweight or obese

	% <b>Obese</b>	% <b>OW</b>	% <b>OW/OB</b>
<b>State (N=10,199)</b>	<b>14.4</b>	<b>14.1</b>	<b>28.5</b>
Aiea (N=247)	8.1	17.8	25.9
Castle (N=370)	15.4	13.5	28.9
Farrington (N=483)	15.5	17.2	32.7 ←
Kahuku (N=188)	19.7	16.0	35.7 ←
Kaiser (N=119)	7.6	10.1	17.6 ←
Kalani (N=249)	7.6	10.1	20.5 ←
Leilehua (N=553)	13.4	15.9	29.3
Nanakuli (N=148)	17.6	10.8	28.4
Waiialua (N=59)	22.0	17.0	39.0 ←
Waianae (N=302)	15.9	14.2	30.1
Waipahu (N=483)	19.9	12.6	32.5 ←

<b>Hawaii (N=1310)</b>	<b>15.1</b>	<b>15.2</b>	<b>30.3</b>
Central Hilo (N=215)	16.3	14.0	30.3
Hilo (N=241)	17.0	14.5	31.5
Honokaa (N=200)	16.5	18.0	34.5 
Kau (N=41)	14.6	17.1	31.7
North Kona (N=221)	15.4	13.1	28.5
South Kona (N=120)	8.3	14.2	22.5 
<b>Kauai (N=488)</b>	<b>12.5</b>	<b>16.4</b>	<b>28.9</b>
Central Kauai (N=233)	9.0	14.2	23.2 
West Kauai (N=141)	14.9	22.0	36.9 
<b>Maui County (N=1167)</b>	<b>17.9</b>	<b>13.8</b>	<b>31.7</b>
Baldwin (N=203)	17.2	17.7	34.9
Hana (N=17)	35.3	11.8	47.1 
Kekaulike (N=275)	15.6	12.7	28.3
Lahainaluna (N=124)	27.4	17.7	45.1 
Lanai (N=30)	20.0	26.7	46.7 
Molokai (N=67)	17.9	13.4	31.3

# Christopher:

- Born at term 5 lbs 5 oz –
- Small as an infant
- Mother is single - works 2 jobs
- Grandmother takes care of child along with 2 other grandchildren
- Live in public housing in Honolulu – “not safe”
- No car – use public transportation
- Money is tight



# The world has changed.

## Bagel

Calorie difference: 210 calories



3-inch diameter  
140 calories



6-inch diameter  
350 calories

## Cheeseburger

Calorie difference: 257 calories



333 calories



590 calories

## Soda

Calorie difference: 165 calories



6.5 ounces  
85 calories



20 ounces  
250 calories

## French Fries

Calorie difference: 400 calories



2.4 ounces  
210 calories



6.9 ounces  
610 calories

# Social Norm in Hawaii







# Dental

- Hawaii's children have among the highest rates of dental caries in the nation (Hawaii State Dept of Health 1999)





Socio-ecologic model of health and chronic disease

# Goal

- The goal of the Hawaii 5210 Initiative is to prevent childhood obesity in Hawaii
  - through coordinated, collaborative, locally relevant health education campaign
  - that promotes a penetrating consistent message of healthy lifestyles through community partnerships in order to optimize community awareness and action.



# Hawaii 5210 Let's Go!

## Partners

- HMSA
- Kaiser Permanente
- UHA
- AlohaCare
- Hawaii Primary Care Association

- American Academy of Pediatric, Hawaii Chapter
- Pioneering Healthier Communities
- KCC Culinary Arts
- YMCA of Honolulu
- Kaho'omiki (Manage training for A+ afterschool programs)
- Kokua Hawaii Foundation
- HAHPERD
- After School All Stars Hawaii
- Safe Routes to School Hawaii Coalition
- Hawaii Education Matters
- Quest Medical (Medicaid)
- Hawaii Public Health Nurses
- Hawaii Department of Health – Maternal Child Health
- Queen Liliuokalani Children's Center
- Kalihi Palama Health Center
- Ko`olauloa Health Center
- Kokua Kalihi Valley Health Center
- Waianae Coast Comprehensive Health Center
- Molokai Health Center
- Waimanalo Health Center
- US Tennis Association – Hawaii Chapter





- **5** fruits, *roots* and veggies
- **2** hours or less of screen time
- **1** hour or more of physical activity
- **0** No sugary beverages every day



# Healthy Breakfast Consumption

- Kids who eat breakfast
  - Have healthier weight
  - Improved school attendance
  - Have more focus and energy
  - Do better on standardized tests
  - Have improved classroom behavior

# Adequate Sleep

- Adults and children who don't get enough sleeps have higher risk of obesity, chronic disease, poor focus and attention.
- Children who get adequate sleep are more likely to do better academically

Age	Sleep Needs
Toddlers (1-3 years)	14 to 15 hours
Preschoolers (3-5 years)	11 to 13 hours
School-age children (5-10 years)	10 to 11 hours
Tweens and Teens (10-17 years)	8.5 to 9.5 hours
Adults	7 to 9 hours

# HEALTH AT EVERY SIZE



# The Forest vs. Trees



≠



≠



≠



≠



# Simple Steps for a Healthy Ohana

## EAT HEALTHY

### 5 FRUITS, ROOTS & VEGETABLES

Fruits, roots and vegetables, including root vegetables such as taro (poi) and sweet potato, are packed with nutrients. To get the amount recommended, most of us need to increase the amount of fruits, roots and veggies we currently eat.

## WATCH LESS

### 2 HOURS OF SCREEN TIME

Two hours or less of computer, video and TV screen time every day. Increased screen time has been linked to lower reading scores, behavioral problems and unhealthy weight.

## PLAY MORE

### 1 HOUR OF PHYSICAL PLAY

Activity that makes your heart pump faster and your body breathe harder make you strong, helps you feel good and think clearly. Kids in active families are more likely to be active adults.

## CUT DOWN

### 0 SUGARY DRINKS

Sugary drinks such as soda, sweetened tea, sports drinks, fruit punch and other fruit-flavored drinks have little health benefit. Sweetened beverages add empty calories, about 150 calories and 9 teaspoons of sugar per 12 oz. can of soda.

For more information  
please contact us at [www.hawaii5210.com](http://www.hawaii5210.com)



## • HEALTHY TIPS •

- A** Be a role model - Include at least one fruit, root or vegetable at every meal and snack.
- B** When possible, avoid frying - try steaming, baking, stir-frying.
- C** Try-A-Bite rule - Offer new fruits, roots and veggies and encourage everyone in the family to try a few bites each time. It can take 7 to 10 tries to like a new food.

## • HEALTHY TIPS •

- A** Encourage your whole family to decrease screen time to 2 hours or less each day.
- B** Keep the TV and computers in a central location and out of your child's bedroom.
- C** Enjoy your family - turn off the TV when eating and talk about the day.

## • HEALTHY TIPS •

- A** Take gradual steps to increase your physical activity level.
- B** Do short amounts of activity several times a day until they add up to 60 or more minutes each day.
- C** Physical activity should be fun - swimming, surfing, paddling, walking, running, dancing, gardening and yes, even vacuuming!

## • HEALTHY TIPS •

- A** Encourage your family to love water. Serve it. Choose it. If it's there, people will drink it. And remember water has zero calories.
- B** Be wary of commercials. Juice products labeled "-ade," "drink" or "punch" often contain mostly corn syrup sweetener and less than 5% real juice.
- C** Avoid bringing sodas and sports drinks home. If it's there, the kids will drink it.



### **Don't Buy It! Get Media Smart**

Media have a tremendous influence on family life. It's hard to imagine life without these media, and it's important to consider the messages they send.

Learn more at [pbskids.org/dontbuyit](http://pbskids.org/dontbuyit)

### **Media Smart Youth: Eat, Think and Be Active**

Media smart is an interactive after school education program for young people.

Learn more [nichd.nih.gov/msy](http://nichd.nih.gov/msy)



LET'S GO!

[www.Hawaii5210.com](http://www.Hawaii5210.com)

# 2

## Hours or Less of Screen Time a Day



# 0

## Sugary Drinks



LET'S GO!

[www.Hawaii5210.com](http://www.Hawaii5210.com)

EXPLORE HAWAII

**5210**



## About



### **5** Fruits, Roots & Vegetables

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[LEARN MORE](#)



### **2** Hours of Screen Time

Two hours or less of computer, video and TV screen time every day.

[LEARN MORE](#)



### **1** Hour of Physical Play

Activity that makes your heart pump faster and your body breathe harder make you strong, helps you feel good and think clearly.

[LEARN MORE](#)



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[LEARN MORE](#)

# Recipes



## Garden Tacos

Delicious veggie tacos! Recipe by Chef Carol Nardello  
(Serves 10)



## Monkey Fruit

by Chef Carol Nardello

# Kaho'omiki and the A+ Afterschool Fun 5 Program

Posted April 15, 2011 | Categories: [Schools](#), [Program](#)



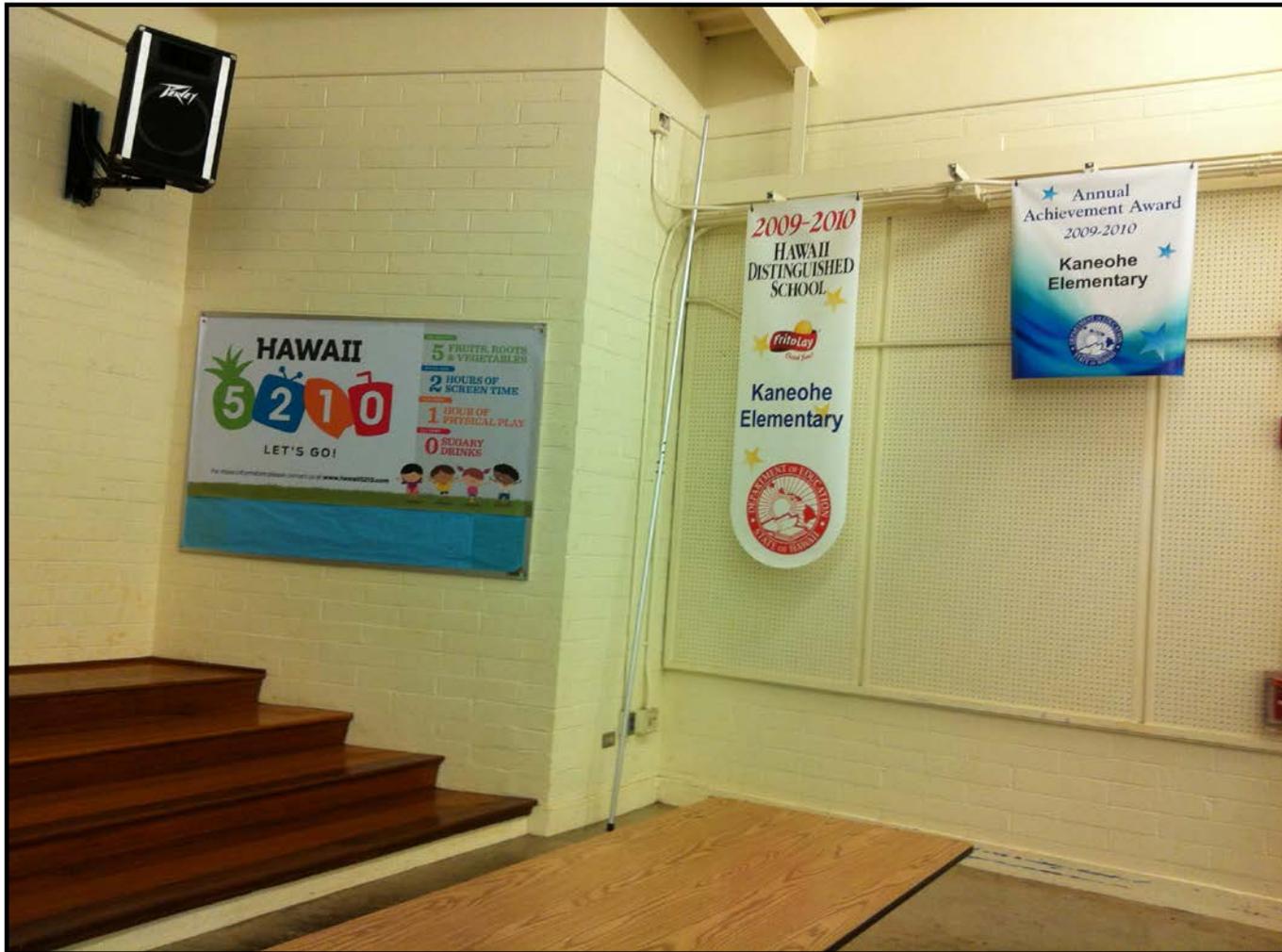
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- [New Report Highlights Changes Needed to Support Healthy Eating and Physical Activity in U.S. Elementary Schools](#)



## Categories

# DOE - Office of Nutrition



- Hawaii 5210 Banners
- 257 schools



Messaging at work...

# 2012 Hawaii 5210 Keiki Run



- February 18, 2012
- 1,450 kids
- \$28,000 raised for School Wellness Programs



2/16/2013 Hawaii 5210 Keiki Run

# Helping parents tackle the problem

- The world has changed – obesity is one symptom
  - Both parents work
  - We buy/eat a lot more prepared foods
  - Children spend a lot of time away from home
- Recognize what is important to the Parent:
  - Happiness of the child
  - Being a good parent
  - Family history
  - Long term health

# The child and family

- Emphasize family and healthy living vs. weight/BMI
- Increase confidence and self-efficacy
  - Start with something you can do (Buy less juice)
- Strategize how to make goals work (ie: Parenting)
  - Parents - Control what you can control
    - ***Parents decide what is served and when it is served***
    - ***Kids decide what to eat and if they want to eat***

# Strategies (ie: parenting)

- Give parents permission to set limits
  - Encourage consistency
    - Not about being the “FOOD POLICE”
  - Recognize difficulty – new behavior for parents
  - Choose limits that they can stick to
    - Ex: To cook only 1 main dish vs. 2 or 3
- Give parents permission to say NO or to do the tasks they think are best
  - Ex: Not buying juice
  - Ex: Not buying the candy at the check out stand

# Wellness at schools and early child care centers

- Healthy kids make everything possible...
- Healthy kids learn better
- Schools and early childcare centers have the responsibility to teach and model healthy behaviors



# Support Healthy Eating for Everyone

## Policies/practices

- Support water consumption
  - Ex: Encourage everyone to bring water bottles filled with water, not juice
  - Serve only water at gatherings
  - Educate kids/families about water vs. sports drinks vs. juice



# Support healthy options

- Support healthy options
  - Bring fruit, veggie options,
- Support portion control
- Support sleep and breakfast
- Support movement, discourage use of TV/videos to occupy children



# Support Non-Food Rewards





# Food rewards

- Teaches kids to eat when they are not hungry
- Encourages over-consumption
- Compromises health
- Undermines efforts by doctors, teachers and/or parents to promote healthful foods.

# Survey of 4<sup>th</sup>-6<sup>th</sup> graders

- 30% Small toys and stuffed animals
- 19% Free time for computer, board games, reading and recess
- 13% Outside time for lunch and play
- 11% Books as prizes, 10% Sit at desk/table of choice
- Additional comments included: school and art supplies; rubber “cause” bracelets; pass for “no” or “late” homework

# We Need YOU!



- You have more power to influence that you think
- Early childcare centers
  - Limit juice and sugary drinks (they get it at home)
  - Serve water, talk about water
  - Limit screen time (they get it at home)
  - Serve healthy options (power of peers and role models)
    - Ok to use bridges (reduced fat Ranch dressing etc)

# We Need YOU!



- Maximize your positive influence in your own community
- Helping to influence policy and systems
  - It takes less time than you think
  - Talk to your family
  - Talk to a teacher
  - Do something different with your friends
    - Bring fruit and veggies to the picnic, bring water
  - Talk to a parent about your concerns



# Thank you!

- Acknowledgement: Our funders
  - HMSA, Kaiser Permanente, UHA
- [www.hicore.org](http://www.hicore.org)
- Hawaii5210.org
- Contact (Dr. May Okihiro)
  - okihirom@hawaii.edu



# Websites

- <http://hawaii5210.org>
- <http://choosemyplate.org>
- [www.teamnutrition.usda.gov](http://www.teamnutrition.usda.gov)
- [www.healthykidshealthyfuture.org](http://www.healthykidshealthyfuture.org)
- [www.presidentschallenge.org](http://www.presidentschallenge.org)

# Hawaii 5210 Video

- <http://vimeo.com/46333015>

# Let's Move! Child Care Goals

- Physical Activity
  - 1-2 hours throughout the day
- Screen Time
  - None under 2 yrs
  - For 2 yrs and up—limit to 30 min/week in child care (no more than 1-2 hrs/day at home)
- Food
  - Serve fruits and vegs at every meal
  - Avoid serving fried foods
- Beverage
  - Water with every meal and throughout the day (avoid sugary drinks) > 2yrs serve nonfat or 1% milk and max 4-6oz/day  
100% fruit juice
- Infant Feeds
  - Provide breast milk and welcome mothers to nurse