



# Childhood Obesity

May Okihiro, MD, MS

October 08, 2012

Assistant Professor, UH JABSOM Department of Pediatrics  
Director, Hawaii Initiative for Childhood Obesity Research and  
Education (HICORE)

Pediatrician, Waianae Coast Comprehensive Health Center

Email: [okihirom@hawaii.edu](mailto:okihirom@hawaii.edu)

# Childhood and adolescent obesity

- Most 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...

# 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











# 2007-2008

BMI	≥ 85%	≥ 95%	≥ 97%
All	31.7%	16.9%	11.9%
6-19 years	34.7%	18.7%	13.3%
2-5 years	21.1%	10.4%	6.9%
White 2-5 years	17.4%	9.1%	5.5%
Black 2-5 years	26.0%	11.4%	8.7%
Hispanic 2-5 years	27.7%	14.2%	9.8%

Ogden et al , JAMA 2010

Funding for this project was provided by the HMSA Foundation.

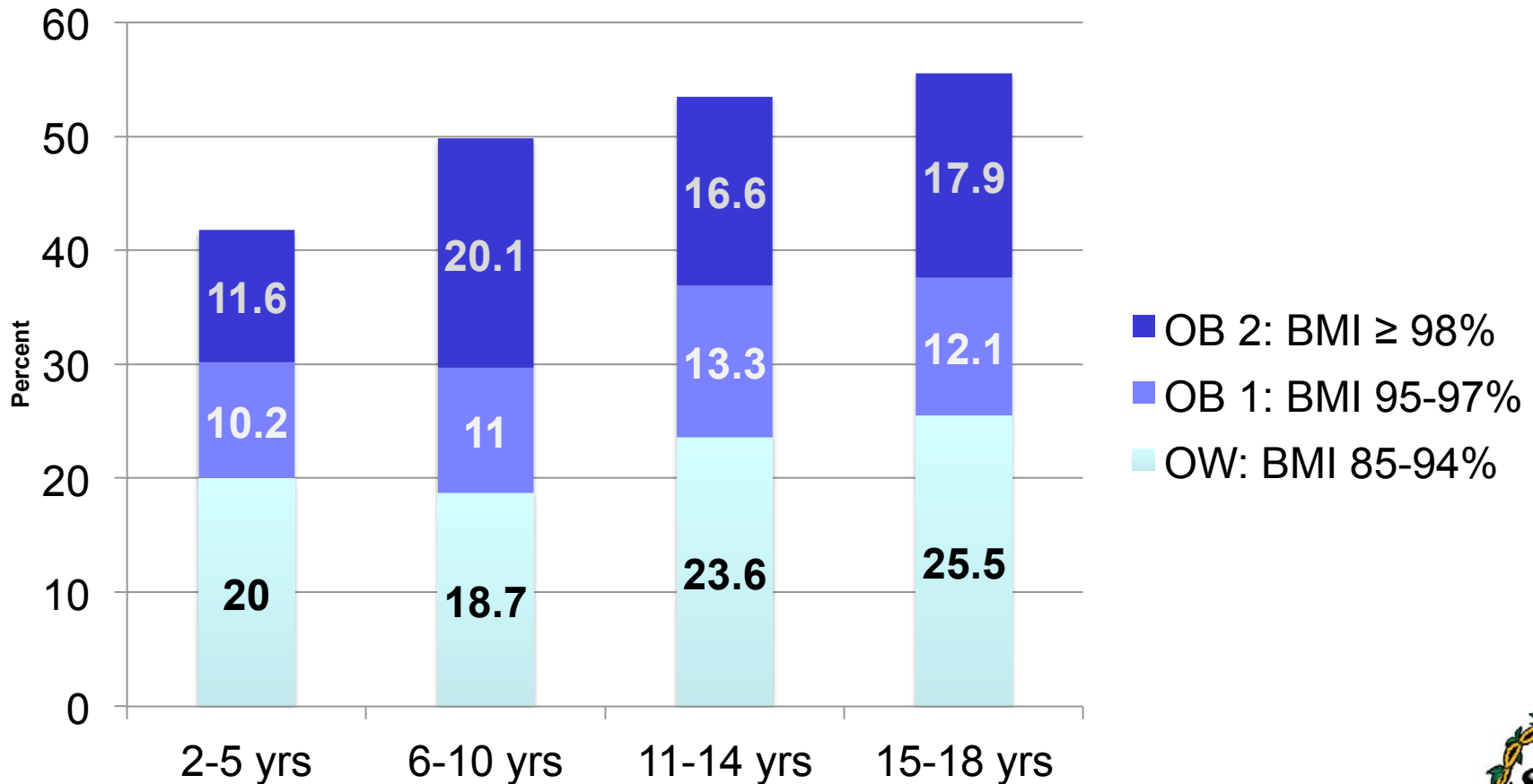
	% Obese	% OW	% OW/OB
<b>State (N=10,199)</b>	<b>14.4</b>	<b>14.1</b>	<b>28.5</b>
Aiea (N=247)	8.1	17.8	25.9
Castle (N=370)	15.4	13.5	28.9
Farrington (N=483)	15.5	17.2	32.7 
Kahuku (N=188)	19.7	16.0	35.7 
Kaiser (N=119)	7.6	10.1	17.6 
Kalani (N=249)	7.6	10.1	20.5 
Leilehua (N=553)	13.4	15.9	29.3
Nanakuli (N=148)	17.6	10.8	28.4
Waialua (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

# OW/OB Prevalence-Children attending WCCHC

Year: 2011, N=2,143

Percent Overweight and Obese



NHANES Children 2-19 years: 16.9% were obese with BMI ≥ 95%

NHANES Children, 6 to 19 years: 18.2% were obese

# Hawaii Youth Metabolic Study (HYMS)

- Based at UH JABSOM Dept. of Native Hawaiian Health - Center for Pacific and Native Health Disparities
- NIH, National Institute for Minority Health and Health Disparities No:P20MD000173
- Questions:
  - What are the consequences of obesity in Native Hawaiian and Pacific Island kids?
  - Aren't Pacific Island kids just big boned?

# **Consequences of childhood obesity**

## **Hawaii Youth Metabolic Study**

- 5 year study funded by NIH-NIMHD,  
Based at WCCHC and KKV Health Center
- Goal: Examine the development of  
metabolic syndrome and Samoan youth,  
10 to 14 years of age
- Metabolic syndrome (MetS) is a group of  
risk factors that increases risk for  
cardiovascular disease and other health  
problems such as diabetes and stroke.

# Hawaii Youth Metabolic Study

	OW	ModOB	SevOB
Fasting Glucose ≥ 100 mg/dl	6.9%	9.8%	11.0%
HDL ≤ 5% age/sex	11.6%	16.9%	27.0%
Triglycerides ≥ 95% age/sex	23.2%	30.2%	48.0%
Blood Pressure ≥ 90% age/sex	3.3%	3.8%	10.0%

# Hawaii Youth Metabolic Study

- Insulin resistance and pre-diabetes are strong risk factors for diabetes and cardiovascular disease.
- Among the Native Hawaiian and Samoan youth, a very high proportion of the adolescents had elevated fasting insulin levels and elevated HOMA 2-IR (a measure of insulin resistance)

	OW	ModOB	SevOB
Fasting insulin ≥ 50 uU/mL	20.9%	23.5%	65.3%
HOMA 2-IR ≥ 4.0	58.1%	58.2%	89.7%

# HICORE Network

## 2009

UH Dept.  
of  
Pediatrics

HMSA  
Foundation

Hawaii  
State Dept.  
of Human  
Services

Family  
Voices  
Hawaii

Dept. of  
Native  
Hawaiian  
Health

American  
Academy  
of  
Pediatrics,  
HI Chapter

Hawaii  
State Dept.  
of Health,  
Healthy HI  
Initiative

Dept. of  
Public  
Health  
Studies

School of  
Nursing



Hawaii Initiative for Childhood Obesity Research and Education

[subscribe to our newsletter](#)

[Home](#) | [Contact Us](#)

[GO](#)

[About](#)

[Collaborations](#)

[Research](#)

[Education](#)

[News](#)

[Events](#)

[Hawaii 5-2-1-0 Let's Go!](#)



## Research and Education Targeting Childhood Obesity

Providing collaborative and multi-disciplinary leadership in research and education targeting childhood and adolescent obesity in Hawaii to improve the health and wellness of Hawaii's families now and for future generations.

[ABOUT](#)



### Research



#### Current Projects

Hawaii Health Matters  
Pacific Diabetes Program  
Pacific Kids DASH for Health (PacDASH)  
Hawaii Youth Metabolic Study  
Healthy Pacific Child Program & Health Foods Hawai'i  
Pacific Islands Families Study  
Lili Moana O Ke Kai

### Education



#### Pediatric Obesity Prevention Training "Well Child Visit: A Family Obesity Prevention Opportunity"

Earn CME now: 2010-2011

#### Unnatural Causes: Social Determinants of Childhood Obesity

May 13, 2010, 12:30 - 1:30 pm

#### An Epidemic of Poor Nutrition & Physical Inactivity: Local Strategies to Turn

### Updates



Resources on Health Effects of Sugar Sweetened Beverages

School Funds at the Forefront of Research Initiatives

UH DHHS Awards Wellness and Prevention Grants to 44 Communities

[VISIT NEWS](#)

## CURRENT PROJECTS

The following are some of the current projects taking place in Hawai'i or involving Native Hawaiian and Pacific Island children and families. Some are research projects while others are service projects and programs that we can all learn from. We know there are other programs out there that we might not be aware of. If you have a project or an on-going program related childhood obesity in Hawai'i or the wellness of our keiki, please let us know.

### Ho'ala - fighting obesity in Hawai'i County

#### New Project Involves 12 Big Island Schools

Hawai'i is one of only eight locations in the U.S. to receive the "rapid response funding award" to launch a partnership between schools, the community and government to fight obesity in Hawai'i County. The Robert Wood Johnson Foundation's Active Living Research Program has provided nearly \$150,000 to the Office of Public Health Studies to launch "HO'ALA". The word ho'ala means "to waken", but it also stands for Hawai'i's Opportunity for Active Living Advancement.

Coordinators are Dr. Katie Heinrich and Laura Dierenfield of Peoples Advocacy for Trails Hawai'i. They are working with 12 public and private schools in Hawai'i County to improve access to more active ways for children to get to and from class. "We want to make it easy, fun and safe to get daily exercise by walking or bicycling to school," said Dierenfield. Added Heinrich, "We hope to impact childhood obesity and help reduce the nearly \$300 million spent annually in Hawai'i to treat obesity-related diseases."

Helping communities in need is also a goal. Participating schools have at least 35% of their students eligible for free or reduced-cost lunch.

For more information, visit [www.pathhawaii.org](http://www.pathhawaii.org).

### Hawaii Health Matters

The Hawai'i Health Data Warehouse new companion data website. A one-stop resource for information about community health in Hawai'i, and healthy communities in general.

### Pacific Diabetes Education Program

PDEP is a five-year project funded by the Centers for Disease Control and Prevention to improve the availability and dissemination of culturally and linguistically appropriate diabetes education materials. PDEP is a program of Papa Ola Lokahi, a community organization that focuses on Native Hawaiian health.

### Pacific Kids DASH for Health (PacDASH)

#### Principal Investigator: Rachel Novotny

Pacific Kids DASH for Health (PacDASH) is a community-based intervention that links food, PA, and health, and targets overweight children in Hawai'i with a goal of preventing further weight gain. Components of the intervention



#### Current Projects

#### Recent Publications

#### Hawaii & Pacific Island Childhood Obesity Research Database

#### Research Resources

#### Funding Opportunities

### Latest News

Get it here.



### Questions?

Contact Us



About

Collaborations

Research

Education

News

Events

Hawaii 5-2-1-0 Let's Go!

## Research / Recent Publications

### RECENT PUBLICATIONS

#### Other Publications

##### Hawaii Medical Journal Childhood Obesity Special Issue

The Hawaii Medical Journal published a HICORE supplement to their July 2011 issue:

The purpose of this supplement is to start to look at and evaluate evidence of the burden of obesity in Hawai'i and to present potential options for the management of obesity at the community level. It represents the efforts of local researchers, it provides an excellent overview of the obesity situation in Hawai'i, and it helps us to elucidate some of the social factors influencing the rate of obesity in Hawai'i.

The Journal's aim is to provide new scientific information in a scholarly manner, with a focus on the unique, multicultural, and environmental aspects of the Hawaiian Islands and Pacific Rim region.

To see the issue, click [here](#).

##### Journal Of Health Disparities Research and Practice

The Journal of Health Disparities research and Practice is peer-reviewed online journal that explores the problems and challenges of health disparities among the diverse populations of the United States and the world. The journal invites submission of original papers from researchers, public health practitioners, and students researching and working on health disparities solutions. Submissions are copyright protected with all rights remaining with the author. The journal publishes three times per year - Spring, Summer, and Fall.

##### The real cost of obesity

In its January 2011 Newsletter, Chart Focus shows how an obesity pandemic has put pressure on health care systems throughout the world. Obesity indirectly costs the United States at least \$450 billion annually—almost three times the direct medical cost. The situation is comparable in other countries as well.

##### Sleeping in on weekends may lower obesity risk in children

January 24, 2011. A study in Pediatrics showed that sleep-deprived children with irregular sleep patterns were more than four

Current Projects

Recent Publications

Hawaii & Pacific Island Childhood  
Obesity Research Database

Research Resources

Funding Opportunities

[About](#)
[Collaborations](#)
[Research](#)
[Education](#)
[News](#)
[Events](#)
[Hawaii 5-2-1-0 Let's Go!](#)

# Research

/ Hawaii &amp; Pacific Island Childhood Obesity Research Database

## HAWAII & PACIFIC ISLAND CHILDHOOD OBESITY RESEARCH DATABASE

### Search Published Projects




The HICORE database is focused on published journal articles based in Hawaii and the Pacific, on Pacific Islanders or by Pacific based researchers who study obesity and obesity-related illnesses such as diabetes. The database is unique because we scanned each citation and in some cases we added a location and/or ethnicity keywords to formulate searches on the Pacific Islands and Pacific Islanders more comprehensive. We also clarified and combined themes. Due to current copyright laws we are unable to provide abstracts or full-text PDF files of the articles.

### How to use the HICORE database:

Enter keywords in the "Search Published Projects" search box above. Use a comma between key words. The **green bolded keywords** below

allow the most comprehensive searches. You will obtain more specific citations using the non-bolded words only if these are included in the title, abstract or keywords entered in PubMed.

**Ex:** Search for articles on obesity in Chuukese children

**Enter keywords:** Micronesia, child, obesity

You may also search by author's last name (You do not need to use the [au] designation).

[Current Projects](#)
[Recent Publications](#)
[Hawaii & Pacific Island Childhood Obesity Research Database](#)
[Research Resources](#)
[Funding Opportunities](#)

### Latest News

Get it here.



### Questions?

Contact Us



# Search Published Projects

child, obesity, pacific

SEARCH

## RESEARCH PUBLICATIONS

Total Results: 116 – [Next 20 Results](#)

### Research Articles

#### **Predicting Time Trade-Off Health State Valuations of Adolescents in Four Pacific Countries Using the Assessment of Quality-of-Life (AQoL-6D) Instrument**

Moodie, M., Richardson, J., Rankin, B., Iezzi, A., Sinha, K.

Value Health. 2010 Sep 10;13(8):1014-27

Pacific Islands , Melanesia , Polynesia , New Zealand , Child , Obesity

#### **Physical activity, sedentariness, and body fatness in a sample of 6-year-old Pacific children**

Oliver, M., Schluter, P. J., Rush, E., Schofield, G. M., Paterson, J.

Int J Pediatr Obes. 2010 Sep 4.

Pacific Islands , Polynesia , New Zealand , Pacific Islander , Polynesian , Maori , Child , Adult , Body Size , Obesity , Physical Activity

#### **Asians and Pacific Islanders and the growing childhood obesity epidemic**

Shabbir, S., Kwan, D., Wang, M. C., Shih, M., Simon, P. A.

Ethn Dis. 2010 May 28;20(2):129-35

Pacific Islander , Asian , Child , Body Size , Adolescent , Asian Americans , Body Mass Index , California/epidemiology , Child , Female , Humans , Male , Obesity/ epidemiology/ethnology , Oceanic Ancestry Group , Overweight/epidemiology/ethnology , Prevalence

#### **Ethnic-specific body mass index cut-off points for overweight and obesity in girls**

Duncan, J. S., Duncan, E. K., Schofield, G.

N Z Med J. 2010 Apr 3;123(1311):22-9

# Does physician advice influence behavior?

- Patients who received physician advice to quit smoking, eat less fat, get more exercise PRIOR to receiving educational materials on the same topic were more likely to:
  - Remember materials
  - Show them to others
  - Perceive the materials as applying to them
- And were more likely to change behavior
  - Quit smoking for at least 24 hours
  - Make changes to diet
  - Make changes in physical activity

~Kreuter, Ann Fam Med 2000



# **Westside Wellness Alliance for Youth**

- Collaboration with Waianae Coast Comprehensive Health Center and Kaiser Nanakuli Clinic
- Develop process and procedures to address childhood obesity in the clinical setting
- Funded Kaiser Permanente Community Benefit Program

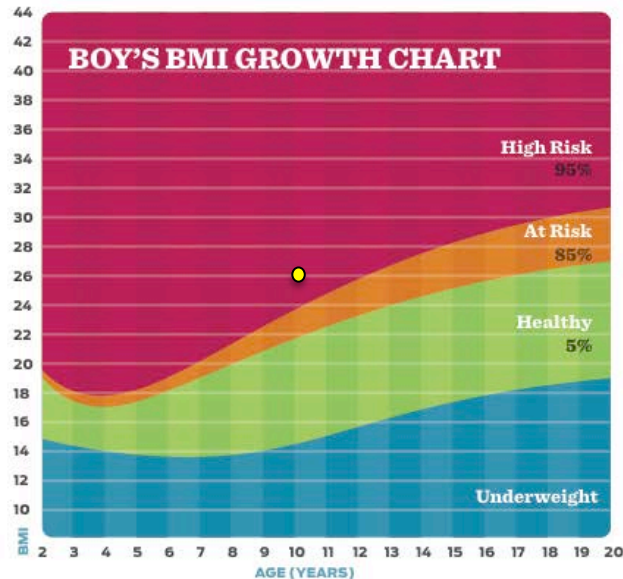
# Integrating obesity prevention and management into the WCCHC Peds Clinic Flow

- Trained staff and providers on CO best practices
- Developed and integrated EMR based clinical prompts to optimize obesity prevention processes
  - BMI screening
  - Wellness survey administration
  - High BMI templates
- Integrated registered dietitians into clinic flow
  - Administer Wellness Survey
  - Available to patients/families at Well Child visits
- CO Educational materials available at fingertips

# Your Child's Growth

## HELPING CHILDREN DEVELOP HEALTHY LIFESTYLES

Doctors screen children for growth problems using a number called body mass index or BMI. BMI is calculated from weight and height and, for children, plotted on the BMI growth chart. The percentile rank on the chart helps doctors to estimate body fat and determine if the child's weight is about right for his height.



### HIGH RISK

Children in this zone are at high risk for developing chronic diseases such as diabetes, high cholesterol, high blood pressure and heart disease. This risk goes up if the child's family has a history of these diseases. Your doctor may decide to do some extra tests on your child. Your doctor may also see your child more often to monitor BMI and blood pressure.

### AT RISK

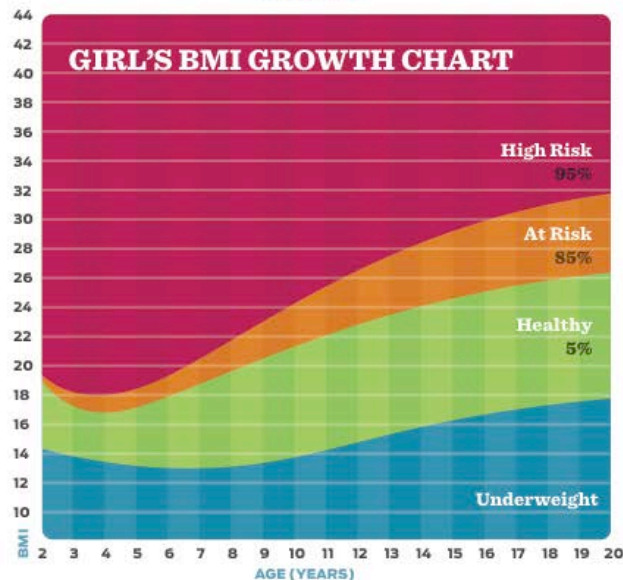
Children in this BMI zone are at risk for developing chronic diseases such as diabetes. Discuss these risks with your child's doctor.

### HEALTHY

Great job! Continue to offer your child healthy foods and time to play and move so she or he will stay in this zone.

### UNDERWEIGHT

Children in this BMI zone may be underweight. Discuss this with your child's doctor.



## BMI REPORT CARD

DATE \_\_\_\_\_

CHILD'S NAME \_\_\_\_\_

WEIGHT \_\_\_\_\_

HEIGHT \_\_\_\_\_

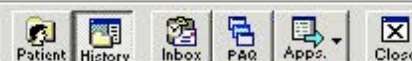
BMI \_\_\_\_\_

BMI % \_\_\_\_\_



Pediatric Health

OKIHIRO, MAY M MD



## Wellness Survey for Parents

Save and Close

We are interested in helping your child and family to be healthy. This includes promoting healthy lifestyles, physical activity, and nutrition. Please take a moment to answer the questions about your child.

Your doctor will review your answers during your visit today.

Patient Name: CHILD TEST

Age: 10 Years 8 Months

Current Date: 09/23/2010

Form administered by: ☐ MA ☐ Provider ☐ RD ☐ Parent/guardian/self

Person completing/responding to this Form:

I feel my child's health is:

I feel my child is:

My child eats about servings of fruits each day. ☐ I don't know

My child eats about servings of vegetables each day. ☐ I don't know

My child eats breakfast:

My child eats about scoops of rice at dinner. ☐ I don't know

My child eats take out, fast food or restaurant food time(s) a week. ☐ I don't know

My child usually eats dinner at the table with the family time(s) a week. ☐ I don't know

My child usually drinks cups/ cans/ bottles of soda, punch, or fruit drinks each day. ☐ I don't know

My child drinks cups of milk per day. ☐ I don't know At home my child drinks the following type of milk:

My child spends about hours a day watching TV or videos, playing computer games. ☐ I don't know

My child has a television in his bedroom: ☐ Yes ☐ No ☐ I don't know

How many days per week is your child physically active, outside of school, for at least 60 minutes (walking, running, playing outside, dancing, etc)

My child usually goes to sleep on weeknights or school nights at about:

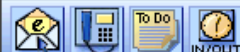
My child usually wakes up on weekdays or school days at about:

Any other comments or concerns?



Pediatric Health

OKIHIRO, MAY M MD



## Assessment

## Navigation

HOME  
Demographics  
Record Vital Signs  
Nurse Doc

> HPI  
Chronic Cond  
Allergies  
Immunizations  
Past Medical Hx  
Family History  
> Social History  
Review of System  
Physical Exam  
Health Maintenance  
Disease Mgmt  
Procedures  
Assessment  
> Orders  
> Plan

Document Gen  
EM Coding  
Interpreter Services  
Clinic Enabling

## Today's Concern(s)/Reason for Visit

12 yr/sports PE

(Highlight row below and click "Add" button to add to today's assessments.)

## Add New Chronic Problem

Add

Add

Chronic Problem	Code	Addtl Info	Previous Assessments	Code	Status
Asthma, intrinsic unspecified	493.10		UNSPECIFIED INTRINSIC ASTHMA	493.10	Mild

**BMI Assessment:** ☐ Underweight (783.22) ☐ Overweight (278.02) ☒ Obese (278.00)  
☐ BMI < 5% (V85.51) ☐ BMI 5-84.9% (V85.52) ☐ BMI 85-94.9% (V85.53) ☒ BMI >95% (V85.54)

Click for Expanded Assessment/Plan

Click here for HIGH BMI Codes

	Today's Assessments	Status	Details
Clear	Routine Infant/Child Health Visit	V20.2	Routine
Clear	Obesity, unspec	278.00	
Clear	BMI Pediatric >95%, Obese	V85.54	
Clear	UNSPECIFIED ASTHMA WITH ACUT	493.92	
Clear			
Clear			
Clear			
Clear			
Clear			

Re-sort Order of Assessments

Print Document



New Lock

Plan WCCHC  
Master IM WCCHC  
01/24/2012 04:03 PM OK  
WC 12 Years WCC  
EPSDT Screening  
Family Hx WCCHC  
Histories (Male) WC  
HPI WCCHC  
Assessment WCC  
Immunization Peds  
Lab Master WCCH  
Master Im WCCHC  
Physical Exam WC  
Office Px WCCHC  
Plan WCCHC  
Review of Systems  
Social Hx Peds WC  
Telephone/Other C  
Vision Hearing WC  
Vital Signs Record  
Wellness Survey W  
Lab Master WCCHC  
Master IM WCCHC

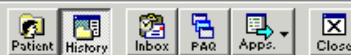
Custom



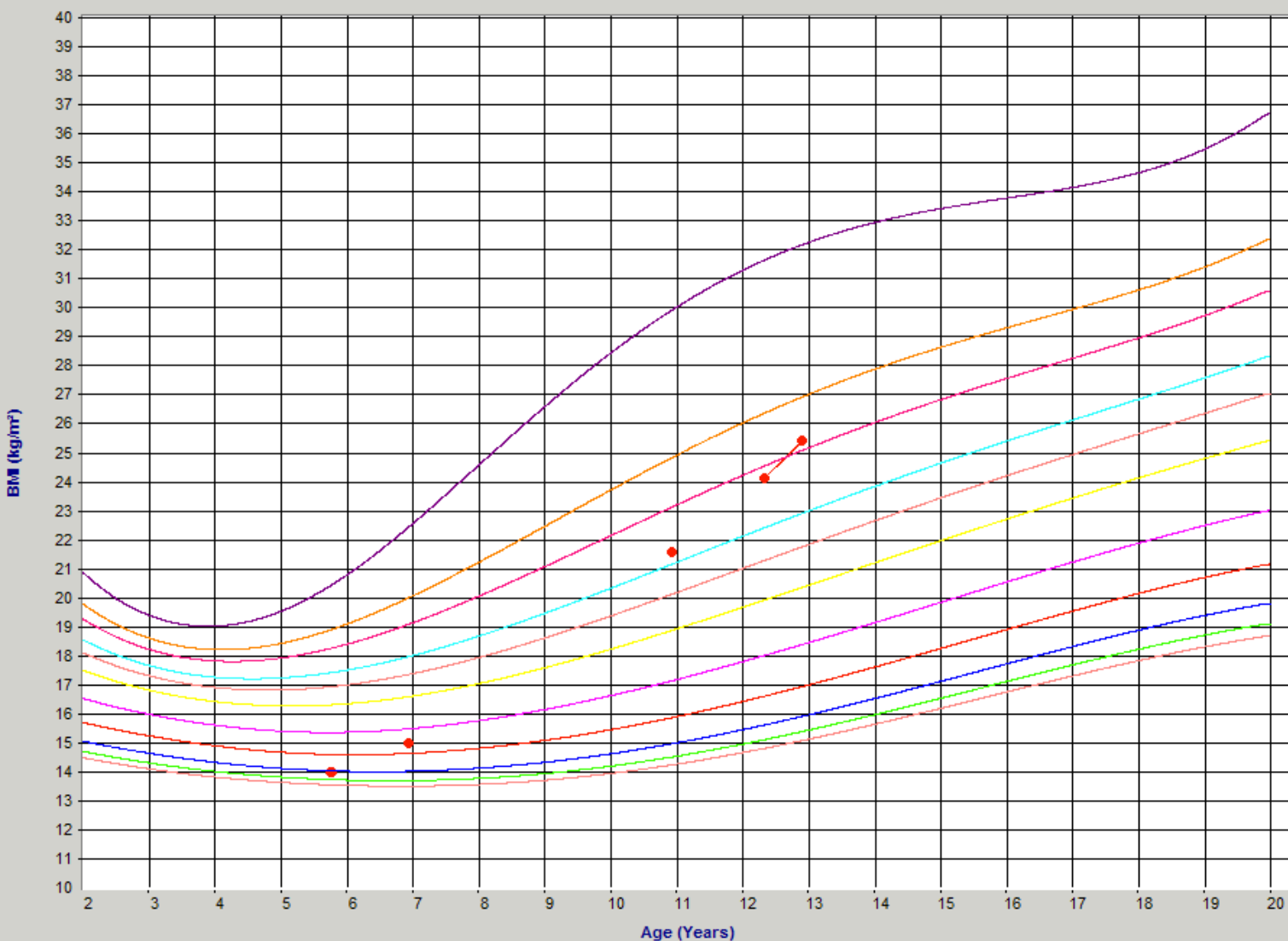


Pediatric Health

OKIHIRO, MAY M MD



## Age vs. BMI (Boys)



3% 5% 10% 25% 50% 75% 85% 90% 95% 97% 99% Patient

09/25/2012 0

- Immun
- Master
- Pediatr
- Plan W
- Referra
- Referra
- Vision
- Vital Si
- Pediatr
- Referral
- Referral
- Vision

08/21/2012 0

- WC 12
- Family
- HPI W
- Immun
- Master
- Office F
- Pediatr
- Social
- Vital Si

Custom



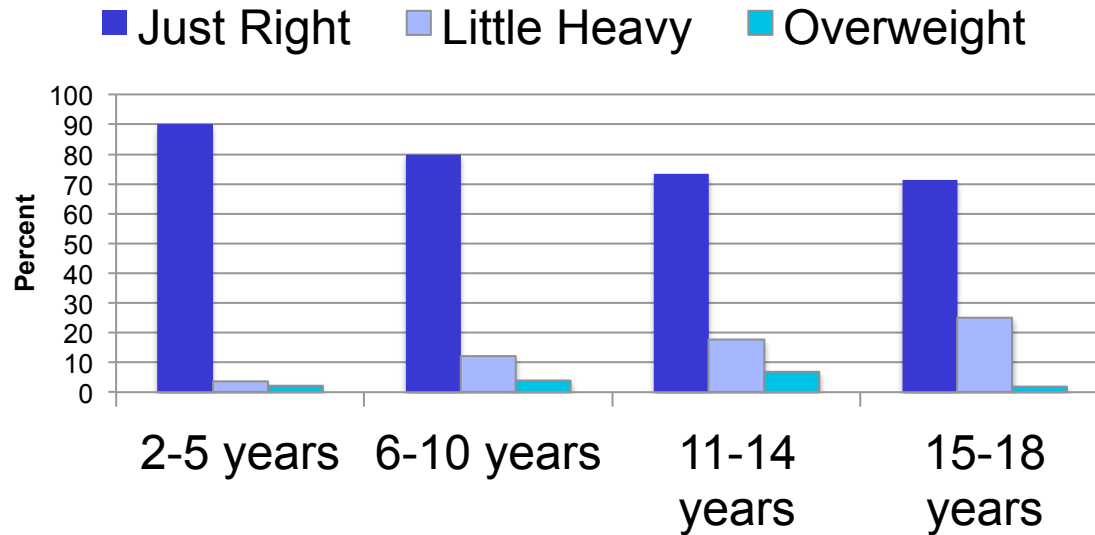
# Parental perceptions of OW/OB

- Westside Alliance for Youth Project
- 17 item multiple choice parent survey
  - Developed, tested, transposed into WCCHC EMR
  - Administered to parents/teen seen for all well-child visits

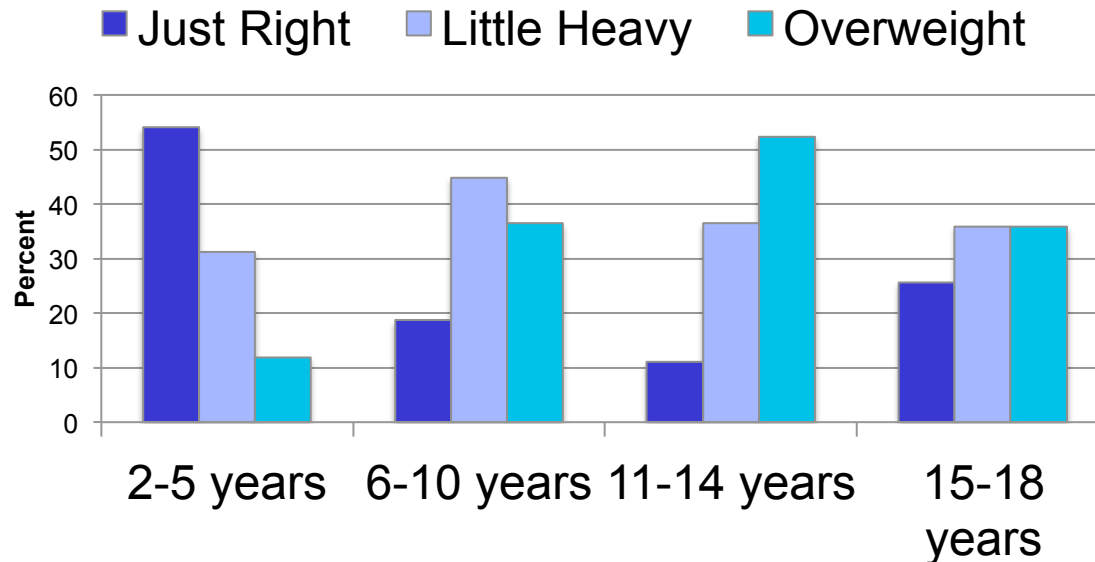
# 12 month period 2010-2011

- 2,143 parents completed survey
- Boys 53%, Girls 47%
- Parental perception of child's body size
  - My child's body size is...
  - Underweight, Just right, A little heavy, Overweight

## Overweight: BMI 85-94.9%



## Obese 2: BMI 98-99.9%



# QI Measures

## WCCHC – Children 2 to 17 years

- At least 80% of all children ages 2-17 years with a BMI > 85th% (overweight) will have healthy weight (nutrition and physical activity) counseling documented in their medical record within the past year.
- We have shown significant improvement with this measure over the past year, from ***16% last year to 64% this year***



Hawaii Initiative for Childhood Obesity Research and Education

[subscribe to our newsletter](#)

[Home](#) | [Contact Us](#)

[GO](#)

[About](#)

[Collaborations](#)

[Research](#)

[Education](#)

[News](#)

[Events](#)

[Hawaii 5-2-1-0 Let's Go!](#)



## Research and Education Targeting Childhood Obesity

Providing collaborative and multi-disciplinary leadership in research and education targeting childhood and adolescent obesity in Hawaii to improve the health and wellness of Hawaii's families now and for future generations.

[ABOUT](#)



### Research



#### Current Projects

Hawaii Health Matters  
Pacific Diabetes Program  
Pacific Kids DASH for Health (PacDASH)  
Hawaii Youth Metabolic Study  
Healthy Pacific Child Program & Health Foods Hawai'i  
Pacific Islands Families Study  
Lili Moana O Ke Kai

### Education



#### Pediatric Obesity Prevention Training "Well Child Visit: A Family Obesity Prevention Opportunity"

Earn CME now: 2010-2011

#### Unnatural Causes: Social Determinants of Childhood Obesity

May 13, 2010, 12:30 - 1:30 pm

#### An Epidemic of Poor Nutrition & Physical Inactivity: Local Strategies to Turn

### Updates



Resources on Health Effects of Sugar Sweetened Beverages

School Funds at the Forefront of Research Initiatives

UH DHHS Awards Wellness and Prevention Grants to 44 Communities

[VISIT NEWS](#)

HAWAII STATE NPAC

COUNTY COALITIONS: HAWAII COUNTY | MAUI COUNTY | KAUAI COUNTY



HOME

TASK FORCES

ADVOCACY

EVENT CALENDAR

ABOUT

JOIN

SEARCH



**School Task Force** seeks to increase physical activity and healthy nutrition opportunities in schools.

## TASK FORCES



BUILT ENVIRONMENT



NUTRITION



WORKSITE WELLNESS



HEALTHCARE



SCHOOLS



RURAL OUTREACH

## JOIN NOW

Become a member of Hawai'i NPAC

## UPCOMING ACTIVITIES

NOV 8

VAL NOLASCO HALF-MARATHON  
Kapiolani Park, 5:30 am  
[www.mprrc.com](http://www.mprrc.com)

NOV 15

SR. OLYMPICS 10K  
Kapiolani Park, 7:30 am  
[www.mprrc.com](http://www.mprrc.com)

NOV 15

YMCA & WAIKIKI SWIM CLUB  
Turkey Swim, 2K/1K  
Ala Moana Beach Park  
808-536-3556  
[See all activities »](#)

## The Healthy Hawaii

is a one-stop source of non-biased data and information about community health on the islands, and healthy communities in general. It is intended to help planners, policy makers, and community members learn about issues and identify improvements.

[LEARN MORE »](#)

## Browse Member Directory »



## UPCOMING MEETINGS

NOV 3

2009 PHYSICAL ACTIVITY & NUTRITION SUMMIT  
"Good Health: Good Business," Hilton Hawaiian

NOV 9

ONE VOICE (BUILD ENVIRONMENT TASK FORCE)  
4 – 6 pm, AARP.

NOV

NPAC ANNUAL LUNCHEON

# NPAC Healthcare Taskforce

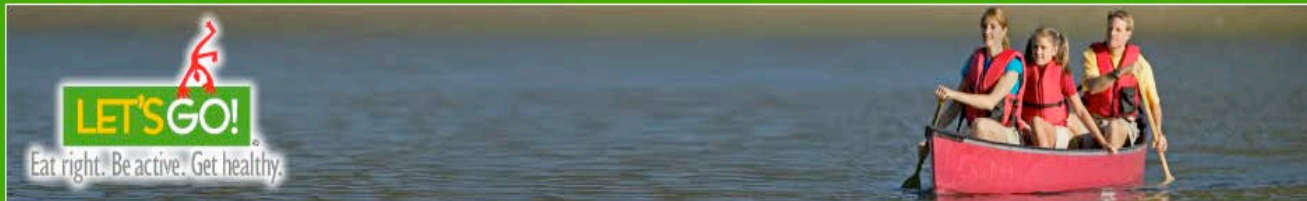
- Chair: May Okihiro, MD
- Members –
  - Physicians
  - State of Hawaii DHS – Medicaid/Quest
  - HMSA
  - Alohacare
  - Hawaii Dept of Health
  - Kapiolani Medical Center
  - National Kidney Foundation
  - American Cancer Society



# NPAC Healthcare Taskforce - Strategies

In an effort to change the **social norm**,  
promote and encourage  
***consistent messaging*** by all:





**LET'S GO!**  
Eat right. Be active. Get healthy.

[HOME](#) [ABOUT US](#) [GET UP & GO GUIDE](#) [NEWS AND EVENTS](#)

[eNews sign-up](#)

[Sign-up](#)

**Resources for:**

[Schools](#)

[After School](#)

[Child Care](#)

[Healthcare](#)

[Workplace](#)

[Community](#)

[Research](#)

**Learn about  
Let's Go! outside  
Greater Portland!**

[Click Here!](#)

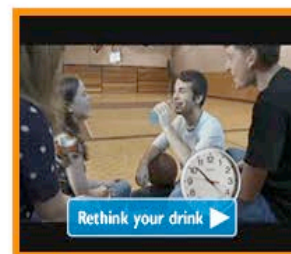
# 5210 Every Day!

## Is it time to rethink your drink?

Have you ever thought about how much sugar sweetened beverages you or your family drink throughout the day? You should. Energy drinks, soft drinks, fruit drinks, it's all sugar. And it all adds up over time...empty calories, tooth decay and even a lot of money!

**Did you know that:**

- Soda has no nutritional value and is high in sugar. A 20 oz. bottle of regular soda can have up to 20 teaspoons of sugar.
- Sports drinks also contain a lot of sugar and calories and are not needed for most activities. Stay hydrated with water!
- Energy drinks are NOT sports drinks and can contain up to 14 teaspoons of sugar.
- Juice products labeled "-ade", "drink" or "punch" often contain 5% juice or less.
- The only difference between these "juices" and soda is that they're fortified with Vitamin C.
- Try drinking water or low fat milk instead!



**Below are free downloads to help you drink less sugar.**



[Drink Less Sugar. Try water and low fat milk instead of soda and drinks with sugar.](#)

[How Much Sugar Do You Drink](#)

[Think Your Drink](#)

[For more ideas, visit our "0" page](#)



<http://www.letsgo.org/resources/MYOC.php?>



- **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

# 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.



Strategy:

## **Pediatric Health Care Providers**

- Initial Focus: Physicians and other pediatric providers, a trusted source of health and wellness information
- Objective 2: To develop and disseminate a core set of clinical tools that will assist providers to effectively and easily counsel parents about healthy lifestyles and their child's growth



# Clinical Tools and Educational Materials

- “Wellness Survey”
  - Healthy Lifestyle Screening Survey
  - Use at every Well Child Visit or when BMI is assessed
- BMI assessment and counseling tool
  - Educate parents about child’s growth
- 5210 Educational Sheet – “Fact Sheet”



# Healthy Lifestyle Screening



We are interested in providing the best care to our patients. This includes discussing ways to prevent future disease through healthy living. While you are waiting, please take a few minutes to answer the following questions. We encourage you to discuss the questions with your child. We will review your answers during your child's visit today.

## Has anyone in your family ever been diagnosed with:

Diabetes / Gestational Diabetes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Who? _____
High Blood Pressure	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Who? _____
High Cholesterol or Lipids (Fats such as LDL)	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Who? _____
Heart Disease (Heart attack & Stroke)	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Who? _____
Overweight	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Who? _____

**How many servings** (1 serving = 1/2 cup) per day of fruits and vegetables does your child eat?

<b>0-1</b>	<b>2-3</b>	<b>4-5</b>	<b>5+</b>
Servings	Servings	Servings	Servings

**In total**, how many hours per day does your child watch TV or movies, play video or computer games?

<b>4+</b>	<b>3-4</b>	<b>1-2</b>	<b>&lt; 1</b>
Hours	Hours	Hours	Hour

**How many days per week** is your child physically active, outside of school time, for at least 60 minutes? (walking, running, biking, swimming, playing, dancing, etc.)

<b>0-1</b>	<b>2-3</b>	<b>4-5</b>	<b>6-7</b>
Days	Days	Days	Days

**How many cups/cans/bottles** per day does your child drink of the following: juice, soda, sports drinks, energy drinks, lemonade, POG, sweetened tea or coffee drinks.

<b>0-1</b>	<b>2-3</b>	<b>4-5</b>	<b>6-7</b>
Times	Times	Times	Times

**How many times per week** does your child eat take out food, fast food or restaurant food?

<b>0-1</b> Times	<b>2-3</b> Times	<b>4-5</b> Times	<b>5+</b> Times
------------------	------------------	------------------	-----------------

**How many times per week** does your child eat food outside the home/school?

<b>6-7</b> Times	<b>4-5</b> Times	<b>2-3</b> Times	<b>0-1</b> Times
------------------	------------------	------------------	------------------

**How many days per week** does your family eat dinner together at the table?

<b>0-1</b> Times	<b>2-3</b> Times	<b>4-5</b> Times	<b>6-7</b> Times
------------------	------------------	------------------	------------------

**How many cups** of milk does your child drink per day?

<b>1</b> Cups	<b>2</b> Cups	<b>3</b> Cups	<b>4+</b> Cups
---------------	---------------	---------------	----------------

**How many scoops** of rice does your child eat at dinner?

<b>1</b> Scoops	<b>2</b> Scoops	<b>3</b> Scoops	<b>4+</b> Scoops
-----------------	-----------------	-----------------	------------------

**Are you ever worried** that food will run out before you get more money to buy more?

<b>Often</b>	<b>Sometimes</b>	<b>Rarely</b>	<b>Never</b>
--------------	------------------	---------------	--------------

**How worried** are you about your child's health?

<b>Very Worried</b>	<b>Somewhat Worried</b>	<b>Not at all Worried</b>
---------------------	-------------------------	---------------------------

**How worried** are you about your child's weight?

<b>Very Worried</b>	<b>Somewhat Worried</b>	<b>Not at all Worried</b>
---------------------	-------------------------	---------------------------

Is now a good time to work on family eating and activity habits?

<b>Definitely</b>	<b>Yes</b>	<b>Maybe</b>	<b>No</b>
-------------------	------------	--------------	-----------

On school nights, my child usually goes to sleep about: \_\_\_\_\_

On school days, my child usually wakes up about: \_\_\_\_\_

# 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





LET'S GO!

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

# 0

## Sugary Drinks



# Power of Breakfast

- Adults who eat breakfast..
  - Lower rates of Type 2 diabetes and are less likely to develop heart failure over their lifetime
  - Better mental performance
  - More successful in attempts to lose weight
- Kids who eat breakfast...
  - Have healthier weight
  - Improved school attendance
  - Have more focus and energy
  - Do better on standardized tests
  - Have improved classroom behavior



# Sleep

- It's important! It Optimizes...
  - Learning
  - Test taking
  - Athletic function
  - Mood
  - Immune system
  - Growth
  - Weight management
- National Sleep Foundation – Rec'd Hours/Night
  - 3-5 years: 11-13 hours/night
  - 5-12 years: 10-11 hours
  - Adolescents: 8.5-9.5 hours
  - Adults: 7-9 hours

# HEALTH AT EVERY SIZE



# Dissemination of Materials to Pediatric Providers

- Dissemination of Materials to CHC
  - Hawaii Primary Care Association
- Health Plans
  - HMSA
  - UHA
  - Alohacare and other Quest Plans
- Kaiser Permanente Hawaii
- Hawaii 5210 Let's Go and HICORE website
  - Online CME

## Objective 3:

- Disseminate the Message by Maximizing Partnerships



# HICORE Network 2009

UH Dept.  
of  
Pediatrics

HMSA  
Foundation

Hawaii  
State Dept.  
of Human  
Services

Family  
Voices  
Hawaii

Dept. of  
Native  
Hawaiian  
Health

American  
Academy  
of  
Pediatrics,  
HI Chapter

Hawaii  
State Dept.  
of Health,  
Healthy HI  
Initiative

Dept. of  
Public  
Health  
Studies

School of  
Nursing

# 2012 Initiative Network of Partners

## Community Partners

### University of Hawaii Partners

*School of Medicine*

**HICORE**  
**DEPT. OF PEDIATRICS (INFRASTRUCTURE)**

Dept. of Native Hawaiian Health

Dept. of Public Health Studies

School of Nursing & Dental Hygiene

Kapiolani CC Culinary Arts

College of Tropical Ag & Human Resources

### Healthcare Partners

#### *Sponsors*

HMSA Foundation

Kaiser Permanente

University Health Alliance

Hawaii Primary Care Association

AlohaCare

HMSA

Healthways

Kapiolani Medical Center

Theresa Wee MD

American Academy of Pediatrics, Hawaii Chapter

### Hawai'i State Partners

Dept. of Human Services, Quest/EPSTDT

Dept. of Health, Family Health Services including WIC, Healthy Hawaii Initiative

Dept. of Health, Public Health Nurses

Dept. of Labor, Office of Community Services

Waianae Coast Comprehensive Health Center

Molokai Community Health Center

Kalihi Palama Community Health Center

Kalihi Kokua Valley Community Health Center

Lanai Community Health Center

Waimanalo Community Health Center

Ko'olauloa Community Health Center

Kohala Center

PATH

YMCA Honolulu

Pioneering Healthier Communities

Kokua Foundation

Kanu Hawaii

Queen Liliuokalani Children's Center

Hawaii Youth Theatre

HAHPERD

Kamehameha Schools

McKinely High School

Hawaii Speed and Quickness

American Diabetes Assn – HI Chapter

Na Pu'uwai Molokai, Lanai

Hawaii Education Matters

Spike and Serve

Parent Teacher Child Association of Hawaii

Hawaii Nutrition & Physical Activity Coalition

Hawaii Action for Healthy Kids

Papakolea Community Center

Hawaii Speed and Quickness

First Years Hawaii

Sacred Hearts Academy

Kaho'omiki

After School All Stars

Konawaena Elementary

Family Voices Hawaii

Kaiser Permanente Educational Theatre & Castle Performance Arts

Kapolei High School

Jamba Juice Hawaii

Old Navy Hawaii

Crossfit 808

BOCA Hawaii

[About](#)

[Family](#)

[Schools](#)

[Healthcare](#)

[Recipes](#)

[News](#)

EXPLORE HAWAII

**5210**



## About



### 5 Fruits, Roots & Vegetables

Fruits, roots and vegetables, including root vegetables such as taro (poi) and sweet potato, are packed with nutrients.

[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](#)



### 0 Sugary Drinks

Sugary drinks such as soda, sweetened tea, sports drinks, fruit punch and other fruit-flavored drinks have little health benefit.

[LEARN MORE](#)



# Recipes



## Garden Tacos

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



## Monkey Fruit

by Chef Carol Nardello

[About](#)

[Family](#)

[Schools](#)

[Healthcare](#)

[Links](#)

[Resources](#)

[Recipes](#)

[News](#)

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

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



## Recent Posts

- [Food Flash Mob! | Jamie Oliver's Food Revolution](#)
- [Beyonce, Michelle Obama and a cool flash work out!](#)
- [Farmer's Markets in Hawaii](#)
- [Kaho'omiki and the A+ Afterschool Fun 5 Program](#)
- [Monkey Fruit](#)
- [Garden Tacos](#)
- [Breast-Feeding May Cut Obesity Risk in Kids of Diabetic Moms](#)
- [Poor Diet Linked to Early Signs of Heart Risks in Obese Kids](#)
- [Alliance for a Healthier Generation's Healthy Schools Program Now Reaches More Than 10,000 Schools](#)
- [New Report Highlights Changes Needed to Support Healthy Eating and Physical Activity in U.S. Elementary Schools](#)

## Categories



# The Fit Factory at Momilani Elementary School “Good In and Great Out!”

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



## Recent Posts

- [Food Flash Mob! | Jamie Oliver's Food Revolution](#)
- [Beyonce, Michelle Obama and a cool flash work out!](#)
- [Farmer's Markets in Hawaii](#)
- [Kaho'omiki and the A+ Afterschool Fun 5 Program](#)
- [Monkey Fruit](#)
- [Garden Tacos](#)
- [Breast-Feeding May Cut Obesity Risk in Kids of Diabetic Moms](#)
- [Poor Diet Linked to Early Signs of Heart Risks in Obese Kids](#)
- [Alliance for a Healthier Generation's Healthy Schools Program Now Reaches More Than 10,000 Schools](#)
- [New Report Highlights Changes Needed to Support Healthy Eating and Physical Activity in U.S. Elementary Schools](#)



## Categories

- [Family](#)
- [Featured](#)
- [Fun News](#)
- [Healthcare](#)
- [Ideas](#)
- [Links](#)
- [Program](#)
- [Recipes](#)
- [Schools](#)

The Momilani Fit Factory is a voluntary fitness club at the Momilani Elementary School in Pearl City lead by coach and 3rd grade teacher Mr. Masaru Uchino and 4th grade teacher Mrs. Dawn Kanoho. The club meets twice a



**Konawaena  
Elementary  
5-2-1-0 Pilot  
Project  
It's a Lifestyle!**



## Hanalei Elementary, Kauai



## Ka'awa Elementary

Messaging at work...

# 2012 Hawaii 5210 Keiki Run



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





# Hawaii 5210 Let's Go! Song and Flash Mob Dance



# Local Teacher Wins UnitedHealth HEROES Grant of \$1000

Posted April 9, 2012 | Categories: [Schools](#)



Early this February, home economics teacher Suzanne Nozaki of Pahoia High & Intermediate School received a \$1,000 UnitedHealth HEROES Grant from Youth Service America (YSA) and UnitedHealth Group for her Eat Your Lawn program.

UnitedHealth HEROES grants support youth-led service-learning initiatives addressing childhood obesity, healthful food choices and active lifestyles.

One of 282 grant recipients nationwide, Nozaki's program includes activities which help youngsters to improve their food choices, as well



## Recent Posts

- [Familiarity With Television Food Ads Linked to Obesity](#)
- [Sacred Hearts Academy Wellness Program - 5-2-1-0 Go!](#)
- [The Winners of the Jamba Eat Healthy Coloring Contest announced!](#)
- [Parent Academy Workshop starting May 2nd](#)
- [Hawaii Fruit Smoothies](#)
- [Power Breakfast! Puka Egg \(Bird's Nest\) Toast with Hawaiian Salsa](#)
- [Rachael Ray's Yum-o! Healthy School Meal Contest](#)
- [2nd Annual Honolulu 5K For - Sunday, April 29](#)

# Sacred Hearts Academy Wellness Program - 5-2-1-0 Let's Go!

Posted April 30, 2012 | Categories: [Schools](#), [Family](#)



## Recent Posts

- [Familiarity With Television Fast Food Ads Linked to Obesity](#)
- [Sacred Hearts Academy Wellness Program - 5-2-1-0 Let's Go!](#)
- [The Winners of the Jamba Hawaii Eat Healthy Coloring Contest are announced!](#)
- [Parent Academy Workshops - starting May 2nd](#)
- [Hawaii Fruit Smoothies](#)
- [Power Breakfast! Puka Egg \(Bird's Nest\) Toast with Hawaii Salsa](#)
- [Rachael Ray's Yum-o! Healthy School Meal Contest](#)
- [2nd Annual Honolulu 5K For Kids - Sunday, April 29](#)
- [Michelle Obama on 'Biggest Loser' to Fight Childhood Obesity](#)
- [Local Teacher Wins UnitedHealth HEROES Grant of \\$1000](#)

## Categories

- [Family](#)
- [Featured](#)
- [Fun News](#)
- [Healthcare](#)
- [Ideas](#)
- [Links](#)
- [Program](#)
- [Recipes](#)
- [Schools](#)



Late March, the Sacred Hearts Academy students experienced an energetic launch to the school's new wellness program – 5-2-1-0 Let's Go!

# *At Kuhio, Wellness Works!*

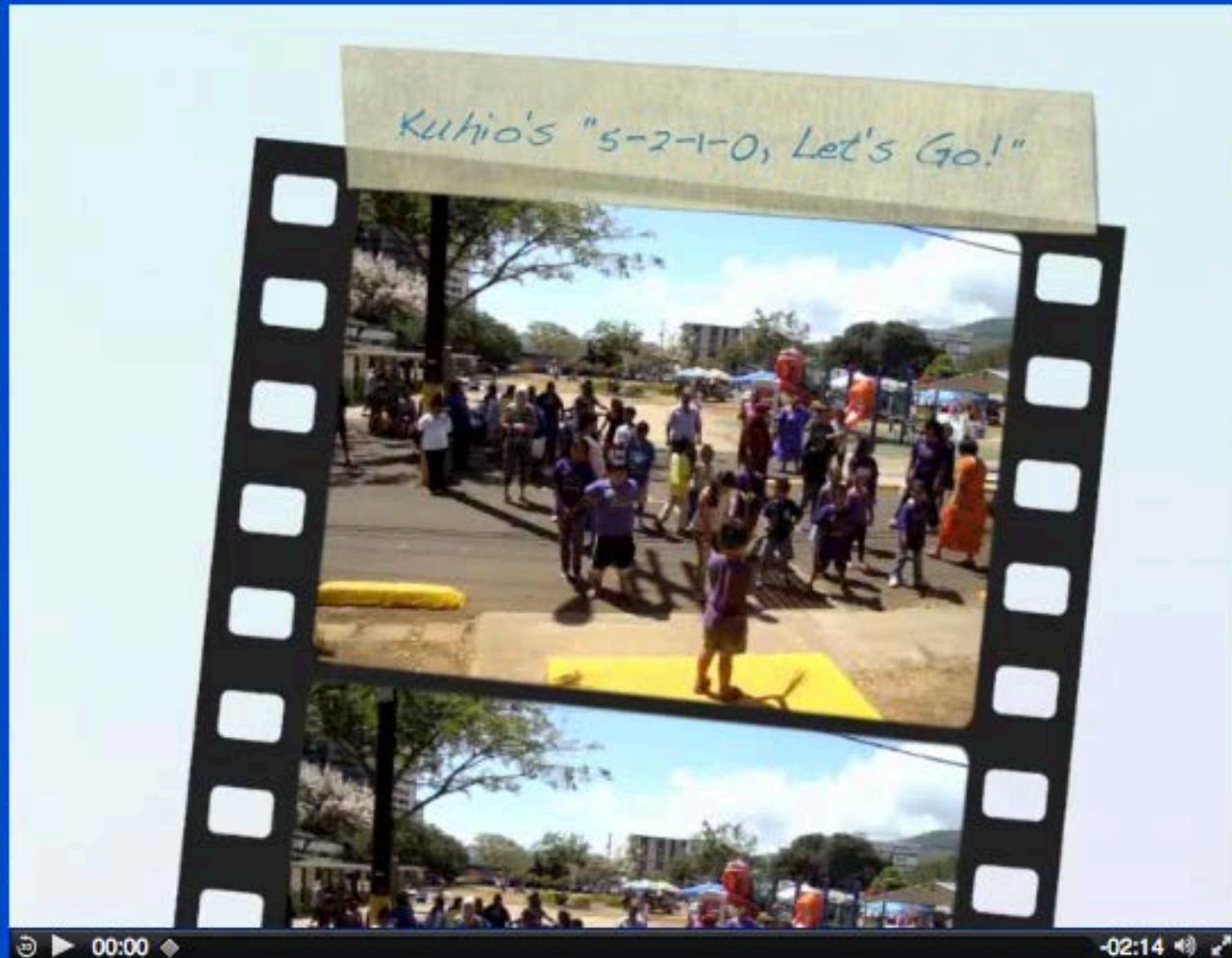
[Welcome](#)   [Principal's Message](#)   [Dashboard](#)   [News](#)   [Classrooms](#)   [Specialty Classes](#)   [Links](#)  
[Parents](#)   [Wellness Works!](#)   [Super Star Savings 2010-11](#)   [5th Grade Academy](#)   [Student Council](#)  
[Positive Action](#)   [Cafeteria Menu](#)   [Before/After School Activities](#)   [Community Partnerships](#)  
[Kuhio's Photo Albums](#)   [About us](#)

**This page may take a minute or longer to fully load. Thanks for your patience.**



# **"5-2-1-0, Let's Go!" dance performed at Kuhio's Wellness Fair 2012**

Learn more at <http://www.hawaii5210.com/2/about>





**Go!Kit**



# Break for Breakfast

Take a Few Minutes to Fuel Up



## SIMPLE



### Keep it Simple

- Eat a balanced breakfast.
- Include whole-grains (oatmeal, whole-wheat bread), protein (nut butters, milk, eggs, yogurt, lean breakfast meat).
- Add fresh fruits like papaya or banana.

## SAVE TIME



### Brown Bag Your Breakfast

- Pack breakfast and lunch with sandwiches and fruit.
- Eat breakfast at school. School breakfasts are inexpensive, nutritious and yummy!

## EAT ON THE GO



### Choose Healthy Fast Foods

- Breakfast at school is a quick way to start the morning.
- If you stop at a fast food restaurant, order a small size or share a larger size. Avoid fried and sugary foods.

## EAT IN THE MORNING



### Snack Mid-Morning

- Eat in the first few hours of your day.
- Pack a few finger foods to snack on for a boost before lunch.

More Information on Healthy Breakfast at [Hawaii5210.org](http://Hawaii5210.org).

### *Skipping Breakfast?*

National experts agree that eating breakfast is better than skipping it.

**Fuel for School** Eating breakfast leads to sharper focus, better memory, higher grades and improves mood!

**Helps Keep a Healthy Weight** Eating breakfast provides even energy throughout the day.

**Cereal Again?** Serve other breakfast choices too! Foods like chicken, rice, and noodles. Or try a new recipe!

### *How Much Sleep is Enough?*

Sleep helps children stay healthier and do well in school. Rested children will be ready to eat breakfast before school.

**Preschoolers** (Ages 3-5)

**11 - 13 Hours**

**School-Age** (Ages 6-12)







**11 - 13 Hours**

**Teens**

**8.5 - 9.5 Hours**

## Breakfast & Sleep Journal

First Name: \_\_\_\_\_ Teacher or Room: \_\_\_\_\_ Date Started: \_\_\_\_\_

Day	I went to bed at:	I woke up at:	I ate breakfast : Yes No	If yes, what did you eat? (draw or write what you ate)	How did you feel when school started? (Circle 1)
Ex.	7:30PM	6:00AM	<input checked="" type="radio"/> Yes <input type="radio"/> No	1 scrambled egg, 2 strawberries, 1 glass of milk	
1			Yes No		
2			Yes No		
3			Yes No		
4			Yes No		
5			Yes No		

# Healthy families, Healthy Hawaii



This work was supported by:

- NIH, National Institute for Minority Health and Health Disparities Grant No:P20MD000173
- HMSA Foundation
- Kaiser Permanente Community Benefits Program