



Got DietDay ?

**A Novel Tablet based Approach to
Assessing What People Eat**

*Lenore Arab, Professor
UCLA David Geffen School of Medicine*

Outline:

- Why Dietary Assessment Matters
- Why are we still struggling with Methods
- Our Web based 24-Hour Recalls “DietDayII”
- The Energetics Study Findings



The Question:

Why would NIH spend \$2.5 million dollars to validate dietary assessment tools?

Frances Collins

*Head, National Human Genome Research Institute, now
Director NCI*

Says he used to believe
that we could understand
disease by comparing the
genetics of those afflicted
and those spared...

*until CopyCat took him by
surprise*



“A year later, Cloned Cat (with identical DNA) is no CopyCat”

Rainbow the cat is a typical calico with splotches of brown, tan and gold on white

Cc, her clone, has a striped gray coat over white.

Rainbow is reserved.
Cc is curious and playful.

Rainbow is chunky.
Cc is sleek.

Therefore genes alone do not tell the whole story, environment must influence their expression



Rainbow

CopyCat

The Need for Valid Dietary Assessment

- 1) Diet influences genetic expression (Nutrigenomics) thus the GEI Initiative of the National Human Genome Institute and NIEHS
- 2) Diet affects metabolism, and the etiology and progression of disease
- 3) Accurate measurement needed in human studies (clinical and epidemiologic) to study the relationship of diet to disease
- 4) *Widely used methods proven to be fatally flawed*

Dietary Assessment Choices

- Prospective Methods:
 - weighed Dietary Records (7 days)
 - duplicate portion methods
- Retrospective Methods
 - multiple 24-hour recalls
 - Diet History
 - Food Frequency Questionnaire
- Biomarkers

Study Design: *Energetics Study*

- Study of 250 African Americans and Caucasians
- Involves conducting 8 Recalls, 2 Diet Histories, 1 Food Frequency
- Recovery Biomarkers (DLW and Urinary Nitrogen)
- Repeat Study in a subset of 60 people 6 months later
- *This is the only DLW study that is non-white and the only one conducted among 'younger people'*

Energetics Population Characteristics

Gender: **Female** 65%
 Male 35.22%

Race: **Caucasian** 49%
 African-American 51%

Education 57% college educated

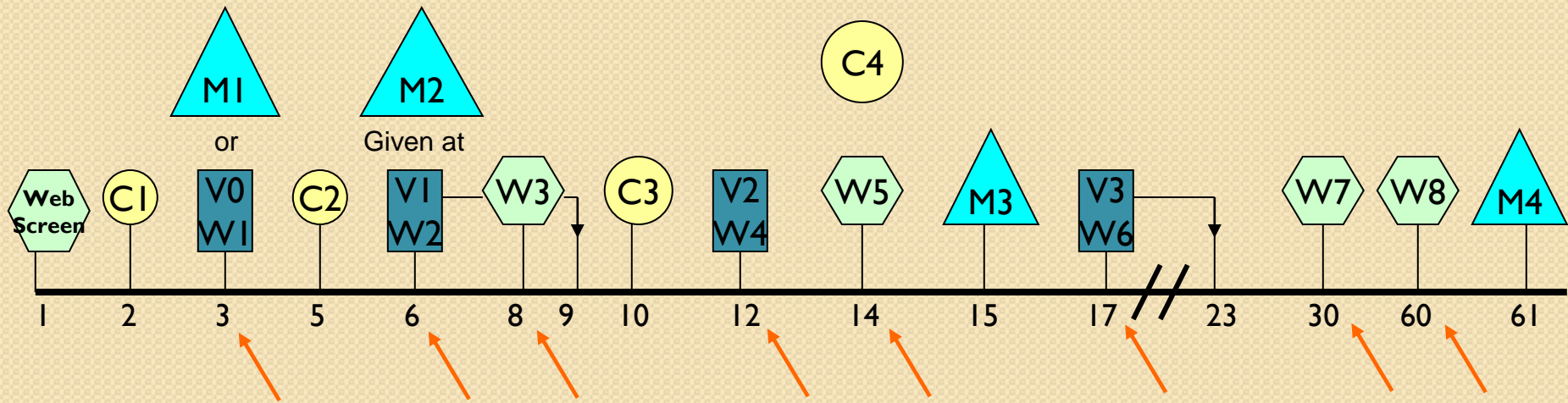
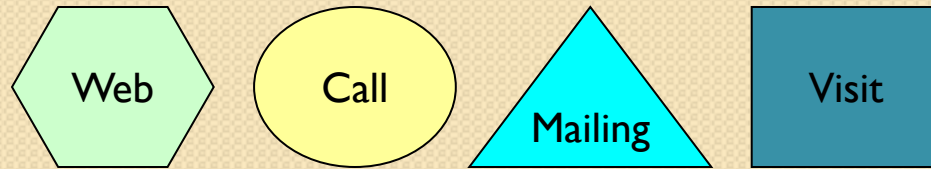
Age **<30** 39%
 30-39 18%
 40-49 19%
 50-59 19%
 60-69 4%

Energetics Population Characteristics

Body Mass Index Status

Under weight	<18.5	2.8
Normal weight	18.5-24.9	43.3
Overweight	25.0-29.9	29.6
Obese	≥ 30	24.3

TIMELINE IN DAYS



Eight self administered 24 hr recalls



Features of DietDay

- CASI
- Over 5000 food images
- Portions sizes changed by subject
- Many ethnic food modules
 - (Chinese, French, Italian, Southern Foods)
- No Interviewer Bias
- Over 8000 foods in the nutrient database
- Captures Nutritional Supplement Use
- Self interview (no personnel costs)
- Real-time feedback to subjects and scientists
- Compares Intake to NAS Recommendations

DietDay Program

61 Different Modules for Foods, Beverages and Supplements such as:

- Fast Foods (321 foods)
 - American (195)
 - Chinese (77)
 - Japanese (33)
 - Indian (40)
 - Mexican (44)
 - Meat (1735)
 - Southern (1414)
 - Vegetables (896)
 - *newly added:* Korean, Thai, Asian Fusion
- 8694 Foods in total 104 Nutrients in research files

Welcome to DietDay!

Your Bridge to Nutritional Fitness

Our program is designed to assist you and your physician and nephrologist to easily and effectively manage diet to lower the stress your kidneys and prevent kidney damage.



Low Nutrients Report

Vitamin Summary

Mineral Summary

Energy Summary

Kidney Health Report

Roll cursor over books for more information.

DietDay Abstract

(Presented at
Experimental Biology,
San Diego 2008)

There is need for
automated valid 24
hour dietary recall
methods that
can. [learn more](#)

Ready to begin?

Start DietDay

Welcome to DietDay!

We take nutrition seriously- the most comprehensive and the only validated nutrient analysis available. Know where you stand, where your diet falls short from the expert recommendations and start your nutritional tracking.

Our program is designed to assist you and your physician and nephrologist to easily and effectively manage diet to lower the stress your kidneys and prevent kidney damage.

Our Mission: To provide the most comprehensive, high quality assessment of vitamin and mineral, supplement and food nutrient intake in a user friendly fashion.



Enter your User ID and password then click the "Sign In" button.

User ID:

Password:

Remember my Login on this computer.

Already a member?

[Sign In](#)

New to the site?

[Register](#)

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Nick's diet for Sunday 4/28/2013 (Yesterday)

Welcome to the Diet Day Program!

This tool will allow you to record your daily diet within the 24 hours period for Breakfast, Lunch, Dinner, Beverages and Daily Supplements. You will also have the ability to generate reports that indicate your intake of Vitamins, Minerals, Fat, Antioxidants, Energy and Cholesterol.

This program features:

- Complete and Quantitative Assessment of Habitual Diet
- Meal-based Cognitive Support
- Thousands of Food Images
- Complex embedded Skip Routines
- Portion Size selection based on changing food sizes on plate
- Ethnic Food Modules (Chinese, French, Italian...)
- No Interviewer Bias
- Extensive Nutrient Database on over 6000 foods
- Self interview with no personal costs
- Immediate feedback to Subjects and Researchers



Our Mission: To provide the most comprehensive, high quality assessment of vitamin and mineral, supplement and food nutrient intake in a user friendly fashion.

Click to view:



[Introduction](#)



[News Center](#)



[How to Navigate](#)



Click "Calendar" icon to change date.

Sunday 4/28/2013 (Yesterday)

Basic Caloric Intake:

Total calories for the day: 0 kcal/day

Calories in Morning: 0 kcal/day

Calories in Afternoon: 0 kcal/day

Calories in Evening: 0 kcal/day

Total calories burned: 417 kcal/day

Meal Time:

Recording Status:



Midnight - 11:00 am

0 item(s) recorded



11:00 am - 5:00 pm

0 item(s) recorded



5:00 pm - Midnight

0 item(s) recorded

Conduct 24 Hour Recall

Nick's diet for Sunday 4/28/2013 (Yesterday)

Meal Time Selection:



Message Center

You said you ate between **midnight - 11:00 am**. Select your food group. Don't forget to select Snacks if you ate snacks during this time period.

Tools:



Search



Fast Track

Breakfast: Midnight - 11:00 am

[Beverages](#)
[Food](#)
[Snacks](#)
[Supplements](#)
[Summary](#)

Make your selection from the list to begin. Use the Blue tags above to select a different category. Click Summary to view progress.

								▲
0 cold cereal	0 hot cereal	0 fast food	0 sandwiches and	0 vegetables	0 American mixer	0 Southern Foods	0 breads	
								▼
0 potatoes / sweet	0 poultry	0 meats	0 pastas / rice / g	0 fish	0 eggs	0 soups	0 salads	

Food Group Selection

Number of recorded items within a group

Account Status

Name:

Your Referral Code / Study Group:

(To enroll in a different Study Group, click the "down" arrow.)

Membership Type: [Administration Portal](#)

You have permission to access Administration portal.

Diet Report Credits:

Allotted: Used: Remaining: Last Accessed: Days of Nutrients Recorded: 

Welcome back, Nick.

Click on "**DietDay**" if you are ready to start a new 24 Hour Recall or make changes and additions.

Click on "Activity Chart" if you need to record your daily activities.

Click on "**Profile**" if you need to update any personal information.

Click on "**Diet Report**" if you would like to view your dietary data.

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Nick's diet for Sunday 4/28/2013 (Yesterday)

Meal Time Selection:



Breakfast



Lunch



Dinner

Message Center

You said you ate **cold cereal** between midnight to 11:00 am. Select the kind of cold cereal you ate.

Tools:



Search



Fast Track

Breakfast: Midnight - 11:00 am

Beverages

Food

Snacks

Supplements

Summary

Make your selection to continue. If your food is not listed, click Go Back to return or select a different category using the above Blue tags.

							
sweetened flake	unsweetened fl	flakes with drier	shredded whea	frosted shredde	toasted O's	sweetened puff	unsweetened p
							
chocolate-flavo	multi-grain cere	high-fiber cerea	total	granola	muesli	sweetened fruit	

Food Selection: cold cereal

Nick's diet for Sunday 4/28/2013 (Yesterday)

Meal Time Selection:



Message Center

You said you ate **sweetened flakes** between midnight to 11:00 am. Select the correct amount you ate by clicking the MORE or LESS arrows.

Tools:



Search



Fast Track

Breakfast: Midnight - 11:00 am

Portion

Toppings

Liquids

Save



Basic nutrition facts per 100 grams:

Total Fat: 0.3 g
 Cholesterol: 0 mg
 Sodium: 462 mg
 Dietary Fiber: 1.8 g
 Protein: 4.4 g
 Vitamin A: 589 mcg
 Vitamin C: 26.7 mg
 Calcium: 3 mg
 Iron: 23.5 mg

Note: Actual calculation varies by portion and servings.

Select your correct portion size for this food. Then make selections from all Green tabs before Saving your item.

How much of this did you eat?



1.42 oz

40 grams

MORE
+

-
LESS

How many servings of this did you eat?

<input checked="" type="checkbox"/>	One Serving
<input type="checkbox"/>	Two Servings
<input type="checkbox"/>	3 Servings
<input type="checkbox"/>	4 Servings
<input type="checkbox"/>	5 Servings
<input type="checkbox"/>	6 Servings
<input type="checkbox"/>	7 Servings
<input type="checkbox"/>	8 Servings
<input type="checkbox"/>	9 Servings
<input type="checkbox"/>	10 Servings

Your exact portion may not be available. If this is the case, just select the closest option.

Portion Selection: sweetened flakes

Click **Cancel** if this is not the correct item to save to your record.

Nick's diet for Sunday 4/28/2013 (Yesterday)

Meal Time Selection:



Breakfast



Lunch



Dinner

Message Center

You said you ate **sweetened flakes** between midnight to 11:00 am. What did you add to this cereal?

Tools:



Search



Fast Track

Breakfast: Midnight - 11:00 am

Portion

Toppings

Liquids

Save

Make your selection from the list. Use the Green tags to view all options. Click Save after you finished recording an item.



sugar



raisins



nuts



dried fruit



fresh fruit



marshmallows



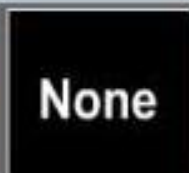
wheat germ



bran



flax seed



None

Toppings Selection: sweetened flakes

Click **Cancel** if this is not the correct item to save to your record.

Nick's diet for Sunday 4/28/2013 (Yesterday)

Meal Time Selection:



Breakfast

Lunch

Dinner

Message Center

You said you ate **sweetened flakes** between midnight to 11:00 am. What liquids did you put in your cereal?

Tools:



Search



Fast Track

Breakfast: Midnight - 11:00 am

Portion

Toppings

Liquids

Save

Make your selection from the list. Use the Green tags to view all options. Click Save after you finished recording an item.



skim milk



1/2% milk



1% milk



2% milk



whole milk



buttermilk



chocolate milk



fruit juice



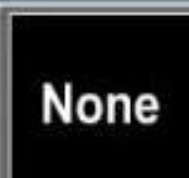
yogurt



soy milk



rice milk



None

Liquids Selection: sweetened flakes

Click **Cancel** if this is not the correct item to save to your record.

Nick's diet for Sunday 4/28/2013 (Yesterday)

Meal Time Selection:



Message Center

Here is your **Breakfast Summary Report** between midnight to 11:00 am. Make any necessary changes by clicking on the Edit button, or select the Diet Report button on top to view your nutrient report.

Tools:



Search



Fast Track

Breakfast: Midnight - 11:00 am

Breakfast Summary

Sunday 4/28/2013

If you want to add any forgotten items, click the **Add** button or select a meal time from the top.

ADD

Make your selection from below to view different meal time summary:

[Breakfast Summary](#)

[Lunch Summary](#)

[Dinner Summary](#)



Edit

Fast Track

Remove

sweetened flakes

Portion: 40 grams

Servings: one serving

whole milk

Remove

Total Item(s): 1

Caloric Intake in Morning (Midnight - 11:00 am): 229 kcal/day

Nick's diet for Sunday 4/28/2013 (Yesterday)

Search X

Type in a name of food, beverage or supplement:

If you want to add any forgotten items, click the Add button or select a meal time from the top.

ADD

Make your selection from below to view different meal time summary.

- Breakfast Summary
- Lunch Summary
- Dinner Summary

	whole milk	Servings: one serving
		Remove

Total Item(s): 1

Caloric Intake in Morning (Midnight - 11:00 am): 229 kcal/day

Nick's diet for Sunday 4/28/2013 (Yesterday)

Meal Time Selection:



Message Center

Here is your **Breakfast Summary Report** between midnight to 11:00 am. Make any necessary changes by clicking on the Edit button, or select the Diet Report button on top to view your nutrient report.

Tools:



Search



Fast Track

Breakfast: Midnight - 11:00 am

Breakfast Summary

Fast Track Meal

Customize pre-recorded diet for speedy daily entry.



sweetened flakes

Done

Add this item to one of the following Fast Track meal:

GENERAL (Default Fast Track Meal List)

BURGER (Burger)

ABC (abc meal)

Or create a new Fast Track meal and add this item.

Fast Track Name:

Description:

Add

Total Item(s): 1

Caloric Intake in Morning (Midnight - 11:00 am): 229 kcal/day


Nick's diet report.

Introduction



Report Period

From: 4/28/2013 

To: 4/28/2013 

Click on the Calendar icon next to date fields to select a different report period.

Days of Nutrients Found:

1

- Introduction
- Executive Summary
- Vitamin Report
- Mineral Report
- Energy Report
- Antioxidant Report
- Low Nutrients Report
- Other Nutrients Report
- Kidney Health Report

Nick's Personal Diet Report

Please note:

Your dietary report is defaulted to the most recent date you recorded your daily intake.

For accurate dietary information, please select a period more than one day.

Tips for generating reports:

To generate reports within a period, select a report period by clicking the "Calendar" icons next to the date fields on the "Report Period" area. The "Days of Nutrients Found" field will be updated to reflect number of days you have recorded your intake. If the "Days of Nutrients Found" is reporting zero, the reports will be reporting zero intake for the selected report period.

To start recording your 24 hour recall, simply click on the "DietDay" button on the top navigation bar.

Nick's diet report.

Executive Summary



Report Period

From: 4/28/2013



To: 4/28/2013



Click on the Calendar Icon next to date fields to select a different report period.

Days of Nutrients Found:

1

- Introduction
- Executive Summary
- Vitamin Report
- Mineral Report
- Energy Report
- Antioxidant Report
- Low Nutrients Report
- Other Nutrients Report
- Kidney Health Report

The following information is based on your intakes on 4/28/2013.

Total calories for the Day:	Your Intake (kcal/day)	Recommended (kcal/day)	% Difference
4/28/2013	229	2502	91

	Your Intake (kcal/day)	% of total
Calories In Morning:	229	100
Calories In Afternoon:	0	0
Calories In Evening:	0	0
Calories from Beverages throughout the Day:	74	32

These are the calories you reported as snacks.

	Your Intake (kcal/day)	% of total
Calories from Morning Snacks:	0	0
Calories from Afternoon Snacks:	0	0
Calories from Evening Snacks:	0	0
Calories from Snacks in Total:	0	0

These are the average dietary energy intakes predicted by the National Academy of Sciences as appropriate to maintain energy balance in a healthy adult at a sedentary level of activity. Greater energy is needed if there is a greater expenditure through physical activity, or through pregnancy and lactation.



Nick's diet report.

Vitamin Report

Report Period

From: 4/28/2013

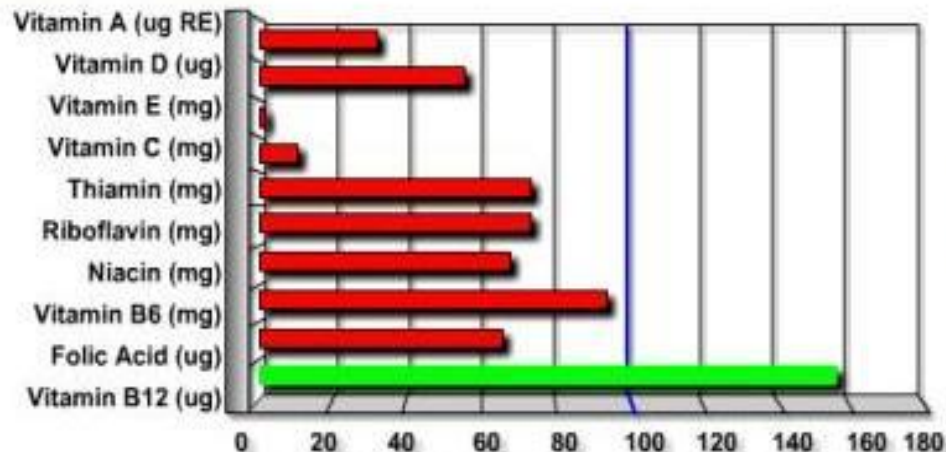
To: 4/28/2013

Click on the Calendar Icon next to date fields to select a different report period.

Days of Nutrients Found:

1

- Introduction
- Executive Summary
- Vitamin Report
- Mineral Report
- Energy Report
- Antioxidant Report
- Low Nutrients Report
- Other Nutrients Report
- Kidney Health Report



Your Vitamin Intake Shown as % of Recommended.

Recommended Intake and Your Vitamin Intake				
Vitamin	Recommended	Your Intake		Upper Limit
Vitamin A (ug RE)	900	291.7	(32.41%)	3000
Vitamin D (ug)	5	2.8	(55%)	50
Vitamin E (mg)	15	0.1	(0.8%)	1000
Vitamin C (mg)	90	10.7	(11.87%)	2000
Thiamin (mg)	1.2	0.9	(73.33%)	--
Riboflavin (mg)	1.3	1	(73.85%)	--
Niacin (mg)	16	10.8	(67.56%)	35
Vitamin B6 (mg)	1.3	1.2	(93.08%)	100
Folic Acid (ug)	400	260.1	(65.03%)	1000
Vitamin B12 (ug)	2.4	3.8	(156.3%)	--

Nick's diet report.

Mineral Report



Report Period

From: 4/28/2013



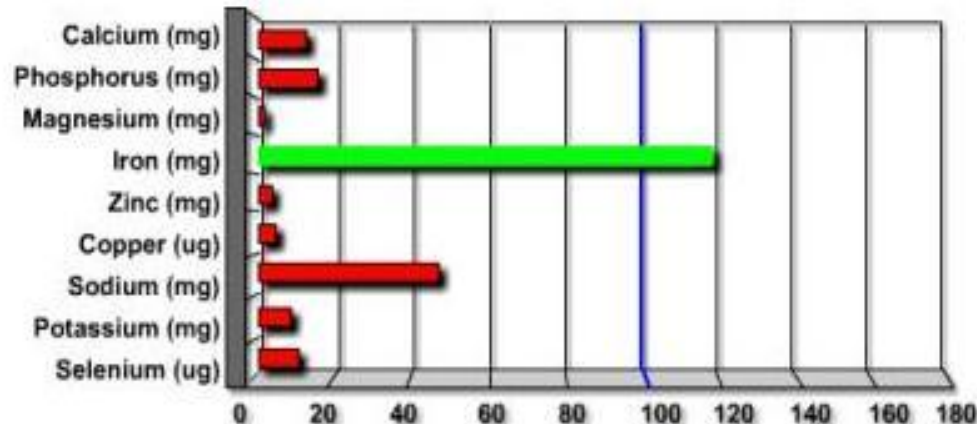
To: 4/28/2013



Click on the Calendar Icon next to date fields to select a different report period.

Days of Nutrients Found:

1



- Too High/Too Low
- Too High (Iron and Sodium)
- Adequate

Your Mineral Intake Shown as % of Recommended.

Recommended Intake and Your Mineral Intake

Mineral	Recommended	Your Intake	Upper Limit
Calcium (mg)	1000	139 (13.91%)	2500
Phosphorus (mg)	700	119 (16.98%)	4000
Magnesium (mg)	420	15 (3.57%)	350 *
Iron (mg)	8	9 (117.5%)	45
Zinc (mg)	11	1 (4.64%)	40
Copper (ug)	900	50 (5.56%)	10000
Sodium (mg)	500	237 (47.45%)	6000
Potassium (mg)	2000	190 (9.51%)	-
Selenium (ug)	55	6 (11.4%)	400

* Please note that the Upper Limit applies only to Magnesium not obtained from food, such as dietary supplements and pharmacological sources.

- Introduction
- Executive Summary
- Vitamin Report
- Mineral Report
- Energy Report
- Antioxidant Report
- Low Nutrients Report
- Other Nutrients Report
- Kidney Health Report



Nick's diet report.

Energy Report



Report Period

From: 4/28/2013



To: 4/28/2013



Click on the Calendar Icon next to date fields to select a different report period.

Days of Nutrients Found:

1

- Introduction
- Executive Summary
- Vitamin Report
- Mineral Report
- Energy Report
- Antioxidant Report
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- Other Nutrients Report
- Kidney Health Report

Recommended Intake Compared to Your Intake¹

Macronutrient	Recommended (g/day)			Your Intake (g/day)	Your Intake (% of calories from Macronutrient)	Recommended Range of % calories from Macronutrient ⁵
	EAR ²	RDA ³	AI ⁴			
Carbohydrate	100	130	—	42.18	74.03	45 - 65
Total Fiber	—	—	38	0.72	—	—
Protein	55.19	66.9	—	5.58	9.79	10 - 30
Total Fat ⁶	—	—	—	4.09	18.15	25 - 35
Total Energy (kcal/day)				227.9		

Red Your intake definitely needs improvement

Green Your intake is adequate

Yellow Your intake could use improvement

Orange Your intake is excessive

¹ Barr SI, Murphy SP, Poos MI. Interpreting and using the Dietary Reference Intakes in dietary assessment of individuals and groups. J Am Diet Assoc. 2002; 102(6): 780-788.

² EAR = stands for Estimated Average Requirement and is the nutrient intake estimate to be adequate for half (50%) of the healthy individuals in a particular life stage and gender group.

Nick's diet report.

Antioxidant Report



Report Period

From: 4/28/2013



To: 4/28/2013



Click on the Calendar Icon next to date fields to select a different report period.

Days of Nutrients Found:

1

- Introduction
- Executive Summary
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- Other Nutrients Report
- Kidney Health Report

Vitamin C (mg)

Your intake of 10.68 mg/day is lower than the recommended 90 mg/day.

The items that added most are:

- sweetened flakes, breakfast on 4/28/2013

Other good food sources are oranges, strawberries, broccoli, and grapefruit.

Vitamin E (mg alpha-TE)

Your intake of 0.12 mg/day is lower than the recommended 15 mg/day.

The items that added most are:

- whole milk, breakfast on 4/28/2013
- sweetened flakes, breakfast on 4/28/2013

Other good food sources are fish, oils, nuts, and margarine.

Carotenoids

Alpha Carotene (ug)

Your intake of alpha carotene is 13.6 ug. Although there is no recommendation for this nutrient, evidence suggests consumption of carotenoids is associated with lower risk of several chronic

Nick's diet report.

Low Nutrients Report

Report Period

From: 4/28/2013

To: 4/28/2013

Click on the Calendar icon next to date fields to select a different report period.

Days of Nutrients Found:

1

- Introduction
- Executive Summary
- Vitamin Report
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- Energy Report
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- Other Nutrients Report
- Kidney Health Report

Vitamin A (ug RE)

The recommended amount is 900 ug, you are getting 291.7 ug from your diet.

The items that added most are:

- sweetened flakes, breakfast on 4/28/2013
- whole milk, breakfast on 4/28/2013

Good food sources are carrots, tomatoes, sweet potatoes, green leafy vegetables and eggs.

Vitamin D (ug)

The recommended amount is 5 ug, you are getting 2.8 ug from your diet.

The items that added most are:

- whole milk, breakfast on 4/28/2013
- sweetened flakes, breakfast on 4/28/2013

Good food sources are fish, fish oil, eggs and milk.


Vitamin E (mg)

The recommended amount is 15 mg, you are getting 0.1 mg from your diet.


The items that added most are:

- whole milk, breakfast on 4/28/2013

Nick's diet report.


Other Nutrients Report 

Report Period

From: 4/28/2013 To: 4/28/2013 

Click on the Calendar Icon next to date fields to select a different report period.

Days of Nutrients Found:

 Introduction Executive Summary Vitamin Report Mineral Report Energy Report Antioxidant Report Low Nutrients Report Other Nutrients Report Kidney Health Report**Caffeine (mg)**

Your intake was 0 mg. Currently, there is no recommendation to limit caffeine consumption and no adverse affects from moderate intake (less than 250 mg per day). However, there is evidence to suggest excess caffeine intake potentially affects bone health. This effect is enhanced when dietary calcium intake is inadequate.

The items that added most are:

Food Sources

Coffee (regular and decaffeinated); Cappuccino; tea leaves/tea; cocoa; colas and many other carbonated beverages; chocolate; frozen desserts and yogurt (coffee and chocolate).

Reference

Women's health and nutrition -- Position of ADA and Dietitians of Canada J Am Diet Assoc. 1999;99:738-751.

Dietary Fiber (g)

Your intake was 0.72 g. The recommended intake is a minimum of 20-35 grams per day. Benefits of fiber include health maintenance and disease prevention.

The items that added most are:

- sweetened flakes, breakfast on 4/28/2013

Food Sources

Fruits, vegetables, grains (breads, cereals) and legumes.

Reference

USDA Dietary Guidelines for Americans, 2000.

Nick's diet report.

Kidney Health Report



Report Period

From: 4/28/2013



To: 4/28/2013



Click on the Calendar Icon next to date fields to select a different report period.

Days of Nutrients Found:

1

- Introduction
- Executive Summary
- Vitamin Report
- Mineral Report
- Energy Report
- Antioxidant Report
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- Other Nutrients Report
- Kidney Health Report**



[Click HERE to view and print Patient Feedback.](#)

To print the above bar chart, click the "Print" button.

Click on the name of each element in the above chart to view and print a pie chart showing the proportional contribution of each food to the total amount of the element consumed for the reported period.

Nick's diet report.

Kidney Health Report



Report Period

From: 4/28/2013



To: 4/28/2013



Click on the Calendar icon next to date fields to select a different report period.

Days of Nutrients Found:

1

Introduction

Executive Summary

Vitamin Report

Mineral Report

Energy Report

Antioxidant Report

Low Nutrients Report

Other Nutrients Report

Kidney Health Report

Patient Feedback

[Click here to return to bar chart](#)**Good news! You have met 5 of 9 recommendations.****Need Improvement:** *(Click on each element from below to view detailed information.)*

Protein

Calorie Intake

Carbohydrate

Protein

My goal: Less than 0.8 g/kg/d**My intake:** 0.1 g/kg/d*√ too little **increases** your risk of malnutrition*Here are some general tips on how to increase your **protein** by 87%:

- Your body needs protein to build muscle, repair itself, and fight infections.
- If your dietary protein is regularly low, talk to your provider about how to safely increase your dietary protein.

Find out what you need to reduce to meet your goal. Click [here](#) to view the protein breakdown of your diet.

Nick's diet report.

Kidney Health Report



Report Period

From: 4/28/2013

To: 4/28/2013

Click on the Calendar Icon next to date fields to select a different report period.

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Protein by Food

[Click here to return to feedback.](#)



Roll mouse cursor over chart for information.





Nick's activities for Sunday 4/28/2013 (Yesterday)

Physical Activities Assessment



Select the time to add your physical activities or click  to view report.

	12:00 am	
	1:00 am	
	2:00 am	
	3:00 am	
	4:00 am	
	5:00 am	
	6:00 am	
	7:00 am	
	8:00 am	
CLR	9:00 am	Bicycling (5.5 mph) (30 minutes)
	10:00 am	
	11:00 am	
	12:00 pm	
	1:00 pm	
	2:00 pm	
CLR	3:00 pm	Dance (Aerobic) (30 minutes)
	4:00 pm	
	5:00 pm	
	6:00 pm	
	7:00 pm	
	8:00 pm	
	9:00 pm	
	10:00 pm	
	11:00 pm	



Nick's activities for Sunday 4/28/2013 (Yesterday)

Physical Activities Assessment



Time: 9:00 am to 10:00 am

What types of activities did you perform during this time period?

Fitness & Exercise Daily Routine Hobbies Martial Arts Sports Dance Done					
	Bicycling (5.5 mph)	Bicycling (9.5 mph)	Climbing Hills (no load)	Climbing Hills (with load)	Dance (Aerobic)
	30	0	0	0	0
	Minute(s)	Minute(s)	Minute(s)	Minute(s)	Minute(s)
	▲	▲	▲	▲	▲
	▼	▼	▼	▼	▼
Dance (Ballroom)	Elliptical Machine (intense)	Elliptical Machine (moderate)	Jogging	Jumping Rope	
0	0	0	0	0	
Minute(s)	Minute(s)	Minute(s)	Minute(s)	Minute(s)	
▲	▲	▲	▲	▲	
▼	▼	▼	▼	▼	





Nick's activities for Sunday 4/28/2013 (Yesterday)

Physical Activities Assessment Report



Total caloric intake recommended per day* (kcal/day)

2502

* This is the average dietary energy intakes predicted by National Academy of Sciences as appropriate to maintain energy balance in a healthy adult at a sedentary level of activity. Greater energy is needed if there is a greater expenditure through physical activity, or through pregnancy and lactation.

Total calories burned for the day (kcal/day)

417

Activity	Minutes of Activity	Total Calories Burned
Bicycling (5.5 mph)	30	161
Dance (Aerobic)	30	256



Done



Technical and Human Feasibility

- Is the System Stable and Sturdy?
- Can Subjects gain Access to the Web for Independent Conduct
- Will they Conduct the Method Repeatedly?
- Will they Respond to Impromptu Email Requests to conduct the method?

Original Research

Eight Self-Administered 24-Hour Dietary Recalls Using the Internet Are Feasible in African Americans and Whites: The Energetics Study

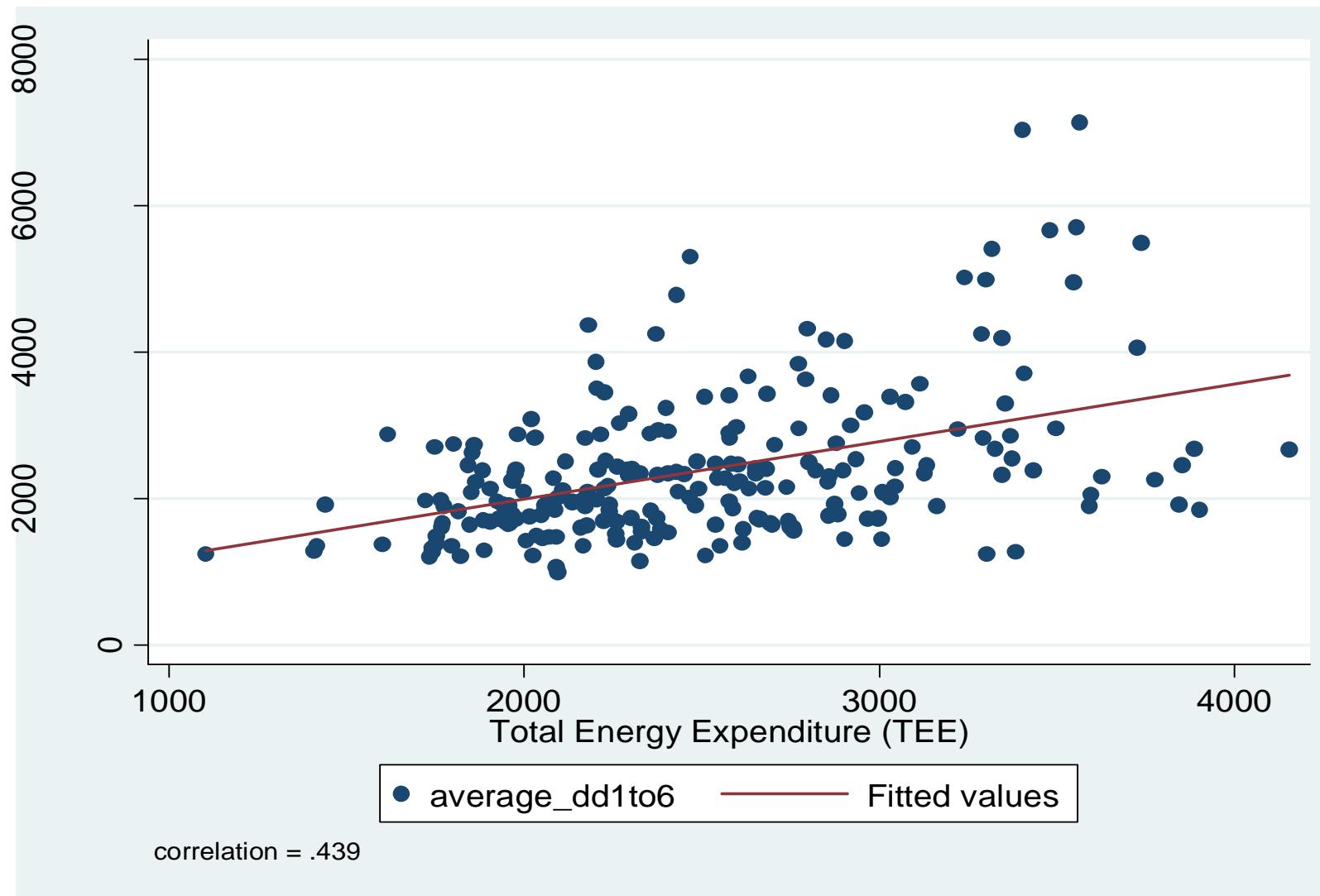
LENORE ARAB, PhD, MSc; KATE WESSELING-PERRY, MD; PATRICIA JARDACK, MS, RD; JUDITH HENRY, MEd; ASHLEY WINTER

	Total Population			Whites			African Americans		
	Easy	Neutral	Difficult	Easy	Neutral	Difficult	Easy	Neutral	Difficult
How difficult was it to conduct 8 repeat DietDays on the Web?	81.0	13.2	5.8	78.9	16.4	4.7	83.1	10.0	6.9

Feasibility of Repeats

N	Number of DietDays	Completed
203	6 or more	85%
184	7 or more	78%
176	8 or more	74%
31	9 or more	13%
10	10 or more	4%
3	11 or more	1%
1	17 or more	0.42%

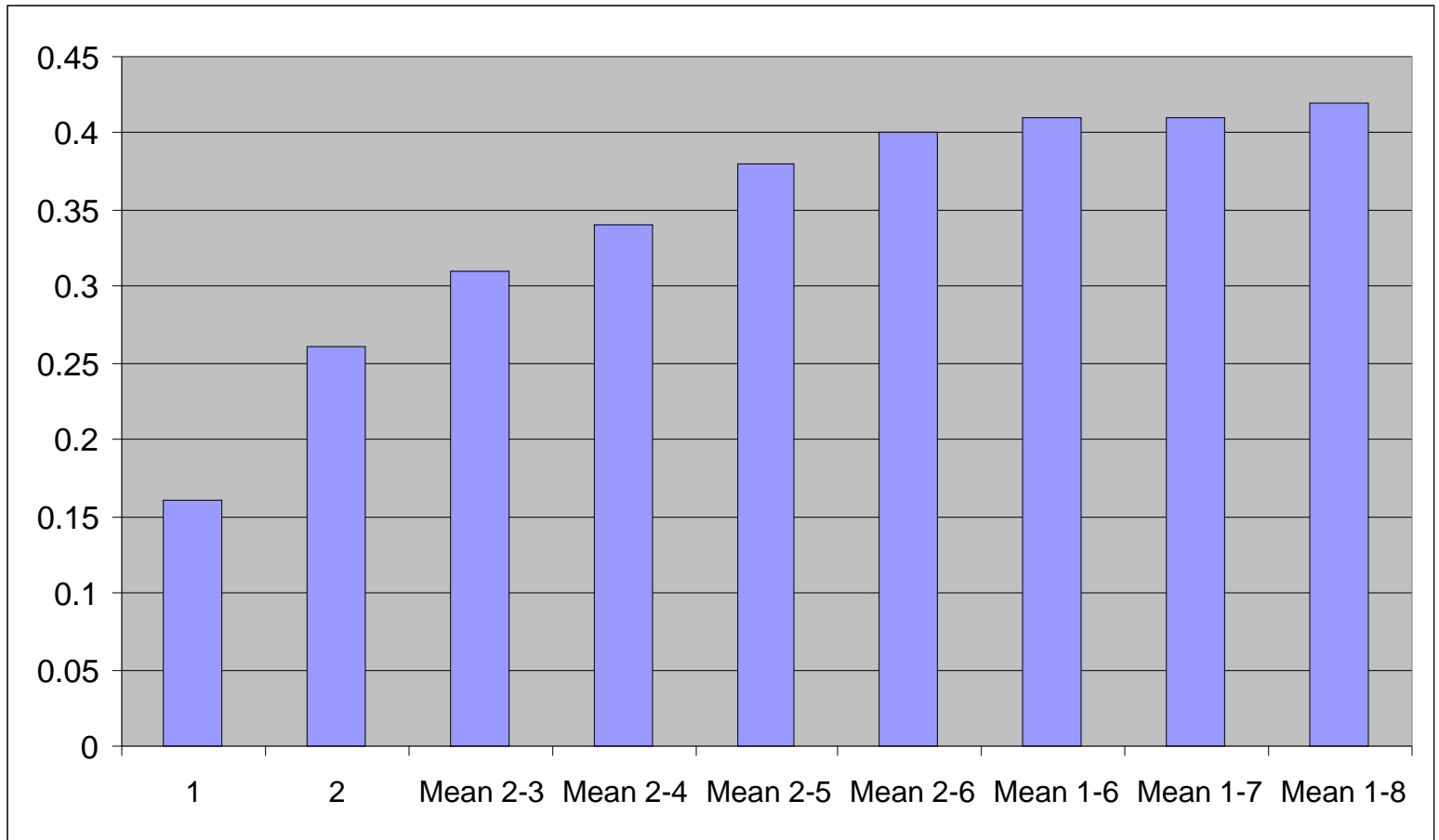
Association Between DietDay Energy Intake and TEE From DLW



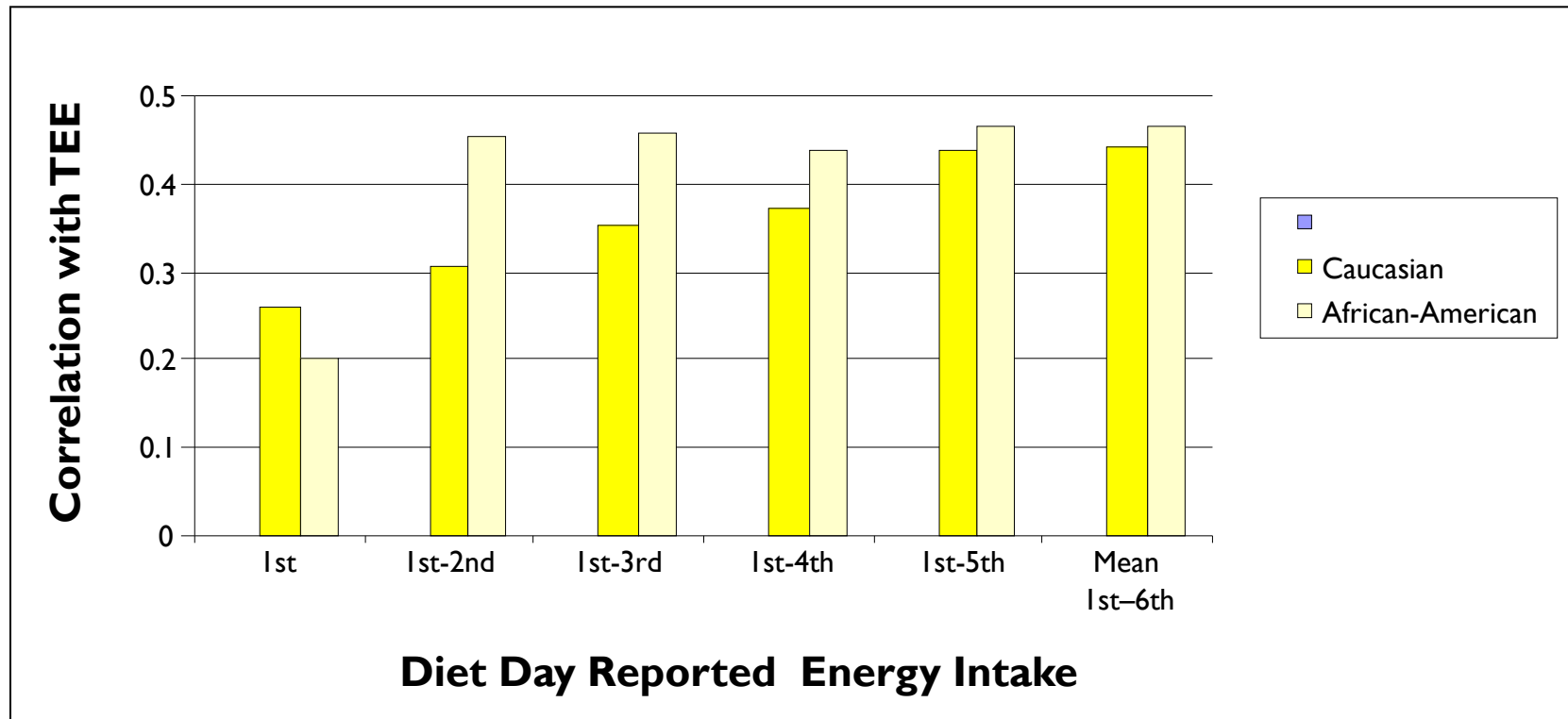
Self Reported Energy in Kcal

- **Day 1** 2253
- **Day 2** 2220
- **Day 3** 2176
- **Day 4** 2054
- **Day 5** 1971
- **Day 6** 1978

Energy Validity Increases With Increasing Numbers of Days



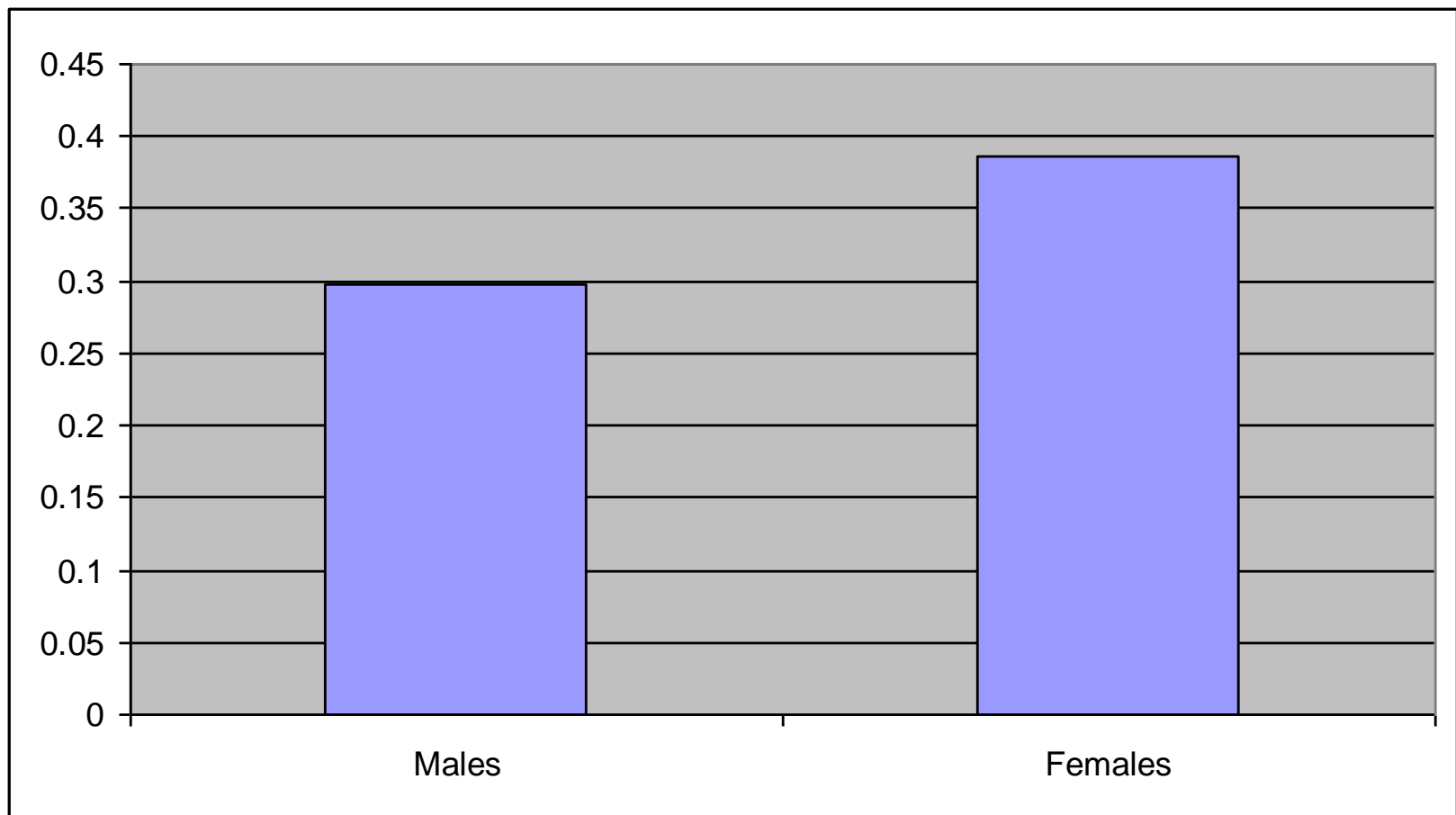
Validity by Race: Correlation of Energy Intake with DLW with Increasing Numbers of days Reported



Validity by Age: Correlations of Reported Energy Intake with DLW with Increasing Number of Days Reported



Pearson Correlation Coefficients for Mean Reported Dietary Intake and Estimated True Intake by Gender



Can we do Dietary Assessment using the Web?

- Yes- for Los Angelinos – both African American & Caucasian
- Younger more so than Older
- Women more than Men

Energetics Study Cast of Characters

Study Manager:	Catie Cambou
Website:	Harry Hahn Ed Prentice
Administration:	Mark Lucas Rhonda Steele
Statistics:	Chi Hong Tseng Weiqing Liu
GCRC:	Patricia Jardack, Bionutrition core manager Carolyn Borne, Unit Director Heather Barber, Assistant Nurse Manager Laurie Shaker-Irwin, Research Subject Advocate Katherine Wesseling, Study Physician Rosa Amgwert, RN and Protocol Manager Rufino Juta, Lab Ricardo Franco, Lab
DLW:	Dale A. Schoeller Tim Shriver
CKD adaptations:	Sameer Murali