



Newsletter

Volume 1, Issue 4

Winter 2012

Welcome to CKiD!

Dear CKiD Participants and Families,

Welcome to the fourth issue of the CKiD family newsletter! We feel it's important for children and their parents to be informed about kidney disease and how it affects the body. Therefore this issue focuses on the heart and how important it is to keep it healthy.

Many of the tests you will do for this study, like blood pressure monitoring and echocardiograms, will be looking at your heart and how your kidney disease may have affected it. This issue will explain what these tests do and why they're important.

Many articles for doctors and nurses have been published in the medical journals based on information from the CKiD study. Articles specifically related to heart health are on page 4. These articles were all made possible by your participa-

tion in the study. A complete list of articles can be found on the CKiD website.

We want to say thank you again to all the participants and families involved in the CKiD study!

Sincerely,

Dr. Susan Furth & Dr. Brad Warady
Principal Investigators, East Coast and Mid-West Clinical Coordinating Centers

Dr. Alvaro Muñoz and Dr. George Schwartz
Principal Investigators, Data Coordinating Center and Central Laboratory

Dr. Marva Moxey-Mims
National Institute of Diabetes and Digestive and Kidney Diseases

Recruitment Update

Our goal is to enroll 880 participants by January 2013. So far, 764



participants have joined and we look forward to seeing each of you at your follow-up visits over the next several years. What we learn from this study will guide doctors in their medical care and help families like yours in the future. We greatly appreciate your participation as this study would not be possible without all the families and participants who have generously given us their time and effort. THANK YOU!

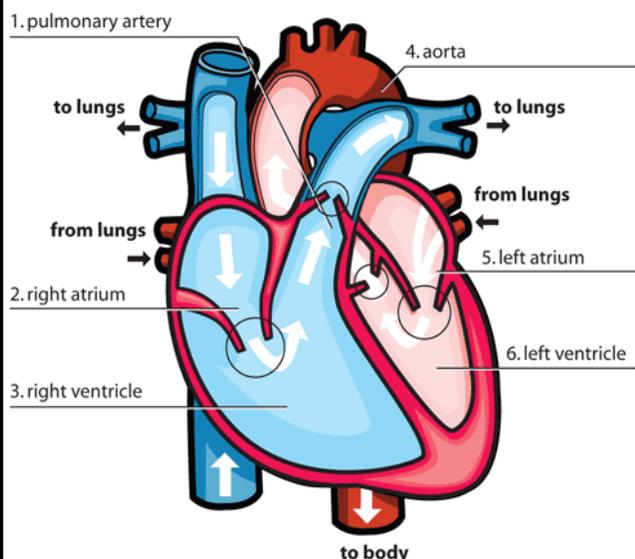
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Did You Know?

- Your heart beats with enough force to shoot blood a distance of 30 ft.
- Your heart muscle is strong enough to lift 3,000 pounds. That's the weight of a small car!
- Your heart feeds 60,000 miles of blood vessels in your body, enough to wrap around the world twice!

Your Heart



Part of this study looks at how kidney disease can affect your heart. Your heart is a big muscle that acts like a pump to move blood around your body. Blood brings oxygen to your cells and carries away toxins produced by your cells. This is important because every cell in your body needs oxygen to live, and toxins, like carbon dioxide, can hurt your cells if the blood doesn't get rid of them.

The CKiD study uses blood pressure monitoring, echocardiograms, including blood and urine tests to look at your heart and blood vessels.

Blood pressure: Blood pressure is very important. Without enough pressure, your organs won't get enough oxygen to work properly. But too much pressure can damage your heart, blood vessels, and organs. When your blood pressure is too high, your heart and blood vessels have to work harder than they're supposed to. All that hard work can cause damage and make your heart and blood vessels wear out sooner. When they're worn out, they can't do as good of a job anymore.

One special tool that helps us measure your blood pressure is a 24 hour blood pressure monitor. This monitor takes your blood pressure all day and night, so we can look at your blood pressure while you're awake and asleep. Since kidneys help control blood pressure, many kids with kidney disease have high blood pressure because their kidneys aren't working like they should. The information we get from the blood pressure monitors helps us determine who needs new or added treatment to make blood pressure normal.

In the CKiD study, the 24hr monitorings have shown us that about 2/3 of the participants have high blood pressure. There are also some children who have normal blood pressure when it's measured in the clinic or doctor's office, but have high blood pressure readings during other times of the day and at night when they're asleep. This is only detected with a 24 hr monitor. This condition is known as "masked" high blood pressure and shows how important it is for CKD patients to have 24hr blood pressure monitoring.

Echocardiogram: For short, we call this test an echo. It's called an echo because it uses sound waves to look at your heart. The sound waves bounce off your heart, and from those echoes a computer puts together a picture of your heart. This picture shows doctors the size and shape of your heart while it's pumping so they can see if anything is wrong. Your heart is one big muscle and just like any other muscle in your body, it gets bigger when it works harder. The only difference is that when other muscles get bigger it means they're stronger, but when your heart muscle gets larger it means it's working too hard, and that can make it weaker. By looking at the size of your heart, doctors can tell if your heart muscle has been working too hard and damaging itself.

From the echos we have studied so far, we have learned that about 16% of the children in the CKiD study have an enlarged heart muscle - a condition known as left ventricular hypertrophy.

Blood and urine tests: Blood and urine samples can tell us the levels of different things known to go along with heart disease. Some levels, like red blood cell levels, we already know play a role in heart disease. Anemia is when you don't have enough red blood cells. Red blood cells carry oxygen to all your organs, and your kidneys help in telling your body how many to make. When your kidneys aren't working well, your body doesn't get the message to make enough red blood cells. In order to get enough oxygen to your organs, your heart has to work harder to pump more blood, which can damage your heart muscle.

The other levels we look at, such as protein in your urine, calcium and phosphorous levels in your blood, can also be abnormal with kidney disease and may affect your heart. The exact way this happens is being studied by the CKiD study.

Tips to keep your heart healthy:

- Just like any other muscle, your heart needs exercise to stay healthy. Try to exercise your heart for 30 minutes a day with things like walking, running, playing a sport, or dancing.
- Eat healthy foods that are low in saturated and trans fats. Try to eat at least 5 servings of fruits and vegetables each day.
- Avoid foods and drinks with a lot of sugar in them, like soda, fruit drinks, and candy.



Kidney Friendly Dishes

(that are just as delicious)



Kidneys help in controlling the balance of certain minerals in your body like phosphorus, potassium, and sodium. However, kidney disease makes it harder to do their job, so it's important to help your kidneys by eating the right things. It can be frustrating when you can't eat foods you like because they are very high in sodium and potassium, but there are creative ways to make them fit into your diet. Below are several "kidney friendly" recipes we hope you'll enjoy, but since everyone is different, make sure to follow your kidney doctor or nutritionist's advice.

Baked Stuffing

- 1-1/2 cups celery, chopped
 - 1 cup onion, chopped
 - 1 cup margarine
 - 15 slices white bread, cubed
 - 1-1/2 teaspoons sage
 - 1 teaspoon thyme
 - 3/4 teaspoon pepper
 - 1/2 teaspoon poultry seasoning
1. Preheat oven to 325° F.
 2. Melt margarine in a skillet over medium heat and sauté celery and onion, stirring frequently.
 3. Stir in 1/3 of the bread cubes.
 4. Remove from heat and place bread mixture in a deep bowl.
 5. Add remaining bread, sage, thyme, pepper and poultry seasoning and mix well.
 6. Place stuffing in a greased 13" x 9" x 2" baking dish. Cover and bake for 30 minutes.
 7. Remove cover and bake an additional 15 minutes.

Easy Pumpkin Cheesecake

- 1/2 cup sugar
 - 1 teaspoon vanilla extract
 - 1/2 cup egg substitute
 - 1/2 cup pumpkin puree
 - 1 egg white
 - 1 teaspoon pumpkin pie spice
 - one 9-inch Nabisco® 'Nilla® wafer crumb pie crust
 - two 8-ounce packages cream cheese, softened
 - 8 tablespoons Cool Whip® frozen nondairy topping
1. Preheat oven to 375° F. Brush pie crust with egg white and bake for 5 minutes. Reduce oven heat to 350° F.
 2. Combine cream cheese, sugar and vanilla in a large bowl and beat with mixer at high speed until smooth.
 3. Beat in egg substitute. Add pumpkin puree and pumpkin pie spice and blend until smooth.
 4. Pour pumpkin mixture into pie shell and bake 40 to 50 minutes until center is set. Cool pie, then refrigerate
 5. Cut into 8 slices. Serve each slice with 1 tablespoon Cool Whip

Slow Cooker Turkey Breast with Carrots & Cranberry Gravy

- 18 ounces boneless, skinless turkey breast
 - 1 teaspoon poultry seasoning
 - 1/2 teaspoon chicken bouillon granules or powder
 - 1 cup cranberry sauce
 - 1/3 cup celery, diced
 - 1/4 cup onion, chopped
 - 2 cups carrot pieces
1. Place turkey breast in slow cooker and sprinkle with poultry seasoning and bouillon granules.
 2. Spoon cranberry sauce on top; add celery, onion and carrots.
 3. Cover with lid, turn heat to high and slow cook for 4 hrs

Garlic Mashed Potatoes

- Large cooking pot or pan of water
 - 2 cups baking potatoes (2 large potatoes)
 - 2 garlic cloves, peeled
 - 1/4 cup margarine or butter
 - 1/4 cup half and half or liquid nondairy creamer
1. Peel and slice the potatoes into small pieces then add to a large pot of water. Let potatoes soak for at least 4 hrs. Drain off water and repeat process. (This is called leaching, and removes some of the potassium.)
 2. Add new water. Boil potatoes and garlic over medium heat until soft.
 3. Drain off cooking water
 4. Whip potatoes and garlic with beater, slowly adding margarine and creamer until whipped smooth

Easy Low Phosphorus Fudge

- 2/3 cup liquid nondairy creamer
 - 1-2/3 cups sugar
 - 2 cups miniature marshmallows
 - 1-1/2 cups semi-sweet chocolate chips
 - 1 teaspoon vanilla
1. Combine nondairy creamer and sugar in a large heavy saucepan. Bring to a boil; reduce heat to medium. Stir constantly and continue a rolling boil for 5 minutes.
 2. Remove pan from heat and add marshmallows, chocolate chips and vanilla. Stir until marshmallows are melted.
 3. Quickly pour into a greased 9" square pan. Cool; cut into 3" x 1-1/2" pieces making 18 pieces.

Articles published from the CKiD study about the heart and kidney disease:

- Furth SL, Abraham AG, Jerry-Fluker J, Schwartz G, Benfield M, Kaskel F, Wong C, Mak R, Moxey-Mims M, Warady BA. Metabolic Abnormalities, CVD Risk Factors and GFR Decline in Children with CKD. Clin J Am Soc Nephrol 2011;6:2132-2140.
- Lo MM, Salisbury S, Scherer PE, Furth S, Warady B, Mitsnefes M. Serum Adiponectin Complexes and Cardiovascular Risk in Children with Chronic Kidney Disease. Pediatr Nephrol 2011;26:2009-17.
- Wilson AC, Schneider MF, Cox C, Greenbaum LA, Saland J, White CT, Furth S, Warady BA, Mitsnefes MM. Prevalence and Correlates of Multiple Cardiovascular Risk Factors in Children with CKD. Clin J Am Soc Nephrol 2011; published on October 6 as doi: 10.2215/CJN.03010311.
- Mitsnefes M, Flynn J, Cohn S, Samuels J, Blydt-Hansen T, Saland J, Kimball T, Furth S, Warady B, CKiD Study Group. Masked Hypertension Associates with Left Ventricular Hypertrophy in Children with CKD. J Am Soc Nephrol 2010;21:137-44. PMID: PMC2799282.
- Saland JM, Pierce CB, Mitsnefes MM, Flynn JT, Goebel J, Kupferman JC, Warady BA, Furth SL. Dyslipidemia in Children with Chronic Kidney Disease: A Report of the Chronic Kidney Disease in Children (CKiD) Study. Kidney Int 2010;78:1154-63.

Clinical Coordinating Centers:

Children's Hospital of Philadelphia
Dr. Susan Furth
Jackie Ndirangu, Purni Abeysekara
3535 Market St, Suite 870
Philadelphia, Pennsylvania 19104

Children's Mercy Hospital
Dr. Bradley Warady
Julie Starr, Chris Smith
2401 Gillham Road, M172
Kansas City, Missouri 64108

Data Coordinating Center:

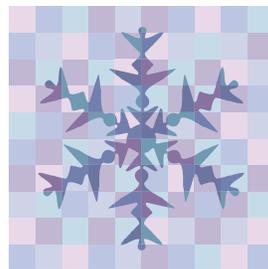
Johns Hopkins University
Bloomberg School of Public Health
Dr. Alvaro Muñoz
Judith Jerry-Fluker
615 North Wolfe St, E7648
Baltimore, Maryland 21205

Central Laboratory:

University of Rochester
School of Medicine
Dr. George Schwartz
Paula Maier
601 Elmwood Avenue, Box 777
Rochester, NY 14642

We're on the web!
<http://www.statepi.jhsph.edu/ckid>

Answers to Kids Corner



Spot the Difference Answers:

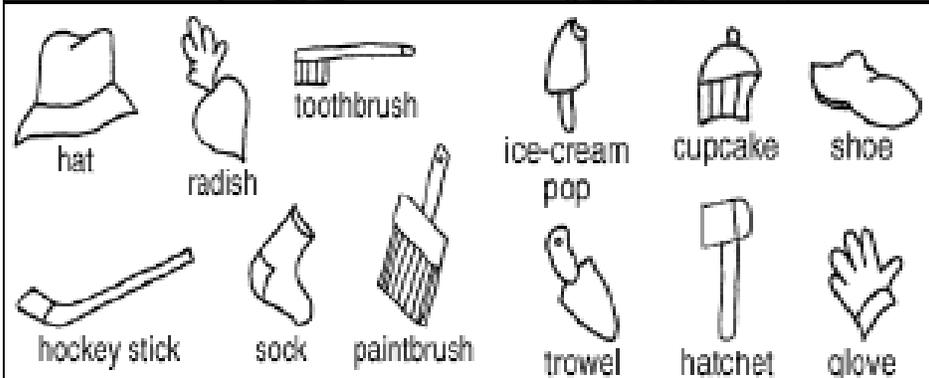
In the picture on the top:

1. Dog tracks are missing
2. Snowman's middle button is missing
3. Bird is blue, not red
4. Holly berries on snowman's hat are missing
5. Dogs feet are brown, not white
6. Attic light is on, not off
7. The chimney has less smoke
8. Side house window is missing
9. Tip of dogs tail is brown instead of white
10. Band across broom is bigger
11. Broom is smaller
12. Pine trees are smaller
13. More snow is falling
14. Carrot nose is shorter
15. Snowman has smaller mouth

Kids Corner!

(Answers can be found on page 4 of the newsletter)

Can you find these Hidden objects in the picture below?



Can you find the differences in these 2 pictures?

