

HEALTHY BLOOD

PARENT AND CAREGIVER RESOURCE

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NOTES

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We know if your child has **enough strong blood** by measuring hemoglobin or hematocrit. The key ingredients for the right **blood count** are:

- Good nutrition which gives you lots of **iron** and **vitamins**
- **ESAs** which your **kidneys** use to tell your **bones** it is time to make more blood

These ingredients are checked through regular blood tests. Your child - and you - get the right amounts of these ingredients in three main ways:

1. What we eat and what your body makes normally
2. Pills and nutritional supplements
3. Injections (ESAs)

First, we always try to make sure we give our body what it needs through eating. You will want to make sure you give your child interesting food options so they get enough iron and vitamins. This is a healthy diet for the whole family so everyone in the family

can eat these foods.

Meats that are high in iron include beef, lamb, pork, liver, veal, dark chicken and turkey, fish, hunted and game meats. Other good sources of iron are dark green leafy vegetables, lentils, dried peas and beans and dried fruit. Chili is a great source of iron. Some foods like bread, cereal, and pasta are **fortified** with iron.

If your child has **anemia**, we might have to supplement their iron intake with medicines. We may also need to prescribe vitamins like iron or **folic acid** or provide them with nutritional supplements.

These are some of the ways we can help make sure that your child is producing enough blood. Sometimes, however, the kidneys cannot send the message that it is time to make more blood. We can prescribe a medicine to stimulate the **bone marrow** to make red blood cells. These medicines are ESAs or erythropoiesis stimulating agents.

HEALTHY BLOOD

Please try to make sure that your child is taking these medicines when they need to and as often as they need to. If you notice any of the symptoms of anemia or if your child is having trouble taking these medicines, let us know. Your Health Care Team can help!

Watch for these Symptoms of Anemia in your child:

- feeling really tired
- trouble thinking clearly
- pale skin
- headaches
- a fast heart beat or feel short of breath, especially when you are active
- leg cramps

WEB BASED RESOURCES

<http://www.aboutkidshealth.ca/En/HealthAZ/Pages/default.aspx> Click on the Letters A-Z to find information on health related topics

<http://www.caringforkids.cps.ca/> Click on a variety of topics at the top of the website for general information to parents about child health. From the Canadian Pediatric Society

<http://www.kidney.org/atoz/pdf/anemia.pdf>

<http://www.kidney.org/atoz/pdf/anemia.pdf> (adult; uses guidelines; is kidney-disease specific (role of EPO))

<http://kidshealth.org/parent/medical/heart/anemia.html> (anemia caused by inadequate production of RBCs; not kidney-specific)

<http://www.aboutkidshealth.ca/En/HealthAZ/ConditionsandDiseases/blooddisorders/Pages/Anemia.aspx> (children, mentions kidney disease in passing, not about EPO)

<http://kidshealth.org/parent/medical/heart/anemia.html>

<http://www.aboutkidshealth.ca/En/HealthAZ/ConditionsandDiseases/blooddisorders/Pages/Anemia.aspx>

<http://www.aboutkidshealth.ca/En/HealthAZ/HealthandWellness/Nutrition/Pages/Iron-Guidelines-Improve-Your-Childs-Intake.aspx>

http://www.caringforkids.cps.ca/handouts/iron_needs_of_babies_and_children

<http://kidney.niddk.nih.gov/kudiseases/a-z.aspx>

<http://kidneyweb.net/handouts.htm>

WEB BASED RESOURCES FOR KIDS

<http://kidshealth.org/parent/medical/heart/anemia.html>

HANDOUTS

Kidney Foundation Pamphlet: "Anemia and Chronic Kidney Disease" <http://www.kidney.ca/document.doc?id=309>

CONSULTS TO OTHER HEALTH CARE PROFESSIONALS

Dietitian

Pharmacist

HEALTHY BLOOD GLOSSARY

ANEMIA



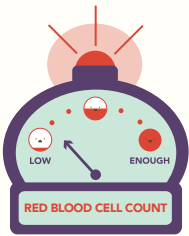
Anemia is the disease caused by having too few red blood cells. People with anemia can feel tired and look pale. Having anemia can be related to chronic kidney disease.

BLOOD



Blood moves or circulates around the body in blood vessels called arteries and veins. Blood carries energy nutrients, oxygen and other important substances to help our tissues and organs work well.

BLOOD COUNT



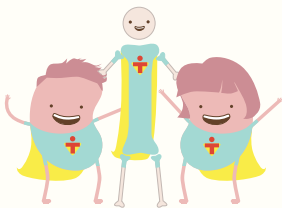
Blood count is a test used to measure the amount of blood cells in our body, like red blood cells and white blood cells. The test is done by taking a sample of our blood and looking at it in a lab under a microscope.



BLOOD TEST

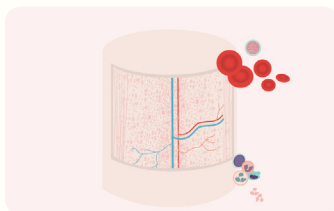
Blood tests can check how well our body is working, whether we have enough or too much of certain vitamins and minerals and whether we might have an infection. A blood test is done by taking a small sample of our blood and testing it in a lab.

BONES



Bones are made of calcium, phosphate and other substances, and form our body skeleton. Healthy bones need enough nutrients from the food we eat, enough physical activity, and the right vitamins and hormones in our body. The kidneys are important for keeping bones healthy.

BONE MARROW

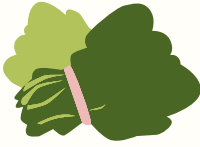


Bone marrow is the soft tissue inside of bone, under the hard bone that you can feel. It is important in the body because it is where you make blood cells, like red blood cells.



ESA

Erythropoiesis stimulating agents are also known as “ESAs” for short. ESAs are medicines that replace the job of erythropoietin, which our body normally makes. ESAs can be given to increase the amount of red blood cells being made by our bone marrow. ESAs can be used to treat anemia that is caused by having chronic kidney disease. ESAs are given by injection. There are several different brand names for ESA medicines.



FOLIC ACID

Folic acid is a type of vitamin. It helps the body make new cells – like red blood cells. Folic acid is found in many foods like spinach, whole-wheat foods, peas, dried beans, lentils, oranges, and many more.



FORTIFIED

Fortified means to make something stronger.



INJECTION

Injection is another word used by health care workers when they talk about giving someone a needle or shot. For example, having a needle or injection for flu shot.

IRON

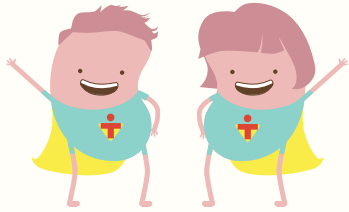
IRON

Iron is a mineral and an important building block. It normally gets into our body in food. It is used by the body for many things, like making red blood cells. It can be measured in a blood test, to see if you have enough iron in your body to be healthy.

KIDNEY HEALTH TEAM



Kidney Health Team is all the different people who work with you to help keep your kidneys as healthy as possible. Members of the Kidney Health Team include nurses, doctors (nephrologists), dietitians, social workers, clerks, you and your family. Together, everyone will work with you to make your Kidney Health Care Plan.



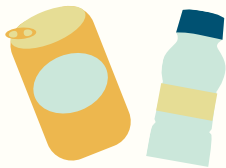
KIDNEYS

Kidneys are bean-shaped organs about the size of our fist. Most people have 2 kidneys. Kidneys are found under the rib cage near the middle of the back. The kidneys have many functions or jobs (see Kidney Function).



NUTRIENTS AND NUTRITION

Nutrition is about getting the nutrients our body needs for health and growth. Nutrients are all the different types of ingredients our body needs for energy and building blocks. We usually get nutrients through food. When nutrition is good, our body can grow well and be healthy.



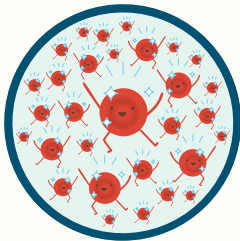
NUTRITION SUPPLEMENTS

Nutrition supplements are drinks or bars that contain extra calories and other nutrients. Your Dietitian may discuss food supplements with you as a way to improve your nutrition and stay healthy.



PILL(S)

Pills are medicines that we swallow. They are also known as tablets, capsules, or gel caps. Pills might be different shapes (round, long and skinny, football-shaped, etc.) and different colours. Pills should be stored safely. Pills should only be taken as directed by your health care team or the Pharmacist.



RED BLOOD CELL COUNT

Red blood cell count is a test used to measure the amount of red blood cells in our body. The test is done by taking a blood sample and looking at it in a lab under a microscope. There test result will sometimes talk about the level of "hemoglobin" or the level of "hematocrit" or "HCT", which are all ways to tell how many red blood cells there are.



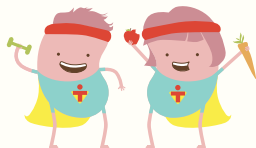
VITAMIN(S)

Vitamins are important building blocks our body needs to stay healthy. Every vitamin has a different job to do in our body. Whole foods are a great source of vitamins.



WHOLE FOODS

Whole foods have many of the different nutrients we need. Whole foods come from plants and animals. Whole foods are vegetables, fruits, nuts, milk, eggs and meat from the store, fishing or hunting. Always choose Whole Foods first!



Created by Julie Strong BN, Tom Blydt-Hansen MD, Diane McKenty RN, and Angela Chotka MA with Pediatric Nephrology (Children's Hospital Health Sciences Centre) and Chotka Consulting: Creative Balanced Solutions. With thanks to the Children's Hospital Foundation of Manitoba for their generous support.

For more information about this resource, please contact Pediatric Nephrology at 204-787-4947 or jstrong@exchange.hsc.mb.ca or the Children's Hospital Foundation of Manitoba <http://goodbear.mb.ca>