Getting your Daily Dose of Vitamin D

Adequate Vitamin D intake is vital for a healthy body. Many people, however, are deficient in this important nutrient. Vitamin D deficiencies can cause poor bone health and a weakened immune system. Vitamin D can be obtained from three sources: the sun, supplements, and foods naturally containing Vitamin D or foods with added Vitamin D. In order to get vitamin D from sunlight, you must have your arms and legs exposed to the sun for approximately five to ten minutes, two to three times a week. Caution should be used, however, to avoid over exposing yourself to the sun as sunburns can be dangerous. Vitamin D can also be obtained from taking a daily multivitamin or Vitamin D supplement. Before purchasing a supplement, check to see if it contains Vitamin D₃ (cholecalciferol) rather than Vitamin D₂ (ergocalciferol). Vitamin D₃ has been shown to be better at increasing levels of Vitamin D in the blood than Vitamin D₂. As always, consult your doctor before taking any new supplement. Vitamin D is also naturally found in some foods and added in continued pg 2

What’s So Great About Soy?

Multiple studies link soy consumption with lowering chronic diseases like cancer and heart disease. ACNC researchers summarized their latest findings on soy in a recently published paper titled “Non-isoflavone Phytochemicals in Soy and Their Health Effects.” The researchers discuss soy protein and the phytochemicals in soy that are not isoflavones. These phytochemicals may act alone or in combination with each other to produce the health effects.

There are four main non-isoflavone components of soy, each having health benefits. These components are saponins, phytoestersols, lignans, and phytates. Research suggests that they all can protect against heart disease and cancer. Research suggests saponins may prevent colon, liver, or breast cancer. They can also protect against heart disease by lowering total cholesterol, “bad” LDL cholesterol, and triglycerides. Saponins can also raise the “good” HDL cholesterol. Finally, saponins may serve as an antioxidant, protecting cells and organs from oxidative stress.

Another component of soy is phytosterols. They decrease the ability of the body to absorb cholesterol so they can decrease LDL cholesterol and can therefore lower heart disease risk. Phytosterols can inhibit cancer initiation and growth and can also regulate the immune system.

A third component of soy is lignans. They work as antioxidants by helping gather free radicals, small substances that can damage our cells. Lignans may also have anti-cancer effects, but more research is warranted in this area.

The final component is phytates. Phytates are important because they can bind minerals. People who consume large amount of phytates may be at an increased risk of nutrient deficiencies like iron-deficiency anemia. However, current research suggests that large quantities of phytates must be consumed in combination with a poor diet to see such effects. Phytates may protect against cancer by decreasing tumor cell number and growth in the breast, colon, liver, prostate, and skin.

Not only can soy be a great source of protein and other nutrients, but it may also have positive effects when it comes to many of today’s health issues. Soy is part of the meat or meat alternatives group in MyPyramid. A total daily portion of meat or meat alternatives for an adult is about 6 ounces, or about the size of two decks of cards.


Our Children, Our Nutrition

Our Children, Our Nutrition is published for the participants, friends and partners of Arkansas Children’s Nutrition Center, 15 Children’s Way, Little Rock, Arkansas, 72205; (501)364-3309, (866)423-1311 toll-free.

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Arkansas Children's Nutrition Center is an intramural research program of the U.S. Department of Agriculture's Agricultural Research Service. It is housed on the campus of one of the ten largest children's hospitals in the United States, Arkansas Children’s Hospital. ACH, the Arkansas Children’s Hospital Research Institute and the University of Arkansas for Medical Sciences are partners with the Arkansas Children’s Nutrition Center.
Our vision, Our research, Our families, Our team, Our facility, Our ACNC...

Meet our Staff: Deanna and Rachel

Deanna joined the ACNC team as a research assistant in 2007. She has a B.S. in Dietetics and a Master’s degree in Family and Consumer Science from the University of Central Arkansas, making her a perfect fit for the research here at ACNC. Deanna is also a Registered Dietician which is an added benefit to our team and our research. “Research with infants and children takes creativity, coaxing, and parental involvement,” says Deanna. Working with healthy infants and children on a day to day basis is what Deanna says she enjoys most about her job.

Rachel joined the ACNC two years ago. She has a B.S. in Psychology from Williams Baptist College and a M.A. in Clinical Psychology from Spalding University. “I just love the fact that the parents and kids get to know us. I love that I’ve been able to test some of the kids at every visit and I’ve seen how much they’ve grown and changed.” Rachel’s favorite part of her job is playing with babies all day and having the opportunity to point parents in the right direction when she sees a child struggling in an area.

Steps to Managing Choosy Eaters

It is common for children to experience a “picky phase” where everything you place in front of them they refuse to eat. Most children need to be exposed to a food several times before they will even try the food. The American Dietetic Association (ADA) has several suggestions for improving your child’s intake. First, they recommend allowing your child to help prepare their meals. This will give them a sense of pride in what they are eating and it might prompt them to eat different foods. Some parents like to use cookie cutters to cut foods into shapes. A star shaped sandwich might make all the difference in your child eating or not eating lunch. Removing distractions such as the television or loud noises can also improve intake by helping your child to pay attention to their food. In addition, the ADA suggests that you use small eating utensils that fit your child’s hand. Above all, remember to stay calm when your child is being picky. Make sure that you are eating the foods that you want your child to eat and avoid making negative statements about foods you do not like so that your child can make their own decisions about their food preferences.


Vitamin D, continued from pg 1

Do not hallucinate.

Vitamin D, ontinued from pg 1 others. Tuna and salmon are natural sources of Vitamin D, while milk, other dairy products, orange juice, cereal, and bread often have Vitamin D added. 

When grocery shopping, be sure to check nutrition labels. If you incorporate sun, vitamins, or foods containing Vitamin D into your lifestyle, you will help to keep yourself from having a Vitamin D deficiency.

To eat is a necessity but to eat intelligently is an art. La Rochefoucauld

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A CNC investigators are studying a process known as “maternal programming of fetal metabolism.” They are very interested in learning the role the placenta plays in this process and whether the placenta holds secrets that could predict future developmental or health outcomes of children. One important area being investigated is the link between childhood obesity and maternal body composition. Preliminary data suggest that there is a subset of children who may become overweight or obese because their metabolism is programmed in such a way that they store energy derived from the diet as fat rather than burning the energy as leaner children do. They hypothesize that mothers “send signals” to their developing fetus which can “program” the metabolism of the offspring.

Part of this study will investigate the role of the placenta. The placenta is a temporary organ that connects the developing fetus to the uterine wall of the mother; it transfers oxygen and nutrients from the mother to the fetus, and permits the release of carbon dioxide and other waste products from the fetus. The placenta develops from the same sperm and egg cells that form the fetus. It is expelled during the birth process with the fetal membranes; together, these structures form the afterbirth. Thus, this is an easy organ to obtain with no stress to the mother or the infant, since it is normally discarded.

The ACNC is in the initial stages of establishing a placenta biorepository, similar to a cord blood bank, which it hopes to eventually make available to other researchers in order to answer critical health questions. The biorepository project stems from translational research projects involving a large team of investigators from the ACNC and the University of Arkansas for Medical Sciences. Placentas will be collected as part of studies from women who have been carefully characterized throughout pregnancy. In addition, their newborn children will be studied for the first few years of life. Obtaining placentas from these mother/child pairs will allow researchers to link findings collected during pregnancy to both the placenta and the child.

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Sneaking Exercise into your Daily Routine

As a parent, it is often hard to find time to exercise. Exercise, however, does not have to be time consuming or viewed as a scheduled event, and there are several ways of getting more exercise during your day.

First, a simple way to burn a few extra calories is to park further away from your workplace or grocery store. The extra steps you take walking to and from the building can really add up. The same thing can be said for choosing the stairs over the elevator or escalator. Another exercise tip is to work out for 10 minutes - 3 times a day, rather than 30 minutes at one time. An example of this could be lifting light weights for 10 minutes when you wake up, going on a brisk 10 minute walk during your lunch break, and doing a 10 minute aerobics video before bed. You are still getting 30 minutes of exercise, but it may not feel like it is taking up as much of your time as it would if you did it all in one 30 minute increment. Finally, you can also include exercise in your day by playing with your children. Children are naturally active and use a lot of energy as they play. Spending time running, jumping, and skipping with them will not only be a good bonding experience, but it will also help you to burn calories. Allow them to direct the activity and you will be surprised with how much you are moving. For more planned activities, you could suggest kicking around a soccer ball, playing basketball, finding a walking trail, or going for a bike ride.

How can I exercise if I don't have a gym membership. (2010). American Dietetic Association Website. Retrieved July 2, 2010 from http://www.eatright.org/Public/content.x?id=10649&terms=exercise
Study Participation Opportunities

fMRI
This is a short-term study designed to look at how the food kids ate as babies affects how they think today. Participants attend up to three study visits on the campus of Arkansas Children's Hospital.
Qualifications
Children participating in this study must be healthy, between the ages of 7 and 8 and have been fed mostly breast milk, milk-based formula or soy-based formula from birth until their first birthday.
Compensation
Those completing each visit will receive monetary compensation in the form of a VISA card. A bonus card will be given to families completing all visits. Partially completed visits may be partially compensated.

Beginnings
This is a long-term, observational study for healthy babies. It is designed to look at how babies fed either breast milk, milk-based formula or soy-based formula grow and develop over the first six years of life.
Qualifications
Babies must be healthy, full-term and weigh at least six pounds at birth. Babies are accepted into the study until 2 months of age and must be fed mostly breast milk, milk-based formula or soy-based formula.
Compensation
Participants will be offered diapers or formula for the first year of participation. Following that, monetary compensation will be provided. Additional compensation may be provided for completion of each visit.

Glowing
This is a long-term study for pregnant women. It is designed to look at how the health of women at conception affects the health of their child at birth. Families are followed through pregnancy until the child is 2.
Qualifications
Women must be less than 6-weeks pregnant or thinking of becoming pregnant. This must be the woman’s first full-term pregnancy and there must be no significant complications or health concerns.
Compensation
Nutrition education and monetary compensation are provided through pregnancy. Formula is provided through the child’s 1st birthday. Additional compensation is provided from 1-2 years of age.

Interested in learning more about a study being conducted at ACNC? Think you may qualify to participate? All research studies require potential participants to be screened. This process is simple and conducted via telephone in approximately 5-15 minutes. During that time, the study can be explained in more depth and any questions you have may be answered.
Screening is done as a way to learn more about you and your baby or child. Typical questions center around the child’s diet, your pregnancy and any other pertinent information that relates to the study being conducted. To be screened or learn more, please contact the ACNC Recruitment Line at 501-364-3309 or toll-free at 866-423-1311. For certain studies, pregnant moms may be placed on a waiting list.