



The challenge of feeding baby

So finally you have a newborn in the family. She's so beautiful, so lovable... and so hungry! What is the best plan to provide her with healthy nutrition? Breast milk, the way to go!

Dr. Basel Khatib

Physicians, scientists, nutritionists — and babies, we might add — unanimously agree that breast milk is the ideal nutrition for infants. For most infants, breast milk will provide all of the nutritional needs during the first year of life. It changes gradually with time, and it has more than 200 ingredients.

In some cases, babies on breast milk need fluoride and vitamin D supplements; you need to discuss this with your pediatrician.

Breast milk contains antibodies, the immunologic factors that help the baby fight infections, so it can be considered baby's first immunization. Breastfed babies are less prone to gastrointestinal, respiratory and ear infections. They also have less chances of having diarrhea, allergies and insulin-dependent diabetes. Fats in breast milk are believed to be useful for the development of the brain and vision.

In addition to nutritional and immunologic value, breast milk supports the emotional relationship between the mother and the infant. It's also inexpensive.

Mothers who breastfeed are less apt to develop anemia, breast cancer before menopause and osteomalacia (softening of the bones). Breastfeeding also helps the uterus get back to normal size; therefore preventing postpartum bleeding.

Formula

Mothers who tried to breastfeed and were unsuccessful, for any reason, shouldn't feel guilty. At least they've given it a try!

The family may decide, for various reasons, to use formula. All formulas are attempts to imitate breast milk. Many different types of formula are available. Most of them provide 20 calories per ounce, like breast milk. Most formulas are made from cow's milk.

In some cases, the physician may recommend a special formula like soy formula, lactose-free formula or protein-hydrolyzed formula. Some of these formulas are expensive. They are usually used for certain medical reasons, and the decision to choose one of them should always be discussed with the physician.

Unmodified cow's milk should not be given to babies under 1 year of age. It is difficult to digest, doesn't have the vitamins and minerals necessary for the baby's growth, and has high concentrations of proteins and minerals that can stress a newborn's premature kidneys, leading to dehydration.

Solid foods

When solid foods are started, give one ingredient at a time at weekly intervals. This way you can identify any food intolerance the baby may have. Rice cereal is a good food to

M A K I N G HEALTHY BABIES

BY RENÉE SKOGLUND
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Every mother hopes her baby will be healthy. But instead of just hoping for the best, pregnant women can now do more than ever to give their future children a head start on a healthy life.

Scientists and physicians are uncovering more links between a woman's diet and lifestyle during pregnancy, and the long-term health of her child. From diabetes to heart disease, birth defects to breast cancer, many serious and chronic diseases seem to arise in part because of conditions in the womb.



Dr. Barbara Luke

This knowledge makes it possible for today's women to make better choices for their children's futures — and themselves.

In her new book, *Program Your Baby's Health: The Pregnancy Diet for Your Child's Lifelong Well-Being*, University of Michigan Health System obstetrics and gynecology professor Barbara Luke, Sc.D., M.P.H., RD, provides guidance for expectant mothers, women planning to get pregnant, and mothers of toddlers.

The book pulls together time-honored tips from experts on prenatal care together with the latest medical knowledge. Even if they don't buy the book, the main point is for women to understand that every day counts during pregnancy, said Luke.

"The nine short months before birth shapes an individual's health for an entire lifetime. We now know from many studies around the world that how a baby grows before birth will influence that child's susceptibility to many chronic diseases."

Metabolic programming

Since mothers-to-be cannot control genetic risks or choices the child makes as she or he grows older, they must concentrate on taking care of their child in the womb. This approach is called metabolic programming, a concept rooted in the knowledge that for a developing fetus, different organs — from the brain to the kidneys — form and grow at different rates.

Research has found there are critical periods during which the environment surrounding the fetus — such as the supply of nutrients and blood through the umbilical cord — can have a great impact on the final size and function of organs.

If one organ is at a critical point in development when the environment changes, other organs might take a back seat, resulting in less cell growth, smaller size or decreased function. That, in turn, can hamper growth or help bring on disease when a child

grows up.

"We cannot go back in time and recreate those optimal windows. That time is gone, and technology cannot make up for it," said Luke. "Babies born malnourished, with a low birth weight, or small for the number of months they spend in the womb need to be monitored for chronic diseases and given preventive care to keep them from developing long-term problems."

Preventing problems

In general, it is very helpful as an obstetrician to talk with a woman before she gets pregnant," said Dr. Dan McMurtrie, department head of obstetrics and gynecology at St. Joseph Mercy Hospital. "That's the time to identify potential risks. It also allows time to order testing for certain conditions in the woman's history."

It's also the time to discuss what medications a woman is taking, so safer alternatives can be prescribed if necessary, said McMurtrie. For instance, certain anti-seizure medications pose higher risks than others for pregnant women.

Most mothers are "highly motivated" to do everything they can to deliver a healthy baby, said McMurtrie. "It's amazing how many women stop smoking while pregnant."

Smoking is one of the worst things pregnant women can do, said Luke. "There are thousands of chemicals in cigarette smoke, including cyanide and carbon monoxide. Children whose mothers smoke during pregnancy don't get enough oxygen, and they're exposed to many toxins before they're born."

Smoking can result in low-birth weight, pre-term birth or the slumping or separation of the placenta, an emergency situation, said McMurtrie.

Alcohol is another major culprit. "Alcohol crosses all the barriers in the human body. It interferes with protein synthesis, and building protein is really

what babies are doing most. So women should abstain from alcohol during pregnancy," said Luke.

Nutrition

Good nutrition before and during pregnancy is paramount, since babies get all of their nutrition from the mother's stores, as well as what she eats on a daily basis.

"Babies who grow well before delivery are the healthiest at birth and continue to be healthy infants and children," said Luke. "Babies who are poorly grown at birth, although we have the technology to help them survive, often pay the price for being born too small or too early when they get further on in childhood."

"Birth weight is the most important indicator of how well babies will do," said McMurtrie.

He added that it's important to remember that a growing fetus will take from its mother what it needs nutritionally, sometimes leaching calcium and iron supplies, which may result in bone loss or anemia. A good diet and vitamin supplement is essential.

A healthy weight gain is also essential. Even highly weight-conscious women need to follow their doctors' guidelines for weight gain during pregnancy, including the early weeks when the placenta is forming. And the weight gain should come from healthy food, not empty calories.

There are no set determinants of how much weight a woman should gain during pregnancy. "We know women who are overweight can have a healthy pregnancy with a weight gain of 15 to 25 pounds. An underweight woman could gain at least 40 pounds,"

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Preemie Stars do WalkAmerica for the March of Dimes

Every year since the mid-1990s, young March of Dimes ambassadors Katie and Danny Blacker of Livonia have made the pilgrimage — with their parents — to WalkAmerica.

Both born prematurely but now the picture of health, they participate in the Preemie Stars walk team, captained by their mother, Laurie Blacker, to raise money to help promote healthy babies and prenatal care.

This spring is no different. The Blackers will walk on Saturday, April 28, from the Plymouth WalkAmerica site. Nearly 20 families in the Preemie Stars are expected to make the eight-mile trek through downtown Plymouth, originating from Hines Park at 9 a.m. (Registration begins at 8 a.m.)

"It's a good way to give something back," Laurie said. "It sounds cliché, but in this case it happens to be true."

Of course, Laurie and her husband, David Blacker, would like to see many more families with preemies raising money and doing the walk. They are welcome to step forward, literally.

"It's hard to get the word out there that we exist," Laurie said. "We picked up a couple interested people along the walk route last year, but it's hard to get recruits."

According to Blacker, the Preemie Stars is "the only team that's set up to benefit the March of Dimes. It's the only preemie walk team."

Many walk teams come together as corporate entities, such as Kmart or Kroger. But, Blacker said,

with the Preemie Stars it is "much more personal." March of Dimes-financed research has helped promote breakthroughs in medicine that in the last decade or so have benefited premature babies such as Katie and Danny, now ages 10 and 7, respectively.

In the "Club Preemie" chapter of a 1999 book on



Walking for babies: The Preemie Stars again will be walking in Plymouth at the April 28 WalkAmerica. Pictured from left are Katie Blacker, her mom Laurie Blacker, Tim and Elizabeth Smith, all of Livonia.

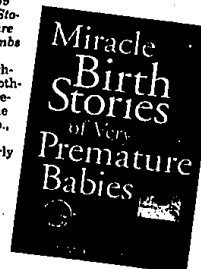
extreme prematurity by Detroit-area author Tim Smith (a reporter with the Observer & Eccentric Newspapers), Laurie Blacker reflected on how important it was for the March of Dimes to help pay for the research that led to a surfactant used to aid lung development.

"Who knows if Katie, especially, would be alive today if it wasn't for stuff like surfactant," she said.

Featured in preemie book

The Blackers and Preemie Stars team are featured in Smith's 1999 book *Miracle Birth Stories of Very Premature Babies — Little Thumbs Up!*

The author's daughter, Elizabeth, is another member of the Preemie Stars team. She was born at just 1 lb., 14 oz. in November 1994 and spent nearly four months in the Beaumont Hospital neonatal intensive care unit. Today, like Katie and Danny, she is a happy, healthy child.



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