North Dakota Department of Health
and North Dakota State Data Center

PRAM-O-GRAM

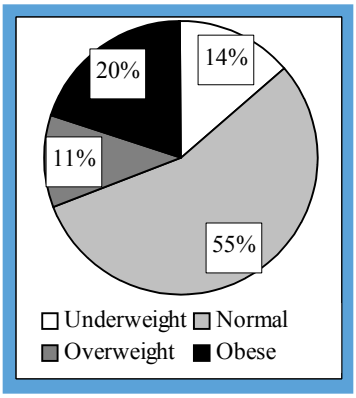
Fact Sheet Series: Number 5, 2007

Maternal Health Characteristics

Mothers who participated in the 2002 North Dakota PRAMS survey provided insight into various maternal health characteristics, including multivitamin use before pregnancy, body mass index, diet-related problems during pregnancy, physical activity during pregnancy, and oral health during pregnancy.

North Dakota mothers were asked their weight and height before pregnancy, which allowed for a pre-pregnancy body mass index (BMI) to be calculated. Based on BMI recommendations from the Institute of Medicine, a woman is classified as either underweight, normal weight, overweight, or obese (see Table 1 for BMI ranges).[1] As seen in Figure 1 and Table 1, nearly one-third of North Dakota mothers were overweight or obese (31%).

Figure 1. North Dakota Mothers' Pre-Pregnancy BMI: 2002



North Dakota mothers gained an average of 31 pounds during their pregnancies in 2002. This average gain was unchanged in 2006.[2] During their pregnancies, 69 percent of overweight mothers and 46 percent of obese mothers gained an excessive amount of weight (i.e., greater than the recommended 15 to 25 pounds) (Table 1).

Some mothers experienced diet-related problems during pregnancy. Nearly one in four mothers experienced severe nausea, vomiting or dehydration (23%). One in five experienced high blood pressure (20%). One in 14 experienced high blood sugar/diabetes (7%).

One-fourth of mothers exercised very little during their pregnancies (24%). Nearly half exercised sporadically (48%) and 27 percent exercised moderately.

Table 1. Body Mass Index and Weight Gain for North Dakota Mothers: 2002

	Mothers' Pre-Pregnancy Body Mass Index			
	Underweight	Normal	Overweight	Obese
Body Mass Index (BMI)*	<19.8	19.8 to 26.00	26.01 to 29.0	>29.0
Pre-pregnancy BMI Percentage of mothers	14%	55%	11%	20%
Recommended weight gain** In pounds	28 to 40	25 to 35	15 to 25	Minimum of 15
Amount of weight gain Percentage of mothers:				
Inadequate	34%	18%	3%	22%
Adequate	47%	43%	28%	32%
Excessive	20%	39%	69%	46%

*Body mass index (BMI) using Institute of Medicine guidelines [1]
**Recommended weight gain during a pregnancy with one fetus based on pre-pregnancy BMI; *obese* weight gain capped at 25 pounds for analysis [3]

The Importance of Adequate Weight Gain During Pregnancy

Gaining too much weight as well as not enough weight during pregnancy can both negatively impact pregnancy outcomes. Weight gain should be tailored to the person; general recommendations for weight gain can be found in Table 1.

Too little weight gain is associated with intrauterine growth retardation, shortened period of gestation, low birthweight, and perinatal mortality. Too much weight gain is associated with elevated risk of a large-for-gestational-age infant, cesarean delivery, and long-term maternal weight retention.[4]

More information about the Pregnancy Risk Assessment Monitoring System (PRAMS), North Dakota PRAMS 2002 data, and the *PRAM-O-GRAM* fact sheets is available online at www.ndsu.edu/sdc/ndprams.htm and www.ndhealth.gov.

Contributions to this issue by:
Ramona Danielson

The *PRAM-O-GRAM* is prepared by the North Dakota State Data Center for the North Dakota Department of Health. This publication is available online at www.ndsu.edu/sdc/ndprams.htm and www.ndhealth.gov.

Use of Multivitamins Before Pregnancy

"I think more education should be done on the importance of multivitamins and especially folic acid during childbearing years. Not enough women know the importance of this."
–North Dakota mother, 2002

Slightly more than half of mothers were taking multivitamins (including folic acid) in the month before getting pregnant (54%). One-third of mothers were taking multivitamins every day (32%), while 10 percent were taking them four to six times per week, and 12 percent were taking them one to three times per week.

The proportion of mothers who did not take a multivitamin at all in the month before getting pregnant was 46 percent. The prevalence was higher for women who were American Indian (71%), unmarried (70%), Medicaid recipients (66%), WIC recipients (60%), younger (62% for women ages 20 to 24), less educated (62% for women with no more than a high school degree), or had unintended pregnancies (66%).

Sources: Unless indicated otherwise, all data and quotes are from North Dakota PRAMS, 2002: www.ndsu.edu/sdc/ndprams.htm; **1.** *Nutrition During Pregnancy*. Institute of Medicine. 1990. www.iom.edu/CMS/3788/18257.aspx; **2.** North Dakota Department of Health, Division of Vital Records. www.ndhealth.gov/vital/; **3.** "Pregnancy weight gain: What's healthy?" www.mayoclinic.com/health/pregnancy-weight-gain/PR00111; **4.** *Births: Final Data for 2003*. www.cdc.gov/nchs/births.htm; **5.** *Oral Health Care during Pregnancy and Early Childhood*. www.health.state.ny.us/publications/0824.pdf

Maternal Health Characteristics, continued

Oral Health

According to a report by the New York State Department of Health, pregnancy is accompanied by "complex physiological changes" that can "adversely affect oral health." The report also discusses how pregnancy is an important time to "access oral health care because the consequences of poor oral health can have a lifelong impact" and how there is an "association between periodontal infection and adverse pregnancy outcomes, such as premature delivery and low birth weight." The report also points out that many women have health-care or dental insurance only during their pregnancy, so pregnancy "provides a unique opportunity to access care."[5]

It is recommended that health-care professionals advise women that dental care is safe and effective during pregnancy:[5]

- Needed treatment can be provided throughout the pregnancy, though treatment between the 14th and 20th week is ideal.
- First trimester diagnosis and treatment, including needed dental x-rays, can be undertaken safely.
- Delay in necessary treatment could result in significant risk to the mother and indirectly to the fetus.
- Elective treatment can be deferred until after delivery.

More than half of North Dakota mothers did not go to a dentist or dental clinic during their most recent pregnancy (56%). The prevalence of mothers who did not go to a dentist or dental clinic during pregnancy was higher for women who were younger, less educated, unmarried, American Indian, recipients of Medicaid, or recipients of WIC.

One-third of North Dakota mothers in 2002 had not had their teeth cleaned by a dentist or dental hygienist in more than 12 months (32%). The prevalence of mothers who had not had their teeth cleaned in more than 12 months was higher for women who were younger, American Indian, receipients of Medicaid, or recipients of WIC.

Two-thirds of mothers said that a dental or other health-care worker did not talk about caring for their teeth and gums during their pregnancy (64%). The prevalence of mothers who did not have a health-care worker talk to them about oral health was higher for women who were American Indian.

"I have never had my teeth cleaned by a dentist."
–North Dakota mother, 2002

"I had an infected tooth from a root canal that started over a year ago."
–North Dakota mother, 2002

One in five respondents said they needed to see a dentist for a problem during their pregnancy (21%). The prevalence of mothers who needed to see a dentist for a problem during their pregnancy was higher for women who were younger, less educated, unmarried, American Indian, recipients of Medicaid, or recipients of WIC.

NORTH DAKOTA DEPARTMENT of HEALTH

The *PRAM-O-GRAM* is a publication of the North Dakota Department of Health, Bismarck, North Dakota. For further information, call 701.328.2372 or visit www.ndhealth.gov.