

# Gestational Diabetes

## Introduction:

Gestational Diabetes from my knowledge is what women develop when they are pregnant. After a woman gives birth, it is possible she will contract type 2 diabetes mellitus. Some women may coincidentally develop diabetes while they are pregnant. A child born to a mother with gestational diabetes may be prone to child obesity, with type 2 diabetes later in life. Babies born to mothers with this condition have increased risks for complication. If the mother has adequate control of her glucose levels, then the baby's risks generally decreases, and the mother can give birth to a healthy baby. Being overweight and obese increases the factors for developing gestational diabetes. I chose to research this topic, because my mother had gestational diabetes when she was pregnant three times, so I thought it would be interesting to learn about. After my mother gave birth all three times, the diabetes went away.

## Section 1: Background and Problem Statement

Healthy People 2010: Diabetes

<http://care.diabetesjournals.org/cgi/reprint/23/6/853>

I found the first article to be very confusing. It discussed 4 diabetes objectives, and also discussed how Healthy People 2010 involve the public and goes into more detail about health issues. I felt that this was not a good article, because I didn't get any information on what gestational diabetes really is. The information I obtained from reading the article is how they address certain topics in Healthy People 2010.

American Diabetes Association

<http://www.diabetes.org/gestational-diabetes.jsp>

I enjoyed reading this article, because I like how it was broken up into sections. This Web site discussed what gestational diabetes is, how it affects your body, how to treat diabetes, and it discusses what the future holds for women who have gestational diabetes.

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## Gestational Diabetes: What it Means for Me and My Baby

<http://familydoctor.org/online/famdocen/home/women/pregnancy/complications/075.html>

This Web site was another good source of information. The Web site was clear, and it was broken down into sections. The Web site discussed what gestational diabetes is, how it affects the mother and her baby, what to do if a mother gets gestational diabetes, changes the mother should make in her diet, if exercise is important, tests needed during the pregnancy, and last but not least, what will happen when the baby is born. This Web site seems to touch every topic a concerned pregnant mother would have if she were diagnosed with gestational diabetes.

## What I need to know about Gestational Diabetes

<http://diabetes.niddk.nih.gov/dm/pubs/gestational/index.htm>

This Web site is also very informative. This Web site, along the Web sites 2 and 3, are broken down into topics. This Web site discusses what gestational diabetes is, what causes it, risk factors, when the mother is checked for gestational diabetes, how the mother is diagnosed, how it will affect the baby and the mother, how the mother is treated, and lastly, a good question, how does the mother know if her blood glucose levels are on target? I feel that this Web site also touches topics that a concerned mother would have.

## **Section 2: Research**

### Increasing Incidence of Diabetes After Gestational Diabetes

<http://care.diabetesjournals.org/cgi/content/abstract/27/5/1194>

**Research-** Women with diet-treated GDM during 1978–1985 were examined in 2000–2002. Women were classified by a 2-h, 75-g oral glucose tolerance test according to the World Health Organization criteria or an intravenous glucagon test supplemented by measurement of GAD antibodies. Historical data from index-pregnancy and anthropometrical measurements were collected.

**Results-** 481 (63.9%) women were examined after pregnancy. Diabetes and impaired glucose tolerance (IGT)/impaired fasting glucose were present in 40.0 and 27.0% of women, respectively. In the new cohort, 40.9% had diabetes compared with 18.3% in the old cohort at the 1990 follow-up ( $P < 0.0005$ ). Prepregnancy BMI was significantly higher in the new compared with the old cohort (26.0 [22.5–30.8] vs. 22.9 kg/m<sup>2</sup> [20.2–28.0],  $P < 0.0005$ ). Among others, new-cohort membership, prepregnancy overweight (BMI  $\geq 25$  kg/m<sup>2</sup>), and IGT postpartum were identified as independent predictors of diabetes by multiple logistic regression analyses.

### Diabetes Care

<http://care.diabetesjournals.org/cgi/content/abstract/23/1/70>

**Objective-** Investigate the possible association of the variants in the nucleotide binding fold regions of the sulfonylurea receptor 1 (SUR1) gene with gestational diabetes mellitus (GDM), type 2 diabetes, and altered insulin.

**Results-** A functional variant that contributes to the risk of GDM and type 2 diabetes may locate close to the SUR1 gene.

Abstract

<http://journals.indexcopernicus.com/abstracted.php?icid=241705>

**Objective-** Assess whether metformin safely reduced development of gestational diabetes in women with the polycystic ovary syndrome

**Results-** Among the 39 women who did not take metformin, gestational diabetes developed in 14 of 60 (23%) pregnancies. When all live births were combined, gestational diabetes occurred in 22 of 72 pregnancies (31%) in women who did not take metformin versus 1 of 33 pregnancies (3%) in those who took metformin.

Predictive factors for the development of diabetes in women with previous gestational diabetes mellitus.

<http://www.ncbi.nlm.nih.gov/pubmed/1530012>

**Objective-** The purpose of this study was to determine the incidence of diabetes in women with previous dietary-treated gestational diabetes mellitus and to identify predictive factors for development of diabetes.

**Conclusion-** Women with previous dietary-treated gestational diabetes mellitus have a risk of later having diabetes. Follow-up investigations are therefore important.

### Section 3: Statistics

Plasma Adiponectin Concentrations in Early Pregnancy and Subsequent Risk of Gestational Diabetes Mellitus

<http://jcem.endojournals.org/cgi/content/abstract/89/5/2306>

I found it difficult to understand the data being presented because I do not understand all of the medical terms. The most useful information I found in this Web site was 73% of women with low levels of adiponectin had gestational diabetes. The level of adiponectin was lower than 6.4 ml.

Diabetes: Statistics

<http://www.childrensnyp.org/mschony/fp/health/diabetes-stats.html>

I found this site very easy to understand. There were many different statistics about diabetes. The one statistic that I found the most useful is that women who develop gestational diabetes during pregnancy, have a 50 percent chance of developing type 2 diabetes within 20 years of the pregnancy. Gestational diabetes is more common among certain groups.

Gestational Diabetes and the Risk of Offspring Obesity

<http://pediatrics.aappublications.org/cgi/content/full/101/2/e9>

This Web site's data was easy for me to understand. There was a statistical study done that I found to be interesting. The study that was done was observing the offspring of mothers with gestational diabetes being larger at birth. It is interesting because babies born to a mother with gestational diabetes were generally larger at birth, but between 6 and 12 months of age the weight seems to balance itself.

High prevalence of gestational diabetes in women from ethnic minority groups

<http://www.ncbi.nlm.nih.gov/pubmed/1473322>

Reading this Web site was interesting because it was comparing different ethnic groups and which group has a greater risk for gestational diabetes. Women from other ethnic groups other than white had a greater risk of developing gestational diabetes. The order from the smallest to the greatest chance of an ethnic group being diagnosed with this type of diabetes would be the following: white, black, miscellaneous, Southeast Asian, and Indian.

#### **Section 4: Consumer Information**

Gestational Diabetes

[http://www.nichd.nih.gov/health/topics/Gestational\\_Diabetes.cfm](http://www.nichd.nih.gov/health/topics/Gestational_Diabetes.cfm)

This Web site is great for viewers trying to learn about gestational diabetes. It covers many topics that viewers would want to know. Some topics discussed are about this type of diabetes affecting the mother's offspring, how gestational diabetes is treated, and many more topics.

High-Risk Pregnancy

[http://www.healthsystem.virginia.edu/uvahealth/peds\\_hrpregnant/gesdia.cfm](http://www.healthsystem.virginia.edu/uvahealth/peds_hrpregnant/gesdia.cfm)

This Web site is another great Web site for viewers who want to learn about gestational diabetes. This Web site gives you an overview of what gestational diabetes is, and it covers what to expect, and many more useful topics.

American Pregnancy Association

<http://www.americanpregnancy.org/pregnancycomplications/gestationaldiabetes.html>

This Web site was also very informative. It is great for women wanting to learn information on gestational diabetes. The Web site is broken into topics that are presented as questions. The questions for each topic are as follows: what is gestational diabetes? , who gets gestational diabetes and why do I have to be tested? , what should I expect during my test? , if I have gestational diabetes, how will I be treated? , is there anything I should be afraid of?

Gestational Diabetes: Nutrition and Questions

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[http://www.plus-size-pregnancy.org/gd/gd\\_nutrition.htm](http://www.plus-size-pregnancy.org/gd/gd_nutrition.htm)

This Web site is great for someone who has been diagnosed with gestational diabetes. It allows consumers to learn about nutrition during their pregnancy. This Web site discusses food plans, a 2100 calorie diet, nutritional issues, eating sweets, fast foods, and lastly, artificial sweeteners.

### **Conclusions:**

#### **Section 1: Background and Statement**

##### **Best Web site:**

<http://www.diabetes.org/gestational-diabetes.jsp>

I thought this Web site was the best because I like how it breaks down the topic of gestational diabetes. It gives good background information on the topic.

##### **Worst Web site:**

<http://care.diabetesjournals.org/cgi/reprint/23/6/853>

I thought this was the worst Web site because the information did not cover what I was looking for. The article just discusses objectives in the future for diabetes. Also, this article was difficult to understand.

#### **Section 2: Research**

There has been research done on gestational diabetes. I learned that women who are diagnosed during pregnancy have a greater chance of developing type 2 diabetes. Also, I found it interesting that women who take metformin that have polycystic ovary syndrome reduce their chances of developing gestational diabetes when they become pregnant.

#### **Section 3: Statistics**

After reviewing the Web sites, I found some interesting information - 73% of women with gestational diabetes had low levels of adiponectin. The chance of a mother developing type 2 diabetes after giving birth is 50%. It was thought that babies born to mothers with gestational diabetes were generally larger

at birth. Sometimes babies born to a mother with this condition are larger, but not all the time. This statistic was not large enough to prove that gestational diabetes affects the weight of the baby.

#### **Section 4: Consumer Information**

For this section, I could not find the best and worst Web site. All of the four Web sites I found were loaded with good information. I thought each Web site was similar, but at the same time had its own way of presenting the information. Each of the four Web sites gives information on how to treat diabetes, what to expect for the baby, and much more. I felt that the information covered questions that mothers who are diagnosed with gestational diabetes would have.

As I graded each Web site, I thought each Web site that I found was a good one. The only bad thing about some Web sites was that I had difficulty understanding them because of medical terms, so I looked them up to get a better understanding of what I was reading. Overall, each Web site was a good one.

<b>Back to Betty C. Jung's Web site</b>	<a href="http://www.bettyjung.net/">http://www.bettyjung.net/</a>
<b>Back to Web site Critique Reports Directory</b>	<a href="http://www.bettyjung.net/Pch201wsreports.htm">http://www.bettyjung.net/Pch201wsreports.htm</a>