

# Role of nurses in gestational diabetes

[Health & Medicine](#), [Diabetes](#)



The role of nurses in gestational diabetes. (DIABETES CARE)(Brief Article) Journal of Diabetes Nursing | May 1, 2003 | Assignment 2 Research studies, recently conducted in America, have found that diet and exercise play an important role in predisposing a woman for gestational diabetes (GD). This study compared the rate of insulin treatment and perinatal outcome in women with gestational diabetes under endocrinologist-based versus diabetes nurse-based metabolic management. A total of 244 participants received endocrinologist-based care and 283 participants received diabetes nurse-based care.

A retrospective analysis was carried out comparing maternal characteristics, rate of insulin treatment and perinatal insulin requirements, in comparison with those who had used diet and exercise as a controlling factor for their diabetes. Pregnancy imposes a great amount of stress on most bodily functions and it is certain that glucose metabolism is no exception. Gestational Diabetes Mellitus is a type of diabetes, which occurs during pregnancy, distinct from the condition that already existed.

It is defined as a glucose intolerance of variable degrees with onset or first recognition during pregnancy; it will generally develop in the latter half of the pregnancy and will improve after delivery (Colman, 2004). Gestational Diabetes is generally not dangerous to either mother or fetus. The disease itself is usually mild and even asymptotic; however there is an increased incidence of foetal and perinatal complications (Guthrie & Guthrie, 2004). In addition, if an unreasonable amount of sugar is allowed to circulate in the mother's blood and then to enter the fetal circulation, potential problems for both mother and baby are serious.

The mother's pancreas works overtime to produce insulin, but it is not enough to lower blood sugar levels. Glucose will then cross the placental barrier, increasing work on the pancreas of the fetus, which uses insulin to convert the glucose into energy. The baby has more energy than is required so it converts this energy into fat stores, resulting in large birth weight babies and all the problems that can be associated with that (<http://diabetes.org>). At each visit to the doctor a sample of urine is taken, this is then tested for glucose levels.

Sugar in the urine may be the first indications of Gestational Diabetes. Also, during the fifth month a glucose tolerance test is now a routine test for pregnant women. A Glucose Tolerance Test is when the women provide a blood sample taken before and after consuming a glucose drink, glucose levels  $> 9.0$  mmol/l indicate Gestational Diabetes is present. However this may be performed earlier on someone who is considered as being at risk (Colman, 2004). The incidence of gestational Diabetes has increased a significant amount, between 35% and 59%, over the past ten years (<http://diabetes.org>). Studies have found that the figures have shown an alarming incline in the amount of women being diagnosed with this gestational Diabetes. It is now believed that between 2 and 12% of pregnant women suffer from Gestational Diabetes (Guthrie & Guthrie, 2002). Testing has now become routine for pregnant mothers, so it is being discovered earlier in the pregnancy and as a result is now being treated much sooner. Because of this routine testing the chance of miscarriage and perinatal loss has been greatly reduced.

The survival rate of these infants has increased from less than 70% a few years ago to nearly 98% now, a figure which has only come about through care specializing in diabetes in pregnancy, routine testing of all pregnant women and the best care available (Guthrie & Guthrie, 2002). Even though gestational Diabetes is now being discovered more often and being medically controlled a woman who has had Gestational Diabetes will have a much higher chance of developing diabetes later in life.

If insulin was required as treatment, there is a 50% chance of diabetes within 5 years, and even if the diabetes was dietary controlled there is still a 60% chance of developing diabetes within 10-15 years (Australian Bureau of Statistics, 2007-08). With these alarming figures it is obvious that further understanding of the treatment and control of gestational diabetes is necessary. From the whole number of applicants, researchers then divide participants into stratified samples; containing those who were at risk for gestational Diabetes and those who had no known predisposing factors.

Each of these strata was then further divided into halves, with one half continuing their usual daily activities and progress through the pregnancy with current medical assistance available. The other half of the group was required to stick to a strict regime of healthy diet and exercising at least once a week, more if they wish. There was an initial interview conducted between the 6-12 week period of pregnancy, during the first trimester, to ensure that the required information is collected and any information can be supplied and ensure that is understood.

The interview incorporated data from the year prior to conception and continued until 2 months following the births of the children. All participants

were required to test daily their Blood Glucose Level (BGL) and also test their urine for sugar and record their findings. While there would be an occasional increase in glucose levels during pregnancy, persistently high levels would indicate Gestational Diabetes and a Glucose Tolerance Test was conducted. Weekly follow ups were conducted to ensure all information was recorded accurately, and also permitted time for the participant to discuss any concerns that had arisen.

However pregnancy requires a number of checkups, increasing towards the later trimester, so data was also collected through the ante natal clinics. After delivery another Glucose Tolerance Test was performed to evaluate for preexisting Diabetes and it also allowed time for any complications for the newborn to arise. For the purpose of this study I feel that a larger number would be required to make certain that there would be women who are at risk, have had gestational diabetes and have never suffered from this condition before, and would also allow for the inevitable elimination of some of the participants.

This was a quantitative research process, there was a need to interview, assess and gather personal information on the study participants. Some participants may deem this an invasion of privacy. To ensure that no emotional or psychological damage occurs to the participants it would be extremely important to ensure that there would be the strictest confidentiality with the information provided and that it would only be shared with those who require the data.

The aim of this research is to understand whether gestational Diabetes can be avoided all together, or whether it can be treated more effectively,  
<https://assignbuster.com/role-of-nurses-in-gestational-diabetes/>

providing a better health outcome for the fetus and mother. By providing conclusions, which benefit society, the principle of Beneficence can be achieved (Roberts and Taylor, 2002). An even more critical consideration is the health and well being of the participants. All women are naturally concerned that their baby will be healthy and normal; a researcher must be able to ensure that no harm will come to the mother or child.

The principle of non-maleficence, makes certain that no injury will occur to either mother or fetus, that the participants are not exploited in any way and that the benefit to the community outweighs any risk that may be present (Roberts and Taylor, 2002). At all times, the participants were treated with respect, confidentiality and their physical and mental welfare was maintained. The most important point to remember here is effective communication, the participants understood exactly what was being researched, and they received accurate information on when, where, how, why and who.

They were given education sessions on how to use any of the equipment that had been supplied. The equipment used were Urine dipstick and BGL machine, requiring only a small amount of training to make sure they were used properly. As the researcher, it is important to be precise and clear about this information to ensure that participants show up, on time and at the right place. (Roberts and Taylor, 2002). By incorporating the interviews and research into their ante-natal care visits, which would normally take place; the researchers avoided any complications arising from data collection.

Participants were required to provide accurate, detailed and correct information on their experiences for the research to be valid and have any true meanings. This requires a great amount of trust on the researcher behalf. By ensuring that the participants understood the importance of this study, for their own health as well as the wider community, it would be hoped that the participants would record precise information. For many people, being diagnosed with gestational diabetes can be upsetting. Treatment for gestational diabetes substantially reduces adverse perinatal outcomes and improves maternal quality of life.

Optimal proven treatment for gestational diabetes includes review by a diabetes educator, dietitian and physician, with insulin used if glycaemic targets are not achieved with dietary control alone. Screening for gestational diabetes should be offered to all pregnant women. Maternity service providers should ensure that adequate resources are devoted to the detection and treatment of gestational diabetes.

References Australian Bureau of Statistics. National Health Survey, 2007-08 <http://www.abs.gov.au> 10/04/10 Colman, M. 2004, Diabetes and you: An owner's Manual, Diabetes Australia, Melbourne. Diabetes Australia. Diabetes and Pregnancy, <http://diabetes.org/gestational-diabetes> 05/04/10 Guthrie, D. A. & Guthrie, R. A. , 2004, Nursing Management of Diabetes Mellitus: Fifth Edition, Springer Publishing Company, New York. Roberts, K. L. & Taylor, B. J. , 2002, Nursing Research Processes: An Australian Perspective, 2nd Ed. , Nelson Thomas Learning, Southbank, VIC. The role of nurses in gestational diabetes. DIABETES CARE, Journal of Diabetes Nursing, May 1, 2003|