

A Report

**Iodine Supplementation and Pregnancy Outcomes among
Pregnant Women in Chautara Hospital**

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Summary

Iodine Deficiency Disorder (IDD) is the world's most significant cause of preventable brain damage and mental retardation. Twenty nine percent of the world's population is at risk of iodine deficiency. IDD is also an important major micronutrient deficiency problem in Nepal. Ministry of Health and Population (MoHP) has prioritized IDD as a high level activity in its National Policy and Strategy 2004. MoHP has set an objective to virtually eliminate IDD by the year 2017 and sustain the elimination. This quasi-experimental study entitled was carried out from June 2007. The objective of the study is to find out maternal and newborn health status in relation to the regular daily iodine supplementation in addition to appropriate maternal and neonatal health care intervention during pregnancy among pregnant women in Chautara Hospital.

Sixty intervention and 60 control subjects were included in the study to compare between pre and post intervention and also between control and intervention group. Intervention was done with regular iodine supplementation in oral form at least for three months during second and early third trimesters of pregnancy. The difference between pre and post intervention and also between intervention and control groups were analyzed using statistical software SPSS version 13.

Study findings revealed that number of adolescent pregnancy was still high with mean age of pregnancy 22.1 year. More than 98 percent of respondents had heard about iodine and more than 80 percent used iodized salt. Among them two third were using it for more than 3 years. About two third of pregnant women were primigravida and more than 97 percent of all pregnancies had attended antenatal clinic. More than 90 percent had taken the first dose of TT injection. Ninety five percent of deliveries were uncomplicated and 93 percent of deliveries were full term with significant difference between intervention and control group. Mean weight and length of newborns were statistically significant between intervention and control group. In the biochemical

indicators, level of thyroxin (T4) in the serum was significantly different between pre and post intervention study.

The study concludes with regular daily supplementation of iodine in oral form more than three months to the pregnant women of second and third trimesters with integrated standard maternal and neonatal health care will bring significant positive changes in perinatal outcomes. Intervention should be done in early stage of pregnancy to get desired outcomes. Regular oral iodine along with iron and folic acid tablets and standard maternal and neonatal health (MNH) care package has been recommended to implement during early stage of pregnancy. Further research in iodine supplementation during early pregnancy and perinatal outcomes should be conducted in large scale to find out the effect in mental development of children.

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Abbreviations

ANC	Ante Natal Check up
DHO	District Health Office
FCHV	Female Community Health Volunteer
IQ	Intelligent quotient
IDD	Iodine Deficiency Disorders
MND	Micronutrient deficiency disorders
MCHW	Maternal and Child Health Worker
SAC	School Age Children
TFT	Thyroid Function Test
TG	Thyroglobulin
TSH	Thyroid Stimulating Hormone
T3	Tri-iodothyronine Hormone
T4	Thyroxin Hormone
TT	Tetanus Toxoid
UIE	Urinary Iodine Excretion