



***WHAT IS  
ADVANCED  
MATERNAL AGE?***

*A woman who is 35  
years of age or older at  
the time of delivery is  
considered to be of  
advanced maternal age.*

It is important to be aware that every pregnant couple in the general population has a 2-3% risk of having a baby with a birth defect. While normal results of prenatal testing are reassuring, they do not guarantee the birth of a healthy baby.



**ADVANCED  
MATERNAL AGE**



### WHAT IS ADVANCED MATERNAL AGE?

A woman who is 35 years of age or older at the time of delivery is considered to be of late or advanced maternal age.

### WHY MIGHT I WANT TO CONSIDER PRENATAL DIAGNOSIS?

As maternal age increases, there is an increased risk for a baby with a chromosome abnormality.

Chromosomes are found in every cell of our body. They are the packages of our genetic information which are responsible for our body structure and function. Chromosomes are passed from parents to their children through the mother's egg and the father's sperm. The usual number of chromosomes is 46, arranged in 23 pairs. One copy of each pair comes from our mother and the other copy comes from our father.

Down syndrome is the most common chromosome change seen in newborn babies. Individuals with Down syndrome have some common physical characteristics, different degrees of mental handicap, and an increased risk for medical problems including congenital heart defects. Down syndrome is just one example of a chromosome abnormality. Other types of chromosome abnormalities can be more or less severe than Down syndrome, depending on the specific chromosome involved.

### WHAT IS MY AGE RELATED RISK?

Maternal Age (years)	Down Syndrome Risk	Risk of any Chromosome Abnormality
34	1/500	1/240
35	1/385	1/180
36	1/300	1/150
37	1/225	1/125
38	1/175	1/100
39	1/135	1/80
40	1/100	1/65
41	1/80	1/50
42	1/60	1/40
43	1/50	1/30
44	1/40	1/26
45	1/30	1/19
46	1/23	1/15
47	1/18	1/11
48	1/14	1/9
49	1/11	1/7

Hook EB, *Obstet Gynecol* 1981;58: 282-285

### WHAT TESTING IS AVAILABLE TO ME?

#### 1. Maternal Serum Screening

Maternal Serum Screening (MSS) is a blood test available to all pregnant women regardless of age. It is done between 15 and 20 weeks of the pregnancy. This blood test calculates the chance of a baby having Down syndrome, trisomy 18 and Open Neural Tube Defect. It is not a diagnostic test.

#### 2. Integrated Prenatal Screening

Integrated Prenatal Screening (IPS) is another screening test that calculates the chance of a baby having Down syndrome, trisomy 18, and Open Neural Tube Defect. This test is done in two parts. Part one is done between 11 and 13 weeks plus 6 days of the pregnancy and involves a special ultrasound (called Nuchal Translucency) and a blood test. Part two of the testing is a blood test that is done between 15 and 18 weeks plus 6 days of the pregnancy. Results of the IPS are given after part

two of the testing is completed. IPS cannot be done on a woman who is carrying twins, or if she has insulin dependent diabetes.

#### 3. Chorionic Villus Sampling

Chorionic villus sampling (CVS) is a test done to obtain a few cells from the developing placenta. This test is usually performed at 11-13 weeks of pregnancy. The cells from the placenta will provide information about the chromosomes of the developing baby.

There are two ways of doing CVS. One method inserts a needle through the mother's abdominal wall, and the other method puts a small tube into the vagina and into the uterus to sample the placenta. Ultrasound is used to locate the position of the developing placenta and the baby. There is about a 1% chance of miscarriage associated with this procedure. The results are ready in about 3-4 weeks. As CVS is not done in Northwestern Ontario, your health care provider would have to refer you to a larger centre.

#### 4. Amniocentesis

Amniocentesis is a test done to obtain a sample of the amniotic fluid surrounding the baby. This test is usually done around the 16th week of pregnancy. The cells in the amniotic fluid will provide information about the chromosomes of the developing baby.

This test involves the insertion of a needle through the woman's abdomen into the uterus and the removal of a small amount of fluid. Ultrasound is used to locate the position of the placenta and the baby, and to decide on the best "pocket" of the amniotic fluid to sample. There is about a 1/200 or 0.5% chance of miscarriage associated with this procedure. The results are available in about two to three weeks. Amniocentesis is done in Thunder Bay.

