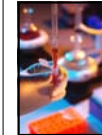


# TRIPLE/ QUADRUPLE SCREENS



**DR. RAYMOND MANSOOR**  
B Sc , MB BS , DM (OG, UWI), FACOG  
OBSTETRICIAN & GYNAECOLOGIST

TANNER ST. & CORN ALLEY  
P.O. Box W1361  
ST. JOHN'S  
ANTIGUA  
TEL/FAX: (268) 463 2232/3  
info@mansoormedical.org  
www.mansoormedical.org

# WHAT IS A TRIPLE/QUADRUPLE SCREEN?

## Introduction

This information will help you understand your choices, whether you share in the decision-making process or rely on your doctor's recommendations.

Not every woman needs a maternal serum triple or quadruple screen. Your decision about the triple screen will be best informed by looking at a number of factors. Consider the following when making your decision.

- *Before you undergo testing for birth defects, discuss the possible outcomes with your partner. Consider whether knowing about a birth defect would change your medical, birthing, or parenting plans.*

- *The triple screen test has a rate of false-positive results, which increases with the mother's age. This means you may experience unnecessary anxiety if you choose to have the test. (Quadruple screen test results are a little more dependable than triple screen.)*

- *The triple/Quadruple screen tests do not diagnose a birth defect—they estimate the **possibility** that your fetus has a birth defect. If your results indicated a higher-than-normal possibility, your next decision would be whether to have diagnostic testing, such as amniocentesis.*

If you are planning on having an amniocentesis because of known risk factors (including being age 35 or older), you can

skip the serum screening test. The amniocentesis offers solid diagnostic information; the serum screen does not.

## What is a triple/Quadruple screen test?

The maternal serum triple screen measures the amounts of three substances in a pregnant woman's blood: alpha-fetoprotein (AFP), human chorionic gonadotropin (hCG), and estriol (uE3). The levels of these substances help estimate the risk that a fetus may have certain defects. The test results are computed based on a woman's age, her weight, her race, and how far along her pregnancy is, among other factors.

The relatively new **quadruple screen** combines the triple screen and a test for the protein inhibin-A, which is produced by the fetus and the placenta. One large study of over 23,000 women has reported that the quadruple screen detects almost 86% of all

Down syndrome cases. Based on this study, the quadruple test is more likely to pick up Down syndrome and may be less likely to be false-positive than the triple screen. This screen is currently available in



I am related to someone with Down syndrome, or my partner is.	Yes	No	Unsure
I have a child with a neural tube defect or other birth defect.	Yes	No	Unsure
I have a diagnosed chromosomal disorder, or my partner does.	Yes	No	Unsure
I have diabetes.	Yes	No	Unsure
I am taking antiseizure medication.	Yes	No	Unsure
I will be age 35 or older on my due date.	Yes	No	Unsure
I am considering chorionic villus sampling or an amniocentesis because I am over age 35.	Yes	No	Unsure
I would not make any changes to my birthing, medical care, or parenting plans if I learned my fetus had a birth defect or Down syndrome.	Yes	No	Unsure
I cannot bear the thought of having a sick or dying newborn without knowing in advance.	Yes	No	Unsure
I cannot bear the thought of knowing in advance that I'm carrying a fetus with a birth defect.	Yes	No	Unsure

Information contained in this booklet is meant for informational purposes only and should not substitute the visit to your doctor nor his/her advice for your health care.

# TRIPLE/QUADRUPLE SCREENS



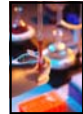
Antigua & Barbuda as a send out test.



These screens is only reliable when they are done between 15 and 20 weeks' gestation. There are most accurate when they are done at 16 to 17 weeks' gestation. It is therefore essential that a fetal ultrasound be used to confirm how many weeks pregnant you are.



Many doctors recommend that all women be offered the triple/quadruple screens. Some countries require that all women be offered these, while others do not. Even within the USA, some states ask that all women be offered the screens while others do not.



## What can these screen tests tell me?

The triple/quadruple screen estimates the risk that a fetus **may** have certain birth defects, including Down syndrome, neural tube defects, and certain rare genetic problems.

## What do I do if I have a positive triple or quadruple serum screen test result?

Normal results tell you that there is no need for further testing unless you have a separate concern, such as a known genetic disease in your family. Positive results tell you that there is a

possibility of a birth defect. However, if the average risk for your age is very low or your risk is above average but still very low, you may choose not to have any additional diagnostic tests.

If your serum screen results suggest that your fetus might have Down syndrome or a neural tube defect or other birth defect, you may first have a repeat serum screen. Repeat serum screen results may be normal (negative). If your results are negative, you'll need no further testing.

- If you don't have a repeat serum screen or your repeat screen results are still positive, a fetal ultrasound will be done as soon as possible. Your age and an accurate fetal age are necessary for interpreting serum screen results. If your test results are abnormal, a fetal ultrasound can confirm that the fetal age, and therefore your screen results, are as accurate as possible. An ultrasound can also be up to 99% accurate in detecting cases of neural tube defects at 15 to 20 weeks' pregnancy. However, ultrasound isn't a very dependable test for signs of Down syndrome or for genetic diseases.



- If your serum screen is positive and the fetal ultrasound shows no problems, you can have an amniocentesis to check for genetic problems. Amniocentesis is more than 99% accurate when used to diagnose genetic problems (including Down syndrome). In most cases, the amniocentesis results are normal.

- If your serum screen is positive and the fetal

ultrasound suggests a possible genetic fetal problem, an amniocentesis can be used to test for specific genetic markers and other substances in the amniotic fluid.

If a birth defect is found, you can learn what to expect and make plans for having a child with Down syndrome or a birth defect, or you can decide to terminate the pregnancy.



## What are the risks of not having a triple or quadruple serum screen test?

The most common risk of having a triple or quadruple screen test is unnecessary worry. Most women have normal serum screen results. Of women who have positive results, most turn out to have no problems. This tendency toward false-positive triple screen results increases as you age. (The quadruple screen may be slightly less likely to give you a false-positive result.)

If you don't have the triple or quadruple screen or other diagnostic tests, you could potentially give birth to a baby with an undiagnosed birth defect or Down syndrome.

- Such a birth can be more complicated and risky for the baby when a doctor is not expecting newborn health problems.



- You could give birth in a hospital that does not have a neonatal intensive care unit (NICU) for sick newborns.

- A fetus with a rare, severe defect sometimes dies before delivery.

- Without advance knowledge, you might not be emotionally prepared for a Down syndrome or sick newborn.

The decision whether to have the triple or quadruple screen test takes into account your personal feelings and the medical facts.

Use the worksheet overleaf to help you make your decision. After completing it, you should have a better idea of how you feel about having the triple or quadruple screen test. Discuss the worksheet with your doctor.

Circle the answer that best applies to you.

Use the following space to list any other important concerns you have about this decision.