Premarital health counseling & screening tests

You are getting married! Excellent! Go ahead! But just pause and answer me that did you see a Doctor?
You will certainly say, “A Doctor at this glorious and dreamy hour of my marriage…its’ uncanny ….it just switches me off!”
Friend, a Doctor’s mantra for marriage is, “LOVE ALONE IS NOT ENOUGH”.
It may be a love marriage or an arranged one…it’s all the same. But do you know everything about this person who is suppose to give you a fulfilling relationship for a lifetime. No, you certainly do not know about him/her. People come from different families and different backgrounds. It is definite that you do not know the biological and Medical profile of your prospective partner. So if you really love a person you should go ahead and get your self checked by a Doctor who will do a premarital health assessment of both the partners and find out that are you both medically compatible to each other. Always consider, “Am I fit for this marriage or I shall be a liability”?

What is premarital health checkup?
A premarital test is considered as a test that provides the base line health assessment of the prospective married couples and is defined as a test in which potential bride and the groom are tested for positive health, genetic, infectious and blood transmitted diseases to prevent any risk of transmitting any disease to each other and their children. An evaluation of family background and hereditary factors, age, diet, exercise, weight management and addictions and personal habits is done by way of a properly tailored premarital medical check up & screening.

Pre-marital screening helps to:
Assess the general health status of both partners
Detect infectious diseases e.g. HIV and Hepatitis B infection
Screen hereditary conditions that may effect the future offspring | e.g. Thalassemia, Haemophilia, Cystic fibrosis etc. which are preventable tragedies
Screening for communicable diseases like T.B
Screening for mental illnesses
Screen for fertility problems and timely counseling

The screening tests include:
Age of the individual whether early or late marriage
Physical examination including height, weight, B.P and secondary sex characters
Menstrual history and any disturbances related to it
Vaccination status including Hepatitis-B and Rubella
H/O Addictions to certain recreational drugs, Narcotics, Marijuana, Alcohol, Smoking etc.
Psychiatric assessment
Examination for all organ systems for any diseases like T.B, Diabetes, Heart disease etc.
Your hereditary status to rule out the genetic disorders

Investigations include:
- CBC i.e. complete blood count which has various components:
- TWBC, DLC, ESR for Acute and Chronic infectious diseases
- Platelet count
- PCV
- MCH Mean corpuscular volume (MCV) and mean corpuscular hemoglobin (MCH) are reduced in BTT
- MCHC
- MCV e.g. It is decreased in Thalassemia and is used as a mass screening test for this disorder.
- Haemoglobin & electrophoresis in cases of genetic haemoglobinopathies like Sickle cell anaemia, Thalassemia. The diagnostic test for BTT is estimation of hemoglobin A2 by electrophoresis or column chromatography. Both these techniques are expensive and time-consuming

Peripheral blood smears to see for normal and abnormal cells

Blood Sugar for detection of Diabetes.

S. Cholesterol for Hypertension and Cardiac disorders

VDRL for Syphilis testing

ABO-RH to screen out the Rh-negative ladies and their full counseling about the risks in pregnancy

Complete Urine Analysis

HIV Elisa and other tests like WB test, CD-4, Virus load etc. are also performed if required

Hepatitis-B Screening by testing the presence of Australia antigen.

X-Ray chest if required

Pap smear if required in cases of females with multiple sexual partners

Ultrasound of Female pelvis to see the status of uterus and the ovaries.

Semen test of the male partner – should be examined in all cases to diagnose that who has normal semen test and who has absent sperms (Azoospermia).

Genetic tests-Doctors usually go for culture based genetic screening. Youth of both gender going to be married belonging to a particular caste or culture have to undergo Premarital Genetic screening for Genetic diseases and consanguinity and if required to be referred for genetic counseling

Genetic tests are done by analyzing small samples of blood or body tissues. They determine whether you or your partner carry genes for certain inherited disorders. Determine trait status for individuals of high-risk ethnic groups. Depending on your family history and ancestry different tests are designed for different disorders.
Haemophilia diagnosis
Blood tests are used to determine:
1. How long it takes for your blood to clot – Clotting time is assessed
2. Whether your blood has low levels or missing of any of the clotting factors especially Factor viii and Factor ix.
3. Diagnosis is done by direct DNA testing and is the most accurate method for identifying carriers. It finds out the mutant within the gene for Haemophilia A & B. A blood sample from the male family member with hemophilia is checked first. In about 98% of cases, a mutation can be identified. Next, a blood sample from the woman desiring carrier testing is obtained, and her DNA is checked for the specific mutation. Such testing is performed at specialized laboratories

Thalassemia Screening:
The following tests are used to screen for thalassemia disease and/or trait:
1. Complete blood count- A complete blood count will identify low levels of hemoglobin, small red blood cells and other red blood cell abnormalities that are characteristic of a thalassemia diagnosis.
2. Haemoglobin electrophoresis with quantitative hemoglobin A2 and hemoglobin F-. A hemoglobin electrophoresis is a test that can help identify the types and quantities of hemoglobin made by an individual and can be used to determine the types and quantities of hemoglobin present. Hemoglobin electrophoresis results are usually within the normal range for all types of alpha thalassemia. However, hemoglobin A2 levels and sometimes hemoglobin F levels are elevated when beta thalassemia disease or trait is present.
3. Free erythrocyte-protoporphyrin (or ferritin or other studies of serum iron levels). Since thalassemia trait can sometimes be difficult to distinguish from iron deficiency, tests to evaluate iron levels are important.
4. Sometimes DNA testing is needed in addition to the above screening tests. This can be performed to help confirm the diagnosis and establish the exact genetic type of thalassemia.
Genetic testing has developed enough so that doctors can pinpoint missing or defective genes.
Many different types of body fluids and tissues can be used in genetic testing. For deoxyribonucleic acid (DNA) screening, only a very tiny bit of blood, skin, bone, or other tissue is needed.

HIV Testing

Today our society is certainly in need to be more open in discussing about HIV & AIDS. Call of the day is that all couples getting married should be tested for HIV as the problem is not hiding the status but it is not knowing about their infected states.

HIV/AIDS spreads by:

1. Sexual intercourse both vaginal, anal and oral (70% to 80%) Here virus enters directly through the linings of vagina, rectum, mouth and the opening at the tip of penis or through erosions and cuts of the skin or mucous membranes.
2. Blood transfusions (5% to 7%)

3. Perinatal that is mother to child during pregnancy, childbirth and Breast feeding (10% to 15%)

4. Needle exposure in Hospitals and sharing of same needles as in Drug users (1% to 10%)

TESTS FOR HIV

1. ELISA test
2. Western Blot technique-it is a confirmatory technique.
3. CD-4 test
4. Viral load assessment

Elisa test is used routinely to screen for HIV/AIDS. A second repeat test is done after 3 months (window period) to ascertain the positive status in suspected cases

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