

IFFS

International Standards of Infertility Practice

Standard 1

Pre-pregnancy advice and assessment Recommendation for Practice

Name	Pre-pregnancy advice and assessment recommendation for practice
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Introduction

The goal of IFFS Practice Standards is to provide policy and decision-makers and the clinical and scientific community with a set of recommendations that can be used as a basis for developing or revising institutional or national guidelines on selected practice recommendations for infertility practice.

The document addresses minimal standards of practice but does not provide rigid guidelines but rather gives recommendations that provide the basis for rationalizing the provision of infertility services in view of the most up-to-date information available.

Because country situations and programme environments vary so greatly, it is inappropriate to set firm international guidelines on infertility practice. However, it is expected that institutional and national programmes will use these practice recommendations for updating or developing their own infertility guidelines in the light of their national health policies, needs, priorities and resources. The intent is to help improve access to, quality of, and safety of infertility and assisted conception services. These improvements must be made within the context of users' informed choice and medical safety. Adaptation is not always an easy task and is best done by those well-acquainted with prevailing health conditions, behaviours, and cultures.

Rationale

Infertility is a global problem and consultations between those suffering from infertility and health care professionals provides the opportunity to discuss a range of factors which impact on maternal and child health. Women and their partners who seek advice and help to conceive should be provided with information and support to optimise their health and environmental circumstances in order to improve their reproductive potential and the outcome for both mother and baby.

Definition of screening

For the purposes of this practice recommendation the term “screening” means a recommended test that all patients presenting with infertility should be offered or advised to undertake.

Scope

This standard is applicable to clinicians in all health care settings involved in advising women who are trying to conceive and those who are pregnant.

Recommendations for Practice

Doctors and/or nurses and/or appropriately trained health care workers should give the following pre-conceptual advice:

Female Weight

Women should be advised that a body mass index (BMI) < 18 and >29 is associated with reduced fertility and adverse outcomes in pregnancy. Women whose weight falls outside these parameters should be provided with appropriate dietary and nutritional guidance.^{1,2,3}

Smoking

Women (who smoke) should be advised that smoking reduces fertility, is associated with adverse outcomes of pregnancy and increases the risk of cancer and cardiovascular disease. All methods of consumption including topical and inhalation pose a risk and should be avoided. When resources permit, the patient should have access to smoke cessation programmes. Male partners should also be advised of the detrimental effects of smoking both on their sperm quality and general health.⁴

Age

Women should be advised that natural fertility and the chances of successful infertility treatment declines with increasing female age. Furthermore, women should be advised that the odds of miscarriage and a child being born who is affected by Trisomy 21 (Down's Syndrome) or other aneuploidy increases with increasing female age. Women should also be advised that the risk of serious pregnancy related complications such as hypertensive disease, antepartum haemorrhage, diabetes and thrombo-embolic disease increases with increased maternal age.

Alcohol

Women should be advised of the detrimental effects of excess alcohol intake on their developing baby.⁵ No minimum safe amount of alcohol is known. Therefore women should be advised to take no alcohol in pregnancy.⁶ Women whose intake of alcohol is excessive should be provided with guidance and support to reduce their intake.

Nutritional advice and dietary supplements

There is little evidence to support the view that dietary supplements increase the likelihood of conception. There is considerable epidemiological evidence for association between a range of dietary deficiencies and adverse maternal and neonatal outcome but a paucity of good evidence for the value of dietary supplementation to improve these outcomes.

Women who are trying to conceive should be advised of the benefit of a nutritionally balanced diet and should be advised to take Folic Acid supplements as this has been shown to reduce the incidence of spinal malformations.^{7,8}

Iron demands are increased in pregnancy. Supplementation is recommended in those at risk of reduced iron levels and should also be provided routinely to women in developing countries.

Calcium supplementation should be considered for those who are at risk of reduced calcium levels because of their diet and those who are at risk of pre-eclampsia⁹.

Vitamin A and B-Carotene supplements should be considered for those who have deficiency in Vitamin A.¹⁰ Vitamin D deficiency is increased in those with reduced exposure to sunlight and those with dark skins and supplementation should be considered in these groups.

Screening for inherited disorders

About 5% of the world's population are carriers of a potentially pathological haemoglobin gene and 300,000 infants worldwide are born with thalassaemia syndromes or sickle cell anaemia. Pre-pregnancy assessment of risk of transmission of an inherited disorder for which there is a known increased risk of carrier gene prevalence in the community should be performed. The list of such diseases includes but is not limited to: Thalassaemia, Sickle Cell Disease, Tay Sachs disease and Cystic Fibrosis^{11,12}

Prescription drugs in pregnancy

Women taking prescribed medication should have this reviewed prior to pregnancy. Many drugs are safe in pregnancy but certain categories of drugs pose particular risks e.g. anti-epileptic drugs. Medication should be assessed for its appropriateness, dosage schedule and safety in pregnancy.

Surveillance for vaccine preventable congenital syndromes of the newborn

All women should be offered serological assessment of rubella immunity and vaccination in the event of absence of immunity¹³. All women should be offered vaccination against Tetanus in countries where maternal and neonatal infection are prevalent.¹⁴

Screening for sexually transmitted disease

All women and their partners should be offered screening for diseases that may transmit between partners before and during pregnancy and between pregnant women and their infants. Testing should include Hepatitis B and C, Chlamydia, Gonococcus, HIV and Syphilis according to the epidemiological needs of the area.¹⁵

Assessment and control of pre-existing maternal disease

Assessment of *known* maternal disease that may affect or be affected by pregnancy should be undertaken and the woman advised of the risks of pregnancy both to her own health and that of the baby. Optimisation of treatment of the pre-existing maternal disease should be undertaken before pregnancy. Conditions that fall into this category include but are not limited to diabetes, renal disease, heart disease, HIV and gynaecological disorders such as fibroids / myoma.

It is also recommended that thyroid disease is screened for by testing serum thyroid stimulating hormone (TSH).

Implementation Standard 1.0 will be circulated in the following ways:

1. Publication in the IFFS newsletter
2. Inclusion in the IFFS World Assisted Conception Survey
3. Circulation to all member countries secretaries
4. Request to WHO and FIGO for inclusion in relevant publications

References

¹ Global strategy on Diet, Physical Activity and Health. WHO; 2004

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- ² Guzick DS, Wing R, Smith D, Berga SL, Winters SJ. Endocrine consequences of weight loss in obese, hyperandrogenic, anovulatory women. *Fertil Steril* 1994; 61:598–604.
- ³ Clark AM, Roberts BG. Maximizing weight loss in the overweight infertile patient: a prospective randomized controlled trial. 16th Annual Meeting of ESHRE, 2000, Bologna, Italy, 2000. Abstract No.O-162 *Hum Reprod* 2000;15(Abstract Book 1):65–66.
- ⁴ Lumley J, Oliver S, Waters E. Interventions for promoting smoking cessation during pregnancy (Cochrane Review). The Cochrane Library, Issue 3. Chichester, John Wiley & Sons, 2004
- ⁵ Alcohol Consumption in Pregnancy Royal College of Obstetricians and Gynaecologists.. Guideline No. 9 London: RCOG Press, 1999.
- ⁶ Alcohol Consumption in Pregnancy Royal College of Obstetricians and Gynaecologists.. Guideline No. 9 London: RCOG Press, 1999.⁷ Research on reproductive health at WHO – pushing the frontiers of knowledge. Human Reproduction group. WHO, Geneva 2004
- ⁸ Lumley J, Watson L, Watson M, Bower C. Periconceptional supplementation with folate and/or multivitamins for preventing neural tube defects. *Cochrane Database Syst Rev* 2001;(3):CD001056.
- ⁹ Hofmeyr GJ, Lawrie TA, Atallah AN, Duley L. Calcium supplements during pregnancy for preventing hypertensive disorders and related problems. *Cochrane Database of Systematic Reviews* 2010, Issue 8. Available at <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD001059>
- ¹⁰ Villar J, Merialdi M, Gulmezoglu AM, Abalos E, Carroli G, Kulier R, de Oni M. Nutritional interventions during pregnancy for the prevention of treatment of maternal morbidity and preterm delivery: an overview of randomized controlled trials. *J Nutr*. 2003; 133: 1606S
- ¹¹ Thalassaemia and other haemoglobinopathies. Report by the Secretariat to the Executive Board of the WHO 118th Session. Ref EB118/5. May 2006
- ¹² Millenium Development Goal number 4. WHO. 1999.
- ¹³ Eliminating measles and rubella and preventing congenital rubella infection. WHO European Region strategic plan 2005-2010. WHO; Copenhagen. 2005
- ¹⁴ Maternal and neonatal tetanus elimination. WHO 2007
http://www.who.int/immunization_monitoring/diseases/MNTE_initiative/en/index.html
- ¹⁵ Prevention and control of sexually transmitted infections: draft global strategy. Report by the Secretariat to the 59th World Health Assembly of the WHO, A59/11: May 2006