

With the participation of



Consensus conference

Pregnancy and smoking

7-8 October 2004

Grand Palais - Lille

About these guidelines¹

This consensus conference was sponsored by *Alliance contre le tabac*, *Association périnatalité prévention recherche information (APPRI)*, *Réseau européen hôpital sans tabac*, and *Réseau hôpital sans tabac*. Names of participating and supporting organisations are given in the Acknowledgements. The conference was held on 7 and 8 October 2004 at the Grand Palais in Lille and conducted in accordance with the method recommended by the *Agence nationale de l'Accréditation et de l'Évaluation en Santé (ANAES)*². The conclusions and guidelines were drawn up by an independent conference jury. ANAES is not responsible for their content .

Steering Committee

M. Delcroix, *chair, gynaecologist/obstetrician, Bailleul*

P. Arwidson, *public health doctor, INPES, Saint-Denis*; I. Berlin, *pharmacologist specialising in smoking addiction, Paris*; D. Boussiron, *psychiatrist, Clermont-Ferrand*; B. Carbonne, *gynaecologist/obstetrician, Paris*; A. Cenzano, *coordinator, National Committee against Smoking (CNCT), Paris*; JM. Colson, *National Board of Doctors (Ordre des Médecins), Paris*; B. Dautzenberg, *chest physician, Paris*; N. Dequidt, *gynaecologist/obstetrician, director of mother and child care centre (PMI 57), Metz*; P. Dosquet, *specialist in ANAES methodology, ANAES, Saint-Denis La Plaine*; G. Dubois, *public health doctor, Amiens*; M. Galliot-Guilley, *laboratory analyst/toxicologist, Paris*; C. Geffrier d'Acremont, *specialist in ANAES methodology, ANAES, Saint-Denis La Plaine*; J. Girona, *National Board of Midwives (Ordre des sages-femmes), Paris*; C. Gomez, *midwife specialising in smoking addiction, Arras*; A. Hirsch, *chest physician, Paris*; C. Lejeune, *neonatologist, Colombes*; D. Martin, *public health doctor, National Health Directorate (DGS), Paris*; H. Missey-Kolb, *medical gynaecologist, Poissy*; C. Paindavoine, *specialist in ANAES methodology, ANAES, Saint-Denis La Plaine*; AM. Schoelcher, *senior nursing manager, care coordinator for Paris hospitals (AP-HP), Paris*; T. Urban, *chest physician, Angers*; MF. Wittmann, *senior nursing manager, technical adviser, French Hospital Federation (FHF), Paris*.

Jury

N. Dequidt, *chair, gynaecologist/obstetrician, director of mother and child care centre (PMI 57), Metz*

F. Blanchet, *pharmacist, Paris*; C. Boscher, *paediatrician, Nantes*; C. Dognin, *gynaecologist/obstetrician, Douai*; E. Dupont-Zacot, *public health doctor, Saint-Denis*; MJ. Husset, *journalist, Paris*; C. Leroy, *midwifery manager, Arras*; C. Liberge, *nurse, public health project manager, Le Havre*; G. Mathern, *chest physician specialising in smoking addiction, Saint-Chamond*; I. Pagniez, *medical gynaecologist, Lille*; B. Quatelas, *psychologist, Nîmes*; F. Raphaël, *general practitioner, Behren-lès-Forbach*

Panel experts

M. Adler, *general practitioner specialising in smoking addiction, Clamart*; A. Beugniez, *medical gynaecologist, occupational doctor, Lille*; N. Billaud, *neonatologist, Metz*; C. Blum-Boisgard, *medical advisor, National Health Insurance fund (CANAM), Saint-Denis*; J. Boccara, *gynaecologist/obstetrician, Paris*; H. Boutigny, *specialist in periodontics, Lille*; A. Burguet, *paediatrician, Poitiers*; M. Collet, *gynaecologist/obstetrician, Brest*; M. Contal, *paediatrician specialising in smoking addiction, Nîmes*; MP. Cournot, *epidemiologist, Paris*; E. Dautzenberg, *midwife specialising in smoking addiction, Versailles*; MD. Dautzenberg, *haematologist specialising in smoking*

¹ The guidelines are taken from a full-length report in French available from the *Haute Autorité de santé* website: www.has-sante.fr.

² Since January 2005, ANAES has become part of the *Haute Autorité de santé (HAS, i.e. French National Authority for Health)*.

addiction, Paris; É. Delcourt-Debruyne, specialist in periodontics, Lille; J. de Mouzon, epidemiologist, Le Kremlin-Bicêtre; S. Depret-Mosser, gynaecologist/obstetrician, Lille; M. Desurmont, paediatrician, expert in forensic medicine, Lille; J. Dietsch, gynaecologist/obstetrician, coordinator of the perinatal network of Lorraine, Briey; G. Dubois, public health doctor, Amiens; L. Ducret, gynaecologist, Paris; M. Durand, pharmacist, Champigneulle; G. Errard-Lalande, doctor specialising in smoking addiction, Tours; B. Fontaine, gynaecologist/obstetrician, Angoulême; D. Garelik, internist specialising in smoking addiction, Paris; C. Gomez, midwife specialising in smoking addiction, Arras; H. Gourlain, laboratory analyst/toxicologist, Paris; G. Grangé, gynaecologist/obstetrician, Paris; I. Grémy, public health doctor, Paris; P. Guichenez, chest physician specialising in smoking addiction, Béziers; A. Halimi, doctor specialising in smoking addiction, Tours; G. Kayem, gynaecologist/obstetrician, Créteil; J. Le Houezec, public health adviser specialising in tobacco dependence, Rennes; P. Lemarié, gynaecologist/obstetrician, Metz; F. Letourmy, doctor specialising in smoking addiction, Toulouse; L. Marpeau, gynaecologist/obstetrician, Rouen; S. Marret, neonatologist, Rouen; M. Mathieu-Nolf, toxicologist, Lille; P. Nguyen, alcoholologist specialising in smoking addiction, Roanne; M. Palot, anaesthetist/intensivist, Reims; C. Pelle, midwife specialising in smoking addiction, Grenoble; J. Perriot, chest physician, Clermont-Ferrand; C. Schepens, specialist in forensic medicine, public health doctor, Clermont-Ferrand; S. Sepaniak, doctor/laboratory analyst, Nancy; K. Slama, psychologist/sociologist, Paris; É. G. Sledziewski, philosopher/political scientist, Strasbourg; A. Stoebner, doctor specialising in smoking addiction, Montpellier; B. Théret, neonatologist, Arras

Literature review group

A. Diguët, gynaecologist/obstetrician, Rouen; P. Habib, gynaecologist/obstetrician, Arras; C. Heilbronner, paediatrician, Paris; AL. Le Faou, public health doctor specialising in smoking addiction, Paris; J. Nizard, gynaecologist/obstetrician, Poissy; V. Trosini-Désert, chest physician, Paris.

Introduction

The following six questions were put to the jury.

- | | |
|-------------|---|
| Question 1. | What are the epidemiological data on maternal and paternal smoking? |
| Question 2. | What are the consequences of smoking on pregnancy and childbirth? |
| Question 3. | How should women who smoke be managed? |
| Question 4. | What are the short-, medium- and long-term consequences of smoking during pregnancy? |
| Question 5. | How <i>in utero</i> exposure of the fetus to smoking during the perinatal period should be managed? |
| Question 6. | What public health measures should be proposed or validated to reduce smoking among women? |

Epidemiology and consequences of smoking during pregnancy

It is estimated that 37% of women smoke before the start of their pregnancy, and that 19.5% of pregnant women continue to smoke throughout either all or part of their pregnancy. Passive smoking among pregnant women is not well quantified but is common.

Like any other addiction, smoking is an indicator of the suffering caused by a range of physical and/or psychological and/or social problems. It is a known risk factor for female and/or male fertility problems.

Maternal smoking during pregnancy increases the risk of :

- complications during pregnancy such as *abruptio placentae* and *placenta praevia*,
- intrauterine growth retardation,
- prematurity,
- sudden infant death,
- higher global consumption of care during infancy.

Because of these risks, both active smoking by the woman herself and passive smoking linked to smoking by her partner, family, friends or colleagues, before, during and after her pregnancy should be taken into account.

How to manage smoking in women before, during, and just after pregnancy

Ideally, women should give up smoking before conception or as early as possible during pregnancy. However, giving up smoking is valuable at any stage of pregnancy and even after delivery.

Women should give up smoking completely. Just reducing maternal smoking is not enough to prevent maternal, fetal or neonatal complications during pregnancy or delivery.

Smoking management should be a part of a pregnant smoker's global care. The woman should feel she is respected as an individual and should not be made to feel guilty about smoking.

Health professionals should receive training in helping women to give up smoking, particularly during pregnancy and after delivery.

- **Before pregnancy**

The best way of preventing women smoking during pregnancy is to prevent them from starting to smoke in the first place. Awareness-raising should begin during pre-adolescence and be reinforced during adolescence, in the school, outside school and in the family environment. Use should be made of all appropriate networks of associations and national health education organisations. The aim should be to involve young people in a partnership.

An important way to help adolescents is to undermine the image of women smokers by enhancing the image of women who do not smoke.

Publicity campaigns are needed to fight manipulation of young people by the tobacco industry. These should make use of all types of media, particularly those aimed at young girls.

Adolescents' appointments with health professionals should always be an opportunity to emphasise the damage smoking does.

- **During pregnancy**

Occupational doctors should ensure observance of the law against exposing pregnant non-smokers to passive smoking, by suggesting adjustments or changes to work conditions or, failing this, by giving time off work. They should offer pregnant smokers help in giving up smoking. Since the public health policy law of 9 August 2004 came into effect, cases can be

referred to workplace inspectors who have the right to intervene. The occupational doctor should complete the appropriate section in the maternity record.

All maternity units must be strictly no smoking areas.

All pregnant women should have a prenatal interview with a health professional (eg a midwife) during the first trimester of pregnancy. This in-depth interview should cover the mother's everyday environment; it should highlight any risk factors during pregnancy, particularly addictive behaviours and the problems they cause during pregnancy, and should offer a practical solution to help her give up smoking suited to her case. A reimbursement tariff for this interview should be established.

Active or passive smoking should be recorded in the maternity record.

Tobacco smoke intake should be measured by an expired-air carbon monoxide (CO) test. A CO analyser can easily be used during any prenatal or postnatal consultation. Its use is a way of urging both the pregnant woman and the health professional to quit smoking and of reinforcing their motivation during their attempt.

Psychological and behavioural supportive approaches are the first-line choices throughout the management of pregnant smokers.

If a pregnant woman cannot stop smoking quickly, either by herself or with psychological and behavioural support, this is a sign of severe tobacco dependency. Nicotine replacement therapy (NRT) may then make it easier for her to give up smoking. NRT may be prescribed at any stage during the management of a pregnant smoker.

At present, bupropion is not recommended for helping pregnant women to give up smoking.

- **During delivery**

During perinatal care, women will receive standard treatment for smoking-related maternal and neonatal complications. Women who continue to smoke right up to and during labour and delivery should be identified, without making them feel guilty.

When a woman who has continued to smoke throughout her pregnancy is admitted to the maternity unit, measuring her CO level may encourage the health care professionals to increase their vigilance with regard to the early diagnosis, prevention and treatment of maternal and/or neonatal complications.

- **After the birth**

The health care professionals at the birth need to be convinced of their role in:

- promoting breastfeeding by all mothers, including mothers who smoke or who are on NRT,
- persuading women smokers of their ability to be mothers,
- providing the mother (and the father if he smokes) with information on aids to giving up smoking,
- urging both the mother and father to stop smoking after delivery to avoid exposing the newborn to passive smoking.

After delivery, psychological and behavioural approaches are first-line choices to help both the mother and father to stop smoking.

NRT may be prescribed after the birth and during breastfeeding. At present, bupropion is not recommended for helping women who are breastfeeding to give up smoking.

Special attention should be given to young mothers who stop smoking just before or during their pregnancy. They should have special support to stop them resuming smoking after delivery.

The child's environment should be free of tobacco smoke pollution. This includes the home and everywhere they go.

The guidelines for preventing sudden infant death should be complied with. A child should not share the bed of a mother and/or father who smokes as smoking increases the risk of sudden death already inherent to co-sleeping.

Proposed studies

Further studies are needed on smoking and pregnant women, specifically:

- a national survey to assess the prevalence of active smoking among pregnant women and passive smoking in their environment, using a biological marker of smoking;
- local surveys providing indicators for adapting national responses to local issues;
- further research on biological markers of smoking, so that NRT can be tailored to individual pregnant or breastfeeding women;
- research into aids to giving up smoking aimed specifically at adolescents, particularly when smoking is associated with other addictive behaviours;
- studies of the effects of NRT on the fetus. Data on the course of pregnancy and its outcomes could be shared if there were a common registry for practitioners prescribing medicines for smoking cessation to pregnant women;
- studies of the medium- and long-term risks in adolescents who were exposed to their mother's smoking *in utero* (cancer, congenital malformations, obesity, syndrome X, abnormal psychomotor development, behavioural problems, addiction to smoking or other addictions);
- a national registry of fetal malformations that holds data on smoking, alcohol and cannabis use.

The lack of data, absence of coordinated action and the dispersion of resources make it desirable to set up a national observatory of pregnancy and birth.

Guidelines for public health measures

• General prevention measures

Smoking status should be recorded in the personal medical record.

Exposure of the baby to family smoking should be recorded on the compulsory certificates issued on day 8 and at months 9 and 24.

Publicity campaigns are needed to reduce passive smoking by pregnant women and children. In particular, there should be regular campaigns on the role of smoking in sudden infant death.

The proposal to post signs in public premises, in particular in restaurants, bars and pubs where people may smoke (as described in the Évin law) saying "Smoking area, not recommended for pregnant women or young children" should be considered.

The sale of tobacco-free cigarettes should be prohibited as they produce a high level of CO.

- **Measures to help pregnant smokers**

Local units need to be set up for pregnant smokers and their partners, where consultations with specialists from a number of disciplines are available to help them give up smoking. These units should be located in a maternity unit if possible, and should include at least a specialist in smoking addiction, a dietician and a psychologist. Access should be free of charge.

It is recommended that the cost of NRT should be reimbursed for pregnant women who smoke.

- **Measures concerning health professionals**

Health professionals should be aware that they set an example with regard to smoking.

Tobacco addiction should be included in basic medical training and continuing medical education for all health professionals or education professionals who may come into contact with pregnant women and their children.

Child minders should be made aware of the possible harmful effects of their smoking and of that of those around them on the children they look after. Whether or not they smoke should be taken into account when they are appointed.

Acknowledgements

Participating organisations

Assistance Publique – Hôpitaux de Paris; Association française des équipes de liaison et de soins en addictologie; Collège national des gynécologues et obstétriciens français; Collège national des sages-femmes; Comité national contre le tabagisme; Conseil national de l'ordre des médecins; Conseil national de l'ordre des sages-femmes; Fédération hospitalière de France; Fédération nationale des collèges de gynécologie médicale; Fédération nationale des pédiatres néonatalogistes; Groupe d'études grossesse addictions; Institut national pour la prévention et l'éducation en santé; Ligue nationale contre le cancer; Office français de prévention du tabagisme; Société française de biologie clinique; Société française de pédiatrie; Société française de toxicologie analytique; Société de pneumologie de langue française; Société de tabacologie.

Supporting organisations

Académie nationale de médecine; Association des utilisateurs de dossiers informatisés en pédiatrie obstétrique et gynécologie; Association nationale des intervenants en toxicomanie; Centre interservices de santé et de médecine du travail en entreprise; Collège national des généralistes enseignants; Conseil national de l'ordre des pharmaciens; Conseil national des chirurgiens-dentistes; Droits des non-fumeurs; Espace de concertation et de liaison addictions tabagisme; Fédération française d'addictologie; Institut Rhône-Alpes de tabacologie; Mission interministérielle de lutte contre les drogues et les toxicomanies; Société de toxicologie clinique; Société française d'alcoologie; Société française d'anesthésie et de réanimation; Société française de cancérologie privée; Société française de gynécologie; Société française de médecine périnatale; Société française de santé publique; Society for research on nicotine and tobacco; Tabac & liberté.

Financial support

Caisse nationale de l'assurance maladie des professionnels indépendants; Conseil régional du Nord-Pas-de-Calais; Direction générale de la santé; Ligue nationale contre le cancer; Mutuelle nationale des hospitaliers; Aventis; EOLYS; FIM; GlaxoSmithKline; Novartis Santé Familiale; Pfizer; Pierre Fabre Santé; Roche Nicholas.