

# Stopping smoking in pregnancy:

A briefing for maternity care providers

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**CPD Training and Certificate of Assessment**



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## Background

**Smoking in pregnancy poses significant health risks to both mother and baby.<sup>1-4</sup> For the mother, smoking is associated with a significantly increased risk of miscarriage, ectopic pregnancy, placenta praevia and deep vein thrombosis.<sup>1-4</sup>**

In addition, there is an increased risk of stillbirth, premature birth, low birth weight, fetal growth restriction (FGR) and neonatal death for babies born to mothers who smoke, and they are twice as likely to die from Sudden Infant Death Syndrome (SIDS).<sup>1-5</sup> Children born to mothers who smoke are more likely to have behavioural problems, including attention and hyperactivity problems, learning difficulties and reduced educational performance, and respiratory problems including asthma, wheeziness and frequent chest infections.<sup>1,4,6-7</sup>

**Exposure to secondhand smoke during pregnancy carries much of the same risks.<sup>1,4,8</sup>**

*Table 1: Impact of smoking and exposure to secondhand smoke in pregnancy<sup>1,4,8</sup>*

Health effect	Maternal smoking	Secondhand smoke
Low birth weight (<2500 g)	Double the likelihood	Increased risk
Stillbirth	Double the likelihood	Increased risk
Miscarriage	24 – 32% more likely	Possible increase
Preterm birth	27% more likely	Increased risk
Heart defects	50% more likely	Increased risk
Sudden Infant Death	2 – 3 times the risk	Increased risk
Neonatal death and admissions	Increased risk	Increased risk
Behavioural and learning problems	Increased risk	Increased risk
Respiratory problems	Increased risk	Increased risk

While many women stop smoking by themselves prior to becoming pregnant or once they learn they are pregnant,<sup>9</sup> the latest data from 2018/19 indicate that 1 in 10 (10.6%) women in England continue to smoke throughout their pregnancy.<sup>10</sup> This rate varies across England and in some areas almost a quarter of pregnant women report smoking during their pregnancy.<sup>10</sup>

Rates of smoking in pregnancy also differ across groups with mothers aged 20 or under being six times more likely than those aged 35 and over to have smoked throughout pregnancy (35% and 6% respectively).<sup>10</sup> Pregnant women are also more likely to smoke if they are less educated, live in rented accommodation and are single or have a partner that smokes.<sup>11-12</sup>

Many pregnant women who smoke can find quitting to be a significant challenge and need considerable support to stop successfully. The reason is that nicotine contained in tobacco while not particularly harmful (it is the tar and carbon monoxide in tobacco smoke that cause most of the health problems), it is highly addictive, and smoking is a chronic relapsing condition.

**Women who smoke should be supported with quitting as early as possible in pregnancy.** Quitting at any stage of pregnancy will have significant benefits to both mother and baby's health. However, research has shown that **women who stop smoking before 15 weeks of pregnancy reduce their risk of spontaneous premature birth and of having a low birth weight baby to the same as a non-smoker.**<sup>13-15</sup>

**We also know that there is no safe level of smoking during pregnancy.**

Smoking even a few cigarettes a day poses a significant risk.<sup>16</sup>

While some women have reduced their smoking, the ultimate goal should be to quit completely.

**Myth: “Quitting smoking is too stressful for mum and baby.”**

**Fact:** It is a myth that quitting smoking puts extra stress on baby and mum. It is proven that people who stop smoking have less anxiety, depression and stress and in fact experience improved mood than those who continue to smoke.<sup>17</sup> Likewise, a UK study also found women who receive support with stopping smoking do not have higher stress levels.<sup>18</sup> Ensuring women are supported by a trained stop smoking practitioner is critical for making quitting successful.

**All maternity care providers have a role to play in addressing tobacco use and supporting women with stopping smoking. This is mainly by identifying who smokes, triggering quit attempts and referring women to evidence-based stop smoking support. This is known as Very Brief Advice on Smoking (VBA).**

Very Brief Advice on smoking (VBA) can motivate, support and facilitate women to quit. It is recommended that midwives perform carbon monoxide (CO) testing with all pregnant women and deliver VBA as part of routine antenatal care.

**Midwives and other maternity care providers are especially well placed to deliver Very Brief Advice (VBA) to pregnant women.**

Supporting women who smoke to stop is also part of the **Professional Standards of Practice and Behaviour for Nurses, Midwives and Nursing Associates.**<sup>19</sup>

Identifying pregnant smokers by assessing exposure to Carbon Monoxide (CO) and supporting women to access help to stop is a key part of the **'Saving Babies Lives'** care bundle and is recognised by **NICE best practice**.<sup>20–22</sup>

**NICE Guidance recommends all midwives who work with pregnant women:**<sup>22</sup>

- understand the impact that smoking and secondhand smoke can have on a woman and her unborn child
- know how to ask them questions in such a way that encourages them to be open about their smoking
- always recommend quitting rather than cutting down
- have received accredited training in the use of carbon monoxide (CO) monitors
- know what local evidence-based stop smoking support is available and how to refer women
- refer all women who smoke, or have stopped smoking within the last 2 weeks, to stop smoking support

**This briefing is aimed at helping members of the maternity care team to deliver VBA to their patients** in order to maximise the opportunity for pregnant women who smoke to get expert support before, during and after their quit attempt.

This briefing is a complement to the National Centre for Smoking Cessation and Training (NCSCCT) online training on:

- **Very Brief Advice on Smoking (VBA) for Pregnant Women**
- **Specialty Training on Smoking Cessation in Pregnancy and the Post-partum Period**

More information on available training can be found at the end of this document.

## Very Brief Advice on Smoking

There are three simple steps to intervening with pregnant women who smoke, this is known as Very Brief Advice on Smoking (VBA):

### ASK

#### CONDUCT CARBON MONOXIDE (CO) TESTING & ASK ABOUT SMOKING

Explain that CO testing is routinely conducted with all pregnant women. Explain what CO is, why monitoring is important and carry out CO test.

Ask the women about her smoking status (smoker, ex-smoker, or a non-smoker) and record in maternity records.

### ADVISE

#### ON IMPORTANCE OF QUITTING WITH SUPPORT

For women who smoke or are ex-smokers, explain about the health benefits of stopping for the woman and her baby. Advise her on the importance of stopping smoking completely – not just cutting down. Explain the best way of quitting is with support from a trained stop smoking practitioner.

***“Stopping smoking is the single most important thing that you can do for your baby’s health and reduce pregnancy related complications. It’s important to quit as early as possible in your pregnancy. Help is available and many women have found this useful.”***

### ACT

#### REFER WOMEN TO QUIT SMOKING SUPPORT

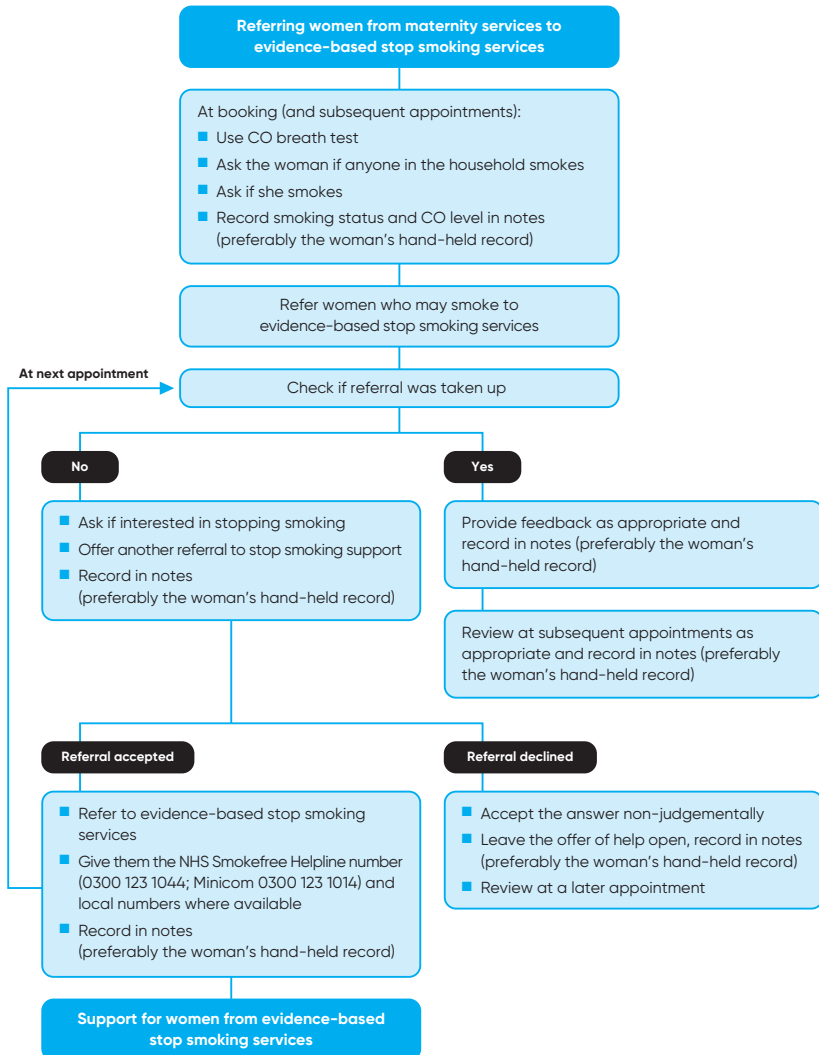
Explain that it is normal practice to refer all pregnant women who smoke for help to quit and that a specialist midwife or stop smoking practitioner will phone to offer support.

Refer all pregnant women who smoke, have stopped smoking in the past 2 weeks, or have a reading of 4 parts per million (ppm) or higher to either local stop smoking support or a trained member of the maternity team.

Use local referral pathways and protocols to make a referral.



## National Institute for Health and Care Excellence (NICE) referral pathway for pregnant women who smoke<sup>21</sup>



**Intervention opportunities**

**Any contact with a pregnant woman offers an opportunity for the delivery of Very Brief Advice, including antenatal appointments.**

- Pre-conceptual consultations
- During pregnancy

Up to 10 weeks	Booking Appointment by Community Midwife*
10–13 weeks	Dating ultrasound scan
16 weeks	Community Midwife appointment
18–20 weeks	Anomaly scan by ultrasound sonographers
25 weeks	Community Midwife appointment
28 weeks	Community Midwife appointment
31 weeks	Community Midwife appointment
34 weeks	Community Midwife appointment
36 weeks	Community Midwife appointment*
38 weeks	Community Midwife appointment
Term	Community Midwife appointment
Term +7 days	Community Midwife appointment
New birth visit	Health Visitor

\* Indicates timepoints that NHS has identified as mandatory indicators for measuring smoking status.

All uncomplicated pregnancies follow this NICE Guidance antenatal care schedule, unless they become classified as 'high risk' and transferred under the care of an obstetrician, where they may require more frequent antenatal checks or interventions or admitted into hospital for more intensive antenatal care.

One of the most important factors that can help a pregnant woman who smokes to quit is a positive relationship with her midwife or other practitioners involved in her care.<sup>23-24</sup> Women have communicated that a positive relationship with their practitioner based on trust and mutual respect is an important part of their success in stopping smoking.<sup>23-24</sup>

Pregnant women who smoke often feel they will be judged or feel like a failure for not being able to quit, likewise many women do not believe they will be able cope without smoking.<sup>23-24</sup> Helping women through their quit attempt in a non-judgmental and supportive manner and helping normalise the feelings and challenges they may be experiencing is an important part of supporting women with stopping smoking.

## Section 1: Ask

**As part of routine antenatal care, CO testing should take place and women asked about their smoking status. This should be repeated at all follow-up visits.**

At first contact and when taking the full medical history at the booking appointment **past and present** smoking status should be recorded; with smoking status and CO result being a mandatory field in the electronic and/or written notes.

It is important to ask women about their smoking status **at every opportunity** (but at least once within each trimester) and to record any advice given.

**This ensures that stopping smoking is deemed important throughout the pregnancy not just at the initial visit.**

Pregnant women who stop smoking prior to conception, or after the pregnancy is confirmed, may well relapse and so it is important that the topic is raised repeatedly, even with those who are recorded as ex-smokers or non-smokers.

### **E-cigarette use**

If a woman reports electronic cigarette (e-cigarette) use only she should be recorded as a non-smoker. If she is smoking cigarettes in combination with e-cigarettes then she is recorded as a smoker.

### **Cannabis use**

Cannabis is the most widely used recreational drug amongst pregnant women.<sup>25-26</sup> Cannabis use has been linked with pregnancy adverse outcomes including preterm birth, low birthweight, and neurological effects.<sup>25-26</sup> Pregnant women who report not smoking but who continue to smoke cannabis will also be putting their baby at risk because of elevated CO levels. Women who use cannabis may record higher CO readings than that of a non-smoker, and should be recorded as a smoker.

## Conducting carbon monoxide (CO) testing in pregnancy

**CO is a poisonous gas contained in cigarette smoke;** it affects the body's ability to transport oxygen around the body which reduces the oxygen available to the baby. CO crosses the placenta and enters the bloodstream of the baby: it increases the risk of miscarriage and slows the baby's growth and development.

**CO testing is an immediate and simple method** for helping to assess whether or not someone smokes (or has been exposed to CO in any other way) and is a routine part of antenatal care. It is also a useful way of raising the subject of smoking.

**A raised CO level of 4 parts per million (4ppm) or above is a sign that further investigation and support is required.**<sup>27–28</sup>

Explaining that CO levels rapidly return to normal, for both the mother and the baby, if there is **not even a single puff** on a cigarette, can encourage pregnant women to stop smoking.

### Example of explaining CO and CO testing

*"Carbon Monoxide is a poisonous gas and is very harmful to your baby. It is present in exhaust fumes, faulty gas appliances and cigarette smoke. It passes via your bloodstream to your baby and deprives your baby of oxygen and nutrients. It also slows the baby's growth and development. Fortunately, CO levels return to normal very quickly once someone stops smoking, which means your baby will benefit almost immediately."*

*"As part of routine antenatal checks we measure the CO level in your bloodstream. It's a simple breath test and we can give you the results immediately. This machine will measure the amount of carbon monoxide in your lungs in parts per million."*

For CO testing to be conducted properly, pregnant women must hold their breath for 15 seconds before blowing into the CO monitor; this allows time for the CO in the blood to pass into the air in the lungs.

**Example of explaining how CO testing is conducted**

*"What I am going to ask you to do in a minute is to take a big deep breath, hold your breath and then exhale into this machine. You will need to hold your breath for about 15 seconds. After you have taken your breath I will hand the machine to you, the machine will count down and I will then tell you when to exhale into it."*

*And then whilst conducting the test say: "I'd like you to take a nice big breath ... well done ... keep holding your breath, only 10 seconds left now ... OK, take hold of the machine ... place your lips around the tube and 5, 4, 3, 2, 1 ... blow now."*

## CO monitor use

There are a number of CO monitors available and you should follow the instructions accompanying these machines and ensure infection control guidelines are followed.

### Using a baby CO monitor

You may be using a Baby CO monitor to assesses the amount of CO in a mother's exhaled breath, which is measured as Parts Per Million (PPM), in addition to measuring the estimated amount of CO carried in the unborn baby's blood, which is measured as a percentage of fetal carboxyhaemoglobin (%fCOhb). The result should be explained to mothers that a percentage of her babies red blood cells are carrying CO instead of oxygen to her unborn baby's blood, which is depriving them of much needed oxygen to grow and develop.



## Interpreting carbon monoxide (CO) testing in pregnancy

**The recommended cut-off for detecting smoking in pregnant women is 4 parts per million (4ppm).**

**Before discussing results of the CO test with women it is recommended that you ask women "Do you smoke?".** Some women may be an occasional smoker or may have simply not smoked in the day prior and may record a low CO reading. Asking about the woman's smoking status will help you tailor your communication appropriately and avoid missing women who are in fact smoking and would benefit from support with quitting.

Although the CO test is a good measure of recent tobacco smoke intake, it will not usually detect smoking from over 48 hours ago, or even the day before. This is because **CO is eliminated from the body rapidly**. CO readings will typically be lower in the morning than the afternoon because CO levels build up over the course of the day as the woman continues to smoke.

### > Women with CO readings below 4ppm

If a CO reading is **under 4ppm** you should inform the woman that this is a normal reading, (CO is produced by the body anyway and so rarely reaches 0ppm), that this is good news for her and her baby and that you will repeat the test at every visit so that she can know that her and her baby are safe from high levels of carbon monoxide.

**Example of what to say to someone with a low CO reading:**

*"Your CO reading is X. This reading is in the normal range, between 1 and 4 parts per million (ppm) and is what we would expect from a non-smoker. Your baby is already benefiting from this."*

**If the woman admits to being a smoker but blows a low reading of below 4ppm then tell her: "Any cigarettes you have from now on will cause the level of carbon monoxide to rise quickly and your baby will then be at risk."**



### > Women with CO readings 4ppm or above

If the pregnant woman **is smoking** you will need to explain that this level of carbon monoxide is harmful to her baby and her baby's health is at risk.

*"Your reading is X and so is above 4 parts per million which would indicate that you are a smoker or exposed to carbon monoxide from some other source. The normal range for a non-smoker is between 1 and 4 ppm and so you can see that your reading is ... times higher than what we would expect from a non-smoker. This is particularly harmful to the baby. The good news is by quitting smoking you can quickly get this down to the levels of a non-smoker and ensure your baby is getting the oxygen and nutrients it needs to develop and grow as we would expect."*

If the pregnant woman **says that she has stopped smoking or does not smoke** but the CO reading is higher than 4ppm, then there are other possible reasons for this high reading and you should explain to her that either:

- she may have been exposed to carbon monoxide fumes from a faulty gas boiler, cooker, car exhaust or from paint stripper (it might be worth you checking these things out as exposure to carbon monoxide is dangerous); the Gas Safety Advice Line number 0800 300 363 should be given to her at this point.
- that she may be lactose intolerant (most people know if they are) and the high reading is a consequence of her consuming dairy products, which can produce gases in your breath.

**It is worth noting that exposure to secondhand smoke will not significantly raise a CO result.**

**It is, of course, possible that the woman is a current smoker but is reluctant to admit this; and so any further questions should be phrased sensitively to encourage a frank discussion.**

### Ask about smoking

Regardless of the CO reading, it is best practice to ask about smoking status, both current and past use to establish very low levels of smoking and identify women who have quit smoking recently.

#### Example of how to explore whether someone is a smoker

Accurately recording smoking status is part of the medical history and simply involves asking: *"Do you smoke, or have you smoked in the past?"* and *"Do you use e-cigarettes?"* and then filling in 'yes', 'no' or 'ex-smoker' in the appropriate fields.

*"How many cigarettes a day do you usually smoke a day now? Is that always the same or do you sometimes smoke more or less?"*

*"Has your smoking changed since you discovered that you are pregnant?" How many cigarettes were you smoking a day before?"*

*"What age were you when you first started smoking?"*

These questions allow you to convey the message that you are not being judgmental about smoking in pregnancy and that you simply want to gather the information.

Asking if their smoking consumption has changed allows you to give advice if they report they have recently cut down, give information about compensatory smoking and reinforce that there is no safe level of smoking.

The stigma around smoking in pregnancy means that some women find it difficult to disclose that they smoke and this can prevent them receiving appropriate advice and support.<sup>23,29</sup>

## Section 2: Advise

### Advise women on the importance of quitting with support

**A woman's chance of stopping smoking is three times greater if they use a combination of behavioural support from a trained stop smoking practitioner and NRT compared with going cold turkey.<sup>30,31</sup>**

Once you have established whether a pregnant woman smokes, either by asking them or after CO testing, the next step is to provide brief advice on stopping smoking.

**We know that pregnant women can be highly motivated to make changes in pregnancy** (e.g. cut out alcohol, avoiding certain foods and giving up smoking) because of their desire to have a healthy baby.

**Pregnant women who smoke should be informed that all women who smoke are referred to a stop smoking specialist for support with quitting.**

This support may be delivered by a trained midwife or other member of the maternal care team or by referral to local stop smoking support.

Simply informing pregnant women that there is a local service that is effective and that other pregnant women have found useful can help motivate them to make an attempt at stopping smoking.

**Example of explaining the best way of stopping smoking and the specialist help offered by local stop smoking support**

*"We know that the best way of stopping smoking is with the help of a trained stop smoking practitioner. We have local stop smoking support that many pregnant women have found very useful – it is part of routine care that we put you in touch with them."*

If the pregnant woman agrees then you can be encouraging about her decision and refer her to local stop smoking support.

### **Establish understanding of how smoking affects pregnancy**

Many women are not fully aware or may underestimate the impact of smoking on pregnancy outcomes and the health of their baby.<sup>23,24</sup> It can be helpful to provide simple, brief advice on how smoking increases risk and the importance of quitting.

Establish if she understands why smoking is harmful in pregnancy and the immediate benefits to baby if she quits. Ask if she has any personal worries relating to any previous poor pregnancy outcomes or complications e.g. low birth weight/ fetal growth restriction/ prematurity/ bleeding in pregnancy.

*"Can I ask if you understand why we worry about women who continue to smoke in pregnancy?"*

*"Is there anything that worries you about your smoking now that you are pregnant?"*

## Assess motivation to stop smoking

Ask about how she feels about quitting smoking.

*"How do you feel about stopping smoking?"*

### If she sounds nervous or ambivalent about quitting:

- Reassure and empathise with her that it is normal and understandable to feel nervous about stopping smoking.
- Reinforce to her how important stopping whilst pregnant is to ensure she has a healthy pregnancy and baby.
- Inform her that with your support, and by using effective strategies for quitting, her chances of quitting will be greatly improved.

### If she sounds positive

- Reinforce her positivity by congratulating her and emphasising how important stopping smoking is to ensuring she has a healthy pregnancy and baby and that both she and her baby will benefit the moment she stops smoking.

**Example of what to say if the pregnant woman does not feel able to stop now or is reluctant to receive help**

*"It is your choice and if you'd like to talk it through with someone then stop smoking support will be able to do this with you. Why don't I give them your number and they can give you a call for a chat?"*

### Pregnant women who express little or no interest in stopping smoking

Pregnant women have the right to decide to not stop smoking and so discussing smoking with those who say they do not want to stop needs to be done in a sensitive manner.

**Pregnant women should be reassured that they are not being judged, but that you are keen to ensure the best possible outcome for their pregnancy.**

#### Example of how to explain why you are discussing smoking status

*"As a healthcare professional I frequently see women for whom things have gone wrong because they smoked. People come for antenatal care because they want a safe pregnancy. My role is to do everything I can to make sure you have a healthy pregnancy and safe delivery. Stopping smoking is one of the main things you can do to reduce your risks of problems in the pregnancy and during delivery."*

*"I'm not going to be putting pressure on you. However, I will talk with you again about this at future antenatal appointments because there are health benefits to your baby whenever you stop and help is available throughout your pregnancy."*

**Smokers frequently deny or minimise the health risks of smoking to themselves and their baby** and may avoid having a discussion on stopping smoking. They may even use humour to detract from the issue.

You can communicate your understanding that quitting is not easy and ask about the reasons that they feel prevent them from being able to quit during this pregnancy. Provide encouragement and communicate the support that will be provided to her.

**Example of how to explore a women's ambivalence or lack of interest in quitting:**

Communicate your understanding that quitting is not easy.

*"I can understand why you feel it might be difficult right now"*

Ask about the reasons they feel prevent them from being able to quit during this pregnancy.

*"What worries you about giving up smoking?"*

Respond with empathy and acknowledge giving up smoking can be difficult. Address any barriers by asking: *"What would help or how could you overcome these difficulties?"*

Ensure that you deliver a motivational message such as:

*"With support and stop smoking medications such as NRT, you are much more likely to be successful... you've got nothing to lose, it's so important you stop smoking whilst you are pregnant."*

Always respect a woman's decision but be clear on the advice that you are giving. If a pregnant woman declines a referral for help to stop smoking this should be recorded in their notes as well as inform here that she can ask for help at any point in the future. It is recommended to also provide the women with the contact information for the **NHS Smokefree helpline: 0300 123 1044.**

### Importance of quitting vs. cutting down

Many pregnant women, aware of the health risks of smoking during pregnancy, **try to reduce their consumption of tobacco** in an attempt to reduce the risks to their baby.

**A reduced number of cigarettes does not, however, equate to significantly reduced health risks** and stopping smoking completely is the only way of ensuring that the unborn baby is not at risk from smoking.<sup>16</sup>

It is fairly common for women who smoke to tell their midwife at their booking appointment that they have 'cut down' their smoking. It is worth asking them why they have done this; most will say that it is because they are worried about the harm smoking might have on their baby. You can recognise that this shows some awareness of the health consequences of smoking and that these women are already doing something to try and reduce the risk to their baby.

This offers an opportunity to inform them that cutting down doesn't offer any significant health advantages and that help is available for them to quit.

*"It's good you've made some change to your smoking, however, it's important we explain why cutting down doesn't reduce the risk to your baby."*



Research indicates that between 75% and 95% of quitters who have a single cigarette resume regular smoking.<sup>32</sup> One study found that 94% of 'lapsers' had a second cigarette and that half of these did so within 24 hours.<sup>33</sup>

#### Example of how to explain the concept of compensatory smoking

*"Your brain and body are used to regular doses of nicotine. When you cut down the number of cigarettes that you smoke your brain and body still 'demand' these regular doses. So what tends to happen, without you realising it, is that you will get similar doses of nicotine from fewer cigarettes by smoking these cigarettes more 'efficiently' (taking more puffs, inhaling deeper and longer, smoking more of the cigarette). Similar doses of nicotine equals similar doses of tar and carbon monoxide which means little or no benefit from cutting down on your smoking."*

### Partners and other smokers in the home

Addressing smoking in the family and household will be an important part of the support you provide to all pregnant women regardless of whether the mother herself smokes.

Exposure to secondhand smoke carries the same risk to baby as maternal smoking. 100% smokefree environments are recommended for all women during pregnancy. Working with families or significant others to reduce secondhand smoke exposure is important. This can include agreeing to house rules about not smoking indoors (i.e. going outside to smoke) not smoking in cars or around the pregnant women.

**All pregnant women should be asked whether their partner smokes or if there are other smokers in the home.**

*“Are there other people in your home who smoke?”*

*“Is smoking allowed in your home?”*

*“Do you spend a lot of time with someone who smokes or in an area with a lot of smoke?”*

**Woman does not live with a smoker:**

- Tell her that this is good news as having cigarettes around them or seeing people smoking could make their quit attempt harder.
- Explain that other friends or family members who smoke also pose a risk; ask whether they can ask these smokers to not smoke around them.

**Woman does live with a smoker:**

- It is important that she understands that living with a smoker or being around smokers will present an extra challenge for them. Explain the dangers of secondhand smoke during pregnancy.
- Explain the dangers of exposure to cigarettes and smokers when you are trying to quit and suggest they ask these smokers to not smoke around them and not leave their cigarettes in view.
- Ask women what they would need to make house rules around keeping their home smokefree and offer some suggestions that will support this.
- Assess interest of spouse or significant other in stopping and arrange support as appropriate.

**For women who do smoke or have recently quit smoking, having a partner or living with someone who smokes greatly increases the chance a woman having an unsuccessful quit attempt or if she does, her chances of relapse are high.**<sup>12,23,24</sup> Likewise the support of family and friends, particularly partners who share the home, has been shown to play a particularly important role in terms of the women's ability to quit.<sup>12,23,24</sup>

**Research shows women who live with a smoker are six times more likely to smoke throughout pregnancy and those who manage to quit are more likely to relapse once the baby is born.**<sup>12</sup> If partners or significant others can also make a quit attempt then the pregnant woman stands a better chance of quitting herself.

Partners, other family members or friends may wish to use this as an opportunity to stop smoking. **Support can be arranged for partners and family members interested in quitting via referral to stop smoking support.**

Even if partners or other family members are not interested in quitting at this time, a totally smokefree environment is a priority for all pregnant women and ideally maintained during the post-natal period for newborns and children.

**If spouse, other family member, or significant other smokes:**

*“Would they be interested in stopping smoking with you? If so, we can arrange for support to be provided to them as well. The arrival of this new baby can be a good motivation for everyone to quit.”*

Be mindful that quitting as a couple can also create tension in their relationship, and you should emphasise the importance of avoiding conflict or acting in competition, which would not be helpful.

## Section 3: Act

### Role of stop smoking support

**All women who smoke or have recently quit smoking should be referred to available stop smoking support.**

**NICE** and the **Saving Babies' Lives** care bundle recommends the use of **(opt-out) referral**. This means all women who smoke or have quit in the past two weeks are referred to local stop smoking support or an in-house specialist, unless the woman asks not to be referred.<sup>20-22</sup> The CO testing combined with opt-out referral system has been shown to **double the number of women who use quit smoking support and double quit rates**.<sup>28,34</sup>

**The evidence-based behavioural support programme provided by local stop smoking support offer pregnant women their best chance of quitting before, during and after a pregnancy.**<sup>29,30</sup>

Local stop smoking support varies in the way it is set up across the country. Some services have a specialist midwife or stop smoking practitioner who works specifically with pregnant women. **It is important that healthcare professionals know what support is available locally or nationally and know what that support involves.**

Stop smoking practitioners will provide behavioural support and will be able to help pregnant women make informed choices about using nicotine replacement therapy (NRT) to help them stop smoking.

You can find contact details for the stop smoking support services in your area by visiting NHS Smokefree: [www.nhs.uk/smokefree/help-and-advice/local-support-services-helplines](http://www.nhs.uk/smokefree/help-and-advice/local-support-services-helplines)

They should be able to advise you on your nearest option for accessing stop smoking support, or if there is specialist support available specifically for pregnant smokers locally.

As a healthcare professional, you can make pregnant women aware of the 'smoking in pregnancy' information available on the NHS Smokefree website and provide them with information on the **NHS Smokefree helpline: 0300 123 1044**.

## Evidence-based stop smoking support in pregnancy: The latest guidance

### Behavioural support

We know from research that pregnant women who smoke will gain significant benefit from behavioural support from a trained stop smoking practitioner.<sup>35</sup> Pregnant smokers often require regular *individualised contacts* to remain smokefree, therefore face-to-face support is recommended.<sup>23,24,35</sup> Relapse is common and often occurs late into pregnancy when anxieties about the impending birth can develop; as such support throughout the pregnancy is important.<sup>9</sup>

### Nicotine replacement therapy (NRT)

Pregnant women can also benefit from the use of nicotine replacement therapy (NRT). NRT works by reducing urges to smoke and other withdrawal symptoms, thereby making stopping smoking a bit easier.<sup>36–38</sup> These products are safer than continuing to smoke and can be particularly beneficial to women with high levels of tobacco dependence, significant cravings to smoke or smoking triggers (e.g. partners continued smoking or lack of support from family and friends).<sup>36,38,39</sup>



While nicotine is a known neuro-toxic chemical, long-term studies have shown that no harm has been found in the fetus from using NRT in pregnancy.<sup>36,38,39</sup> Unlike smoking, NRT delivers a clean form of nicotine and no carbon monoxide is produced which is the main risk of smoking during pregnancy.

There are a variety of NRT products available (patches, nasal spray, gum, lozenge, inhalator, microtab and mouth spray). **NRT can be provided free on prescription during pregnancy.**

Importantly, pregnant women who use two or more nicotine products (combination NRT) are more successful at quitting than those who use a single NRT product.<sup>40</sup> It is recommended that pregnant women use a 16 hour patch (i.e. remove at night) in combination with a shorter acting product (e.g. gum, lozenge, inhalator or spray) to assist with managing cravings throughout the day and night.<sup>22</sup>

Getting women to comply with NRT for the full 12-week course of therapy can be problematic; this may reduce success with quitting.<sup>37,38,41,42</sup> Women should be encouraged to use the therapy for the full duration and to discuss with their maternity care provider or stop smoking practitioner any concerns or difficulties they may have with using the medication.<sup>41</sup>

**Data on rates of quitting among pregnant smokers from local stop smoking support services in England has shown that NRT when combined with specialist help from local stop smoking support can be particularly helpful.<sup>40</sup>**

- No Meds = 16% quit
- Single NRT = 25% quit
- Combination NRT = 36% quit

### Electronic cigarettes (E-cigarettes)

Some women will choose to use e-cigarettes during their pregnancy or may be already using e-cigarettes when they become pregnant.

While licensed NRT products are the recommended option, if a pregnant woman chooses to use an e-cigarette or has already stopped smoking with the use of an e-cigarette and feels that it helps her to stay smokefree, she should not be discouraged from doing so.

E-cigarettes are fairly new products and as such we don't yet have evidence about the effects of longer-term use and any risks to unborn babies. The vapour produced by e-cigarettes contains some toxicants; these are either at much lower levels than those found in tobacco smoke or at levels not associated with serious health risk.<sup>43</sup> Most importantly, unlike cigarettes, e-cigarettes do not burn tobacco and do not produce tar or carbon monoxide, which is particularly harmful to developing babies.

**E-cigarettes are not completely risk free, however based on the current reviews of evidence conducted by experts in the UK we definitely know that e-cigarettes are significantly less harmful to a pregnant woman and her baby than smoking tobacco.**<sup>43-45</sup> If using an electronic cigarette helps an expectant mother stay smokefree, it is much safer for both her and baby than continuing to smoke.

If a woman reports that she has stopped tobacco smoking completely but is using an e-cigarette, she should still be congratulated and encouraged to stay away from all tobacco use, even if that involves continuing to use an e-cigarette to avoid relapsing to smoking.





## Supporting pregnant women to remain abstinent from smoking



**Pregnant women can find stopping smoking incredibly difficult and the relapse rate in pregnancy is high.<sup>9</sup>** We know that many smokers lack the confidence to succeed and may lose heart if stopping smoking is more difficult than they anticipated. Boosting their motivation to quit and their confidence in quitting successfully is a crucial ingredient of the behavioural support programme offered by the stop smoking support service.

**Community midwives who see the pregnant woman regularly can be a valuable extra source of support** to complement the intervention provided by the stop smoking in pregnancy specialist practitioner and can help pregnant women maintain their resolve to stay off cigarettes.

It is important to congratulate pregnant women on their achievement thus far, to record recent non-smoking status in their notes and to encourage them to remain a non-smoker. **Also, continue to conduct carbon monoxide (CO) monitoring throughout the pregnancy.** These readings will provide powerful evidence of the benefits to themselves and the baby of not smoking, and motivation to remain abstinent.

**Example of how to enquire about how pregnant women are doing with their quit attempt:**

*"How are things going in terms of not smoking?  
Have you found it easy or a struggle?"*

*"Have you thought about what you will do in place of smoking  
if you feel tempted to smoke?"*

*"Are you using any stop smoking medications?"*

**As postnatal relapse is common, ask:**

*"Have you thought about what you might do to remain  
a non-smoker after your baby is born?"*

Use the discussion to emphasise the advantages for the new baby of a smokefree home.

Provide information on how the NHS Smokefree Helpline can continue to offer them help, for example through their telephone support programme. Encourage pregnant women to continue with their quit attempts at every opportunity; let them know that as each day goes by without a cigarette they are significantly increasing their chances of never smoking again.

## Documenting smoking status and interventions

It is important for all healthcare professionals to keep a written record of the stop smoking advice given to each woman throughout her pregnancy.

**Systematic recording** is an important motivation for healthcare workers in supporting women to stop, it shows we work as a team to achieve the best possible outcomes in pregnancy and it helps keep all staff 'on message'.

**All records on smoking should be consistent** in the woman's hand-held and hospital notes, and on computerised records (if available), to allow everybody involved in antenatal care to monitor progress and to track their success. Any personal information collected from the pregnant woman by a stop smoking practitioner is subject to the usual confidentiality, data protection regulations and safeguards and pregnant women should be reassured of this.

**The following are the core indicators the NHS has identified as mandatory:**

- Proportion of women who smoke at booking
- Proportion of women who smoke at 36 weeks of pregnancy
- Proportion of women who smoke at time of delivery
- Proportion of women with elevated CO levels referred for specialist stop smoking interventions

### 36-week Smoking Status (NEW)

The NHS Saving Babies Lives Care Bundle and Maternal Neonatal collaborative recommend all pregnant women have their smoking status assessed at the initial booking and all other antenatal appointments.<sup>46</sup> They have identified as a new indicator assessing smoking status at the 36-week community midwifery appointment by both self-report and CO measurement.

**Summary of action to be taken to support quitting among pregnant women:**

- Provide information to women on the effects of smoking to pregnancy outcomes and reinforce the importance of quitting early in pregnancy.
- Use CO measurements to assess tobacco use and provide feedback on the health effects of continued smoking for themselves and their unborn child.
- Describe what support is available and boost their motivation to make a quit attempt.
- Arrange referral to available stop smoking support. Follow-up on uptake of referrals at each contact. Provide support and encouragement for remaining smokefree.
- Assist partners and significant others with quitting by referral to available stop smoking support. Give advice on women's exposure to secondhand smoke in the home, car and other places where women spend time.
- Reinforce the importance of quitting completely as the goal versus cutting down, as this can help pregnant women focus their attention on the effort required.
- Discuss and help women plan ahead to remain smokefree following delivery.
- Document and communicate to relevant colleagues conversations you have had with the pregnant woman, and advice you have given and use in assessing appropriate individual management of antenatal care.

### Antenatal admission of a pregnant woman who smokes

Antenatal problems may emerge during pregnancy and women may be unaware of the link between the problem and their smoking, or the immediate health benefits to them and their pregnancy of stopping smoking.

Women who smoke are more likely to be admitted for antenatal care than non-smokers, especially to monitor for fetal growth restriction (FGR). Whilst in hospital, **some women will suffer from acute nicotine withdrawal symptoms and request to leave the ward frequently to smoke to relieve them.**

If behavioural support and nicotine replacement therapy (NRT) were available and offered to treat their nicotine withdrawal, it would help improve compliance and make treatment more effective to increase their chance of a successful outcome in pregnancy.

**An admissions protocol for pregnant smokers should be developed, by the hospital midwifery and pharmacy teams with the specialist help of local stop smoking support, to include:**

- A system that ensures that the smoking status of pregnant women is recorded as part of the hospital admission procedure.
- The delivery of very brief advice on smoking (VBA) to all pregnant women admitted for antenatal care.
- Ensure that pregnant women and family members are aware of the hospital smokefree policy.
- Encouragement to stop smoking during any antenatal admission; using the opportunity to link smoking to the presenting medical problem.
- The referral of pregnant women who smoke for inpatient stop smoking support or to the local stop smoking practitioner.
- Arrange or provide training for all in-patient maternity care providers in the use of NRT for temporary abstinence and stop smoking advice and treatments.
- Access to NRT to help manage withdrawal symptoms, made available via the hospital pharmacy.
- Provide contact number of the NHS Smokefree helpline: 0300 123 1044.

The progress of pregnant women who stop smoking should be monitored. They should be encouraged to stay stopped and to use NRT if necessary, for withdrawal relief and to prevent lapse, once they are discharged.

## Section 4: The Post-Partum Period

### Smoking at Time of Delivery (SATOD)

**Smoking at Time of Delivery (SATOD)** is used to generate data on the prevalence of smoking at the time of delivery (child birth). SATOD data collection is the primary method for tracking rates of smoking among pregnant women both locally and nationally

**Hospital trusts in England are required to submit figures each quarter on the following:**

- Number of maternities
- Number of women known to have been smoking at time of delivery
- Number of women known not to have been smoking at time of delivery

Asking about the smoking status of women at the time of delivery offers another opportunity to raise the topic of smoking and secondhand smoke; and can influence the support given to women immediately after the baby is born, including referral to local stop smoking support.

**Ideally CO testing could be used to assess smoking status**, although many women may have gone for a number of hours without a cigarette at this point, resulting in a low CO reading. Of course, you could simply ask whether they are smoking (see page 17).

**Example of how midwifery staff could explain using CO testing to collect SATOD data**

*"We routinely ask all women to blow into a monitor so that we can record the amount of carbon monoxide in their lungs. The main source of carbon monoxide is from smoking. Are you currently smoking or have you recently given up smoking?"*

### Preventing a relapse to smoking after baby's arrival

Post-partum relapse rates are extremely high among women who are successful with quitting during pregnancy.<sup>9,47-48</sup> Some women who quit smoking during pregnancy may do so with the intention of resuming smoking after the birth of their child. Others simply return to smoking without planning on it often as a way to relax, deal with stress of having a new baby, returning to their social circle of friends who smoke, post-natal depression. Concerns about weight gain and having a smoking partner and lower socio-economic status are also known to contribute to relapse.<sup>9,47-48</sup>

**Supporting women with remaining smokefree following pregnancy is an important secondary target for intervention for both baby and mum's health.**

**An estimated 47–63% of women who quit smoking during pregnancy will relapse within six months of delivery.<sup>9</sup>**

There is a strong relationship between tobacco use and decisions related to breastfeeding. Mothers who smoke tobacco after delivery are at least twice as likely not to breastfeed their babies.<sup>49-51</sup> Given the known benefits of breastfeeding for all infants, especially for babies born prematurely, supporting a mother's efforts to remain smokefree into and during post-partum period may be an important factor to initiate and prolong the duration of breastfeeding.



**Asking about a women's thoughts about smoking once the baby arrives can be useful for understanding the risk of relapse.**

*"I was curious to know if you are feeling committed to staying quit after the baby's arrival?"*

*"Have you thought about what you might do to remain a non-smoker after your baby is born?"*

Use the discussion to emphasise the advantages for the new baby of a smokefree home, breastfeeding and other benefits to the women personally for staying smokefree (e.g. financial, personal health benefits, setting an example for children). Helping women identify the benefits of staying smokefree once their baby arrives and strengthening her commitment can be part of the support offered in the weeks leading up to her baby's arrival.

Helping women with planning ahead for what they may do to address temptation to smoke post-partum as well as where smoking fits in their mind in terms of relaxing and socialising. The time leading up to their baby's arrival also offers the opportunity to discuss ways to deal with the stress of being a new mother other than smoking. Advising on the continued use of NRTs or e-cigarettes can be helpful including ensuring they carry these products with them to use should they feel tempted to smoke. The provision of on-going support to women in the post-partum period may also be advisable. Remind the woman that she has come so far and encourage her to set the goal of not returning to smoking after her baby's arrival.

### Inpatient care following the delivery of the child

Women who have smoked throughout their pregnancy are likely to experience symptoms of nicotine withdrawal following the delivery of their baby. This will be particularly pronounced in women who have a prolonged postnatal admission (e.g. following a premature birth or a caesarean section). New mothers may ask maternity staff to look after their baby while they go outside to smoke. Many trusts now have smokefree site policies that do not allow this.

**It is important that protocols for discussing smoking, referral of smokers and recording smoking related information are established.** This will help the discussion of smoking to become part of routine practice. If pregnant women are aware of hospital policies they can plan accordingly for their admission and might even be prompted to stop smoking, even if temporarily.

The use of NRT in the delivery suite and postnatal wards may be helpful for women in dealing with their enforced temporary abstinence from smoking.

**Action to take:**

- Ensure that a protocol for inpatient smokers is developed by the hospital midwifery team with the support of the local stop smoking specialist, including:
  - Make women aware of the hospital smokefree policy and maternity ward policies regarding leaving the ward to smoke. Ensure that these policies reinforce to patients the risks of secondhand smoke and of holding their newborn child after smoking
  - Deliver VBA on smoking (Ask – Advise – Act)
  - Refer women who smoke for inpatient stop smoking support or to local stop smoking support
  - Ensure there is access to NRT via the hospital pharmacy whether women are quitting smoking or need help with managing temporary abstinence
  - Provide details of the NHS Smokefree Helpline
- Ensure that there are clear and simple referral procedures to stop smoking support in place.
- Agree what, and where, information relating to smoking is recorded (e.g. hand-held notes, electronic patient records, postnatal discharge summary, Personal Child Health Record 'Red book')

## NCSCT Training

**The National Centre for Smoking Cessation and Training (NCSCT) has developed a number of resources for members of the maternity care team.**

### **Very Brief Advice on Smoking (VBA) for Pregnant Women:**

This short online training module provides members of the maternal care team training in how to deliver VBA as part of routine antenatal care, including carbon monoxide (CO) monitoring. The training includes videos to demonstrate both VBA and CO testing.

**For more information:**

[elearning.ncsct.co.uk/vba\\_pregnancy-launch](http://elearning.ncsct.co.uk/vba_pregnancy-launch)

### **Specialty course on Smoking Cessation in Pregnancy and the Post-Partum Period:**

This NCSCT certified specialty training offers individuals who have completed the NCSCT Core Training and Assessment Certification and wish to receive further training in addressing tobacco use during pregnancy. The online course provides information on the health effects of smoking in pregnancy, the benefits of cessation and effective methods to help pregnant women stop smoking; it also focuses on best practice in assisting pregnant women to stop smoking and has links to useful resources.

**For more information:**

[www.ncsct.co.uk/publication\\_pregnancy\\_and\\_the\\_post\\_partum\\_period.php](http://www.ncsct.co.uk/publication_pregnancy_and_the_post_partum_period.php)

### **NCSCT Online Course in Very Brief Advice on Secondhand Smoke:**

A short training module on how to raise the issue of secondhand smoke exposure and promote smokefree homes and cars.

**For more information:**

[elearning.ncsct.co.uk/shs\\_vba-launch](http://elearning.ncsct.co.uk/shs_vba-launch)

## Other Resources

**Saving Babies Lives Care Bundle – Version Two (2019)**

[tinyurl.com/saving-babies-lives-v2](https://tinyurl.com/saving-babies-lives-v2)

**NICE Pathway – Stop Smoking in Pregnancy and After Childbirth**

[tinyurl.com/NICE-Pathway](https://tinyurl.com/NICE-Pathway)

**Carbon monoxide screening: Advice for health care professionals  
(Smoking in Pregnancy Challenge Group)**

[tinyurl.com/carbon-monoxide-screening](https://tinyurl.com/carbon-monoxide-screening)

**NCSCT Briefing on electronic cigarettes**

[www.ncsct.co.uk/publication\\_electronic\\_cigarette\\_briefing.php](http://www.ncsct.co.uk/publication_electronic_cigarette_briefing.php)

**Use of electronic cigarettes in pregnancy: a guide for midwives and other  
health care professionals (Smoking in Pregnancy Challenge Group).**

[tinyurl.com/use-of-electronic-cigarettes](https://tinyurl.com/use-of-electronic-cigarettes)

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This briefing gives expert, concise guidance for Maternity Health Providers on how to deliver Very Brief Advice (VBA) to pregnant women who smoke and how to carry out routine carbon monoxide (CO) testing with all pregnant women.