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Strictly Embargoed until 00:01 hours (GMT), 18th July 2007

This release focuses on four Reviews on smoking cessation and lung cancer publishing next week in The Cochrane Library, 2007, Issue 3.

To receive a full copy of the Reviews highlighted, or to arrange an interview with an author, contact Jennifer Beal +44 (0)1243 770633 or by email, jbeal@wiley.co.uk.

Reviews highlighted in this newsletter:

- **Quitting smoking – a time in hospital can be a good time to start**
For many people, going in to hospital provides an opportunity to stop smoking. A Cochrane Systematic Review has found that the chance of successfully quitting can be enhanced if patients receive smoking cessation counselling during their stay, and then have at least one month of supportive contact after going home.
- **Quitting with rimonabant – 20mg dose can help, and can prevent weight gain**
Using selective cannabinoid 1 (CB1) receptor antagonists such as rimonabant at a dose of 20 mg per day can help people quit smoking, can help them to remain abstinent, and can help prevent the weight gain that so often accompanies attempts at stopping smoking. The lower dose of 5mg, however, was not shown to be effective, according to a Cochrane Systematic Review.
- **Reducing smoking – mixed messages and poor markers**
Some people are unwilling or unable to stop smoking, but are prepared to try and reduce the numbers of cigarettes they smoke each day. After studying healthcare literature, a team of Cochrane Researchers could find only a few reports that assessed methods aimed at helping people reduce use. It is also unclear whether cutting down the number of cigarettes delivers clear health benefits.
- **Non-small cell lung cancer – chemotherapy before surgery appears better than surgery alone**
Combining pre-operative chemotherapy and surgery increases the average chance of survival at five years by approximately 6% compared with surgery alone.

Quitting smoking – a time in hospital can be a good time to start

For many people, going in to hospital provides an opportunity to stop smoking. A Cochrane Systematic Review has found that the chance of successfully quitting can be enhanced if patients receive smoking cessation counselling during their stay, and then have at least one month of supportive contact after going home.

Because hospitals are now smoke-free, any smoker has to stop temporarily while in hospital. People who are in hospital, especially those with smoking-related illnesses, are often highly receptive to the suggestion that they should try and break their habit. Consequently, they are a natural group of people to consider targeting with interventions that help them achieve this goal. Research carried out for the Cochrane Collaboration shows that this package of therapy can help smokers who go in to hospital for all conditions, even those that are not related to tobacco addiction.

This conclusion came from work that drew data from 33 trials involving a total of over 5600 people. The research showed that only intensive interventions with at least 30 minutes of counselling in the hospital and at least one-month of additional supportive care after the stay show any significant benefit; anything less, and the therapy tends to be ineffective.

They also found that adding nicotine replacement therapy or bupropion to intensive treatment plans had some additional effect in helping people stop smoking over providing the intensive counselling alone, although the difference was not statistically significant.

“High intensity behavioural interventions that begin during a hospital stay and include at least one month of supportive contact after discharge promote smoking cessation among hospitalised patients,” says lead researcher Nancy Rigotti, MD, Associate Professor of Medicine at Harvard Medical School and Director of Tobacco Research and Treatment at Massachusetts General Hospital, Boston, USA.

“There is no evidence that less intensive counselling interventions, particularly those that do not continue after hospital discharge, are effective in promoting smoking cessation,” says Rigotti.

Rigotti NA, Munafo MR, Stead LF. Interventions for smoking cessation in hospitalised patients. *Cochrane Database of Systematic Reviews* 2007, Issue 3. Art. No.: CD001837. DOI: 10.1002/14651858.CD001837.pub2.

Quitting with rimonabant – 20mg dose can help, and can prevent weight gain

Using selective cannabinoid 1 (CB1) receptor antagonists such as rimonabant at a dose of 20 mg per day can help people quit smoking, can help them to remain abstinent, and can help prevent the weight gain that so often accompanies attempts at stopping smoking. The lower dose of 5mg, however, was not shown to be effective, according to a Cochrane Systematic Review.

Smoking tobacco sends nicotine into the blood stream, and this chemical disrupts the endocannabinoid system, part of the hormonal control mechanism in the brain that controls energy balance and food intake. Over time the body alters the nature of its energy mechanism to compensate for this effect. Stopping smoking removes the nicotine and once again disturbs the mechanism, adding to the withdrawal symptoms and leaving a person prone to put on weight.

One potential way of preventing this is to take a drug that blocks the receptor that is involved in nicotine's action in the brain – the cannabinoid 1 receptor. These CB1 receptor antagonists could therefore form part of a therapeutic programme aimed at helping individuals quit smoking, although this drug has not yet been approved as a smoking cessation treatment in the USA or in Europe.

To see whether there was evidence that these receptor antagonists work two Cochrane Researchers, Kate Cahill who works at the Department of Primary Care in the University of Oxford and Michael Ussher who works at St George's, University of London, searched the published and unpublished literature for relevant research projects. They found three trials that involved a total of 1567 smokers and 1661 people who had recently quit smoking. Analysing the data showed that the effect of the drug depended on the dose used:

Quitting with 20mg rimonabant

People given 20 mg rimonabant increased by 50% their odds of remaining abstinent compared with those on placebo. Smokers who had quit while using 20mg rimonabant increased by 50% their odds of staying abstinent if they continued taking either 5mg or 20mg rimonabant, compared with those who moved to placebo treatment after quitting.

Quitting with 5mg rimonabant

People who wanted to quit appeared to gain no benefit from 5 mg rimonabant treatment. Furthermore the people who did manage to quit using this lower dose were equally likely to remain abstinent whether they continued with rimonabant treatment or moved to a placebo.

Weight gain

Weight gain appeared to be significantly lower in people who quit while using 20 mg rimonabant than those taking either 5 mg rimonabant or placebo. The differences in weight between the groups appeared to be maintained through longest follow-up. This beneficial effect was more evident in overweight or obese smokers than in those of normal weight.

“From the preliminary data that we found it appears that 20mg rimonabant may significantly increase a person's likelihood of quitting and may also reduce the amount of weight that they gain,” says Cahill.

Cahill K, Ussher M. Cannabinoid type 1 receptor antagonists (rimonabant) for smoking cessation. *Cochrane Database of Systematic Reviews* 2007, Issue 3. Art. No.: CD005353. DOI: 10.1002/14651858.CD005353.pub2.

Reducing smoking – mixed messages and poor markers

Some people are unwilling or unable to stop smoking, but are prepared to try and reduce the numbers of cigarettes they smoke each day. After studying healthcare literature, a team of Cochrane Researchers could find only a few reports that assessed methods aimed at helping people reduce use. It is also unclear whether cutting down the number of cigarettes delivers clear health benefits.

The main effort in therapies aimed at smokers has been at helping them to stop smoking completely. Little attention has been given to the idea of helping them reduce their use. This is partly for the fear of creating the false impression that reducing the number of cigarettes you smoke a day will lead to an equivalent reduction in a person's risk of smoking-related disease.

Even so, the team of Cochrane Researchers found that they could glean some useful pointers from the currently published data.

Firstly, they found that between 6% and 9% of people using nicotine replacement therapy delivered by either chewing gum or inhaler managed to reduce their use of cigarettes. "This may not seem like a large result, but it is a significantly greater proportion than the 1-3% of people who reduced use in control groups where no NRT was given," says lead researcher Lindsay Stead, who works at the Department of Primary Care at Oxford University.

Secondly they found no evidence that the treatments that aimed to help people reduce their use diverted them from attempting to stop completely. "In fact cessation rates were higher, not lower, in nicotine replacement treatment groups," says Stead.

Thirdly, the researchers point out that there is currently no evidence whether reducing cigarette use, or using products that potentially reduces exposure to the most harmful substances in tobacco products (PREPs) has any long-term benefit on a person's health. "The only clear benefit is that aiming to reduce use often leads to people eventually stopping completely," says Stead.

Stead LF, Lancaster T. Interventions to reduce harm from continued tobacco use. *Cochrane Database of Systematic Reviews* 2007, Issue 3. Art. No.: CD005231. DOI: 10.1002/14651858.CD005231.pub2.

Non-small cell lung cancer – chemotherapy before surgery appears better than surgery alone

Combining pre-operative chemotherapy and surgery increases the average chance of survival at five years by approximately 6% compared with surgery alone.

This conclusion was drawn by a team of Cochrane Researchers from the MRC Clinical Trials Unit in London after they identified 12 eligible randomised controlled trials. Data from seven of these trials were available from trial reports and were combined in a meta-analysis. The seven trials involved a total of 988 patients.

“This is currently the best estimate of the effectiveness of this therapy, but is based on a relatively small number of trials and patients,” says lead researcher Sarah Burdett.

There was, however, insufficient data to break the patients down into sub-groups and see whether the effectiveness varies for different types of patients or stages of the disease.

This research is important because around the world more than a million new cases of lung cancer are diagnosed each year, around 80% of which are non-small cell lung cancer. In addition, many patients are only diagnosed after the disease has progressed, so survival rates across all stages of disease tend to be fairly low at around 14%, with only a quarter of patients being suitable for surgery.

The Cochrane Systematic Review found that using chemotherapy before surgery can reduce the size of tumours making the surgery simpler, and increasing the number of patients who may be candidates for surgery. The worry is, however, that having a course of chemotherapy delays the operation, and could therefore leave patients at risk of allowing the tumour to spread.

“The data suggest that the benefits of the chemotherapy outweigh the risks associated with the delay,” says Burdett

A project to collect complete data on all patients included in all trials is ongoing and will be able to fully assess the value of this treatment.

Burdett S, Stewart LA, Rydzewska L. Chemotherapy and surgery versus surgery alone in non-small cell lung cancer. *Cochrane Database of Systematic Reviews* 2007, Issue 3. Art. No.: CD006157. DOI: 10.1002/14651858.CD006157.pub2.

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Notes for editors

1. The Cochrane Library contains high quality health care information, including Systematic Reviews from The Cochrane Collaboration. These Reviews bring together research on the effects of health care and are considered the gold standard for determining the relative effectiveness of different interventions. The Cochrane Collaboration (<http://www.cochrane.org>) is a UK registered international charity and the world's leading producer of systematic Reviews. It has been demonstrated that Cochrane Systematic Reviews are of comparable or better quality and are updated more often than the Reviews published in print journals¹.
2. The Cochrane Library can be accessed at <http://www.thecochranelibrary.com>. Guest users may access abstracts for all Reviews in the database, and members of the media may request full access to the contents of the Library. For further information, see contact details below.

A number of countries have national provisions by which some or all of their residents are able to access The Cochrane Library for free. These include:

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Finland	http://www.terveysportti.fi
India	http://www.icmr.nic.in/
Ireland	http://www.thecochranelibrary.com
Latin and Central America and Caribbean	http://cochrane.bireme.br

New Zealand <http://www.moh.govt.nz/cochranelibrary> or <http://www.nzgg.org.nz/> or <http://www.cochrane.org.nz/>
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South Africa <http://www.sahealthinfo.org/evidence/databases.htm>
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The Canadian Province of Saskatchewan <http://www.thecochranelibrary.com>
The Canadian Province of Nova Scotia <http://www.library.dal.ca/kellogg/ahkp/cochrane.htm>
The US State of Wyoming <http://wyld.state.wy.us/dbloginform.html>

3. There are also several programmes, such as the Health InterNetwork Access to Research Initiative (HINARI) that provide access in developing countries. To find out whether your country is included in any of these programmes/provisions, or to learn how to get access if you don't already have it, please visit: <http://www.thecochranelibrary.com>.

If you would like to see a full list of Reviews published in the new issue of The Cochrane Library, or would like to request full access to the contents of The Library, please contact:

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^a Jadad AR, Cook DJ, Jones A, Klassen TP, Tugwell P, Moher M, et al. Methodology and reports of systematic Reviews and meta-analyses: a comparison of Cochrane Reviews with articles published in paper-based journal.