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This alert highlights two reviews focusing on Malaria and their key health care conclusions and implications for practice publishing this week in [The Cochrane Library](#), 2009, Issue 3.

To receive a full copy of the reviews highlighted in this newsletter, or to arrange an interview with an author, please contact Jennifer Beal on +44 (0)1243 770633 / +44 (0) 7802 468863 or by email, medicalnews@wiley.com.

Due to the importance of these reviews, please find below an introduction by Professor Paul Garner, Co-ordinating Editor of the Cochrane Infectious Diseases Group, based in Liverpool, UK. Professor Garner will also be available for interview.

“Malaria kills more than a million people a year, and causes untold illness in millions of others. Not surprising then that governments in malarial areas are keen to take action to prevent the disease, or to make sure that effective treatments are available. But it is not straightforward. The mosquito vector is ubiquitous and clever. There are different malaria parasites, and there is a constantly shifting landscape as parasite resistance to commonly used drugs develops and spreads.

“Research is key to preventing transmission and making sure that treatments are effective. The Cochrane Infectious Diseases Group have been working on tropical diseases since 1994. Supported by the Department for International Development for the benefit of people in developing countries, and focused on malaria, we are linked to the World Health Organization (WHO), and individuals and groups in developing countries experienced in malaria research. The group have in the past helped to show clear benefit of artemisinin combination treatments in malaria; these are incredibly effective new drugs that result in much higher cure rates in malaria than has been seen for a decade. The WHO are currently updating their global malaria treatment guidelines, and the new review published this week is to help them make the best recommendations. There is a new drug on the horizon – dihydroartemisinin piperaquine – which this review shows has higher cure rates than some of the best treatments currently available. Getting the best treatment is still a long way off, but the advances in recent years have really started making a difference. And with malaria, children commonly get anaemic, and yet there has been some research which suggests that giving iron supplements to children in malarial areas actually is bad for them. However, the massive review of iron in malaria published in this issue suggests that this is not a concern and oral iron can be given to children in malaria endemic areas.”

Reviews highlighted in this newsletter:

- [**Give Children Iron Supplements: They Don't Increase Malaria Risk**](#)
Iron supplements do not increase the likelihood of contracting malaria in areas where regular malaria surveillance and treatment are provided, and should not be withheld from children at risk of the disease, despite World Health Organisation (WHO) guidelines to the contrary, a new review by Cochrane Researchers suggests.
- [**Continued Vigilance Against Drug-Resistance Malaria Is Needed**](#)
Current combination malaria therapies recommended by the World Health Organisation (WHO) provide adequate treatment for mild malaria, according to a Cochrane Systematic Review of the evidence. However, selected trials had high failure rates for some combinations and evidence for the effectiveness of anti-malarial therapies is lacking in some vulnerable groups.

Give Children Iron Supplements: They Don't Increase Malaria Risk

Iron supplements do not increase the likelihood of contracting malaria and should not be withheld from children at risk of the disease, despite World Health Organisation (WHO) guidelines to the contrary, a new review by Cochrane Researchers suggests.

“Based on our review, children should not be denied iron supplements, even if they are living in areas where malaria is prevalent,” says lead researcher, Juliana Ojukwu of the Department of Paediatrics at the Ebonyi State University in Ebonyi State, Nigeria. “Iron is important for growth and development, and maintaining a healthy immune system.”

Until 2007, WHO guidelines recommended that all children should be given iron supplements to help prevent iron deficiency and anaemia, which are significant public health problems in developing countries. It is estimated that iron deficiency is the cause of 726,000 childhood deaths each year. However, a recent large trial in Zanzibar prompted the WHO to change its guidelines, which now recommend that iron supplements are withheld from children under two years in areas where they are at high risk of contracting malaria. The argument against giving iron is that it could help promote the growth of malarial parasites circulating in the blood.

In response to this, Cochrane researchers reviewed data from 68 different trials involving 42,981 children. They concluded that iron did not increase the risk of malaria, as long as regular malaria surveillance and treatment services were available, and that there should not be any need to screen for anaemia before giving supplements. They say WHO guidelines rely too heavily a single recent trial, whereas this current research drew its conclusions after giving appropriate weight to a wide range of studies.

Although the benefits of giving iron are greater for children with anaemia, any decision to withhold iron supplements should be carefully considered. “Any potential negative effects of giving iron have to be weighed against the quite serious implications of not giving it, namely anaemia and its contribution to childhood infection and death, especially in Sub-Saharan Africa,” says Ojukwu.

Full citation: Ojukwu JU, Okebe JU, Yahav D, Paul M. Oral iron supplementation for preventing or treating anaemia among children in malaria-endemic areas. *Cochrane Database of Systematic Reviews* 2009, Issue 3. Art. No.: CD006589. DOI: 10.1002/14651858.CD006589.pub2.

Continued Vigilance Against Drug-Resistance Malaria Is Needed

Current combination malaria therapies recommended by the World Health Organisation (WHO) provide adequate treatment for mild malaria, according to a Cochrane Systematic Review of the evidence. However, selected trials had high failure rates for some combinations and evidence for the effectiveness of anti-malarial therapies is lacking in some vulnerable groups.

Malaria kills more than a million people each year and accounts for more than a third of public health expenditure in some badly affected countries. Uncomplicated malaria is a mild version of the disease, but it can become serious and life threatening if left untreated. Resistance to the older antimalarials has led the WHO to recommend treatments combining an artemisinin-based drug with another longer-lasting drug to combat resistance.

The review included 50 trials of artemisinin-based combination therapies (ACTs). Overall, the four combinations studied were effective for treatment of the most common type of malarial parasite. The researchers conclude that the recently introduced dihydroartemisinin-piperaquine performed well compared to the ACTs in current use and offers another potential first-line therapy for the disease.

There were examples of treatment failure rates above 10% for all evaluated combinations. This is above the maximum allowable failure rate for a first line antimalarial as recommended by the WHO.

“Patterns of resistance change from place to place and over time, so these results have to be interpreted with some caution,” says lead researcher David Sinclair of the Liverpool School of Tropical Medicine in Liverpool, UK. “Our findings emphasise the need for continued vigilance in the monitoring of malaria and the development of resistance to antimalarial drugs.”

In addition, there were few studies focusing on the most at-risk groups, which are pregnant women and young infants. “The lack of evidence supporting the use of these drugs in pregnant women and infants represents a critical gap in our knowledge that must be addressed,” says Sinclair.

Full citation: Sinclair D, Zani B, Donegan S, Olliaro P, Garner P. Artemisinin-based combination therapy for treating uncomplicated malaria. *Cochrane Database of Systematic Reviews* 2009, Issue 3. Art. No.: CD007483. DOI: 10.1002/14651858.CD007483.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 journals^a.

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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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.nzqg.org.nz/ or http://www.cochrane.org.nz/
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The US State of Wyoming	http://wyld.state.wy.us/dbloginform.html

3. The Cochrane Library is available with free one-click access to all residents of countries in the World Bank's list of low-income economies (countries with a gross national income (GNI) per capita of less than \$1000). Access to The Cochrane Library for low-income countries is via Wiley-Blackwell IP recognition, a system which recognises the country a user is in. Users in low-income countries can access The Cochrane Library via <http://www.thecochranelibrary.com>.

There are also several programmes, such as the Health InterNetwork Access to Research Initiative (HINARI) and the International Network for the Availability of Scientific Publications (INASP) 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>.

4. The Cochrane Database of Systematic Reviews received its second Impact Factor in 2008 and has an IF of 5.182, giving it a ranking of 12 out of 107 in the ISI category Medicine, General & Internal.
5. The Cochrane Library Issue 3, 2009 Podcasts: a collection of podcasts on a selection of Cochrane Reviews by the authors will be available from <http://www.cochrane.org/podcasts> from Wednesday 8th July 2009. For Issue 3, 2009, the podcasts are:
 - **Progressive resistance strength training for improving physical function in older adults**
 - **Green tea (*Camellia sinensis*) for the prevention of cancer**
 - **Combined DTP-HBV-HIB vaccine versus separately administered DTP-HBV and HIB vaccines for primary prevention of diphtheria, tetanus, pertussis, hepatitis B and Haemophilus influenzae B (HIB)**
 - **Interventions to prevent occupational noise induced hearing loss**
 - **Topical rubefacients for acute and chronic pain in adults**
 - **Garlic for the common cold**
 - **Erythropoietin as an adjuvant treatment with (chemo) radiation therapy for head and neck cancer**

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 Cochrane Library, please contact:

Contact: Jennifer Beal / Wiley-Blackwell PR Team
Direct line: +44 (0) 1243 770633
Mobile: +44 (0) 7802 468863
Email: medicalnews@wiley.com

^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.