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infosheet
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EDUCATIONAL INTERVENTIONS FOR IMPROVING COMPLEMENTARY FEEDING PRACTICES OF CAREGIVERS

Complementary feeding is the consumption of appropriate food along with breast milk when breast milk alone is no longer sufficient to meet the nutritional requirements of an infant".[1] Undernutrition is associated with about 45% of child deaths.[2] Most of the undernourished children live in Africa and Asia.[3] Structural and functional impairments from malnutrition are most significant in the first 1000 days (the time of conception to the second year) of life. This period, which is usually characterized by rapid growth and development, is also the peak period of growth faltering and micronutrient deficiencies in children.

The World Health Organization recommends exclusive breast feeding for the first six months of life and complementary feeding with continuation of breast feeding from six months to 23 months. Fortified complementary foods or vitamin-mineral supplements are also recommended for the infant as needed.[4] The quality of complementary food a child receives is very important as poor complementary feeding can lead to malnutrition and its associated illnesses.

In order to meet the nutritional needs of the child, complementary feeding must be timely (introduced at the right time), adequate (the amount, food consistency, frequency, energy density and nutrient content of the food must be appropriate for the child's age and nutritional needs), safe (prepared, stored and served hygienically) and fed responsively. The above-mentioned conditions are quite difficult to attain in resource-poor settings due to limited access to nutrient-rich foods, lack of potable water, poor environmental sanitation and inadequate facilities for food preparation and storage.

Various strategies have been employed in communities and at health facilities to improve complementary feeding practices of caregivers. One of such strategies is education of caregivers. Education has been used in various health promotion interventions and has the potential to improve knowledge, skills and self-efficacy. Arikpo[5] and colleagues conducted a systematic review to assess the effectiveness of educational interventions for improving the complementary feeding practices of primary caregivers of children aged 24 months and under and related growth outcomes. The systematic review included 23 randomized controlled trials involving a total of 11,170 caregiver-infant pairs. The complementary feeding practices of caregivers who received educational interventions were compared to those who received no intervention, usual practice, or educational interventions provided in conjunction with another intervention.

A broad range of educational interventions in facility-based settings or community-based settings were assessed in the included trials. These included printed materials such as books, brochures, leaflets, manuals, menu plans, flyers, newsletters, posters or pictures; other interventions were education sessions, practical demonstrations, counseling, peer support, group

meetings, telephone calls, text messages, videos, stories, nutrition fairs, debates, village rallies and street plays.

The researchers found that overall, when compared with no intervention, educational interventions led to improvement in the age at which complementary foods were introduced to children (moderate quality evidence) and improvement in hygiene practices of caregivers (moderate quality evidence). There was no appreciable difference between the duration of exclusive breastfeeding for caregivers who received education and those who did not (very low quality evidence). There was limited (low to very low-quality) evidence of an effect for all growth outcomes.

Educating caregivers of young children appears to have potential for improving complementary feeding practices of caregivers and by extension helping to curb undernutrition in our region. Educational interventions may be delivered in communities or health facilities and should include messages on time of introduction of foods, hygiene, responsive feeding and adequate amounts, types and quality of complementary foods.

References

1. https://www.who.int/elena/titles/complementary_feeding/en/
2. https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding
3. UNICEF, World Health Organization & The World Bank (2019) *Levels and Trends in Child Malnutrition: Key Findings of the 2019 Edition of the Joint Child Malnutrition Estimates*. Geneva: WHO.
4. World Health Organization. Guiding principles for complementary feeding of the breastfed child. Geneva: WHO. 2003.
5. Arikpo D, Edet ES, Chibuzor MT, Odey F, Caldwell DM. Educational interventions for improving primary caregiver complementary feeding practices for children aged 24 months and under. Cochrane Database of Systematic Reviews 2018, Issue 5. Art. No.: CD011768. DOI: 10.1002/14651858.CD011768.pub2.

EVIDENCE AT YOUR FINGERTIPS

(From the Cochrane Library)

TECHNICAL SUMMARY

EXERCISE FOR WOMEN RECEIVING ADJUVANT THERAPY FOR BREAST CANCER

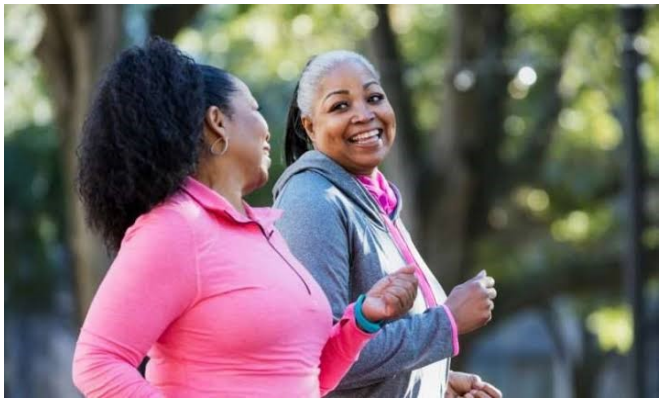
Background

Advances in science over the past few decades have made it possible for early detection and treatment of breast cancers. Most breast cancers are treated by breast-conserving surgery followed by radiotherapy. Adjuvant systemic therapy may include chemotherapy, hormonal and/or antibody therapy.

During adjuvant treatment, however, women may have to deal with severe side effects and psychological distress which impacts on their quality of life considerably. Existing literature suggests that exercise interventions may be effective in managing some of these side effects, such as fatigue, depression, and cognitive dysfunction.

Objective

To assess the effect of aerobic or resistance exercise interventions during adjuvant treatment for breast cancer on treatment-related side effects such as



physical deterioration, fatigue, diminished quality of life, depression, and cognitive dysfunction.

Main Results

- Thirty-two randomized controlled trials involving a total of 2626 women were included in the systematic review.
- Participants were women who were diagnosed with breast cancer stages I, II, or III who were undergoing adjuvant (including neoadjuvant) chemotherapy, radiotherapy, or a combination.
- Interventions were aerobic or resistance exercise or both compared to no exercise or other interventions e.g. psychosocial interventions.

Exercise was delivered concurrently with the adjuvant therapy (not following the therapy) for a period of at least six weeks.

- The primary outcomes assessed were physical fitness, fatigue, quality of life, depression and cognitive function; secondary outcomes were strength, psychological distress outcomes, physical activity behaviour, multidimensional outcomes and harms.
- **Effects of Interventions (main outcomes):**

  ***Physical fitness*:** 15 Studies (n=1310 women) measured this outcome. Physical exercise probably improves physical fitness (SMD 0.42, 95% confidence interval (CI) 0.25 to 0.59; 15 studies; moderate-quality evidence).

  ***Fatigue*:** This outcome was assessed by 19 studies (n= 1698 women). The results showed that physical exercise slightly reduced fatigue (SMD -0.28, 95% CI -0.41 to -0.16;; moderate-quality evidence).

  ***Quality of Life*:** One study (n=68 women) showed that exercise may result in little or no improvement in health-related quality of life (MD 1.10, 95% CI -5.28 to 7.48; low-quality evidence).

  ***Depression*:** Exercise may make little or no difference in depression in women undergoing adjuvant treatment for breast cancer compared to women in the control group (SMD -0.15, 95% CI -0.30 to 0.01; 5 studies; 674 women; moderate-quality evidence).

  ***Cognitive function*:** Two studies (n=213 women) were pooled for this outcome. The results showed an improvement in cognitive function in women who did exercise (MD -11.55, 95% CI -22.06 to -1.05; 2 studies; 213 women; low-quality evidence)

Authors' conclusions

Aerobic and resistance exercise can be considered to be beneficial for individuals with side effects from adjuvant treatment for breast cancer. More research is needed to ascertain what type, intensity and timing of exercise interventions are best for this group of women. Long-term evaluation is required to identify any possible long-term side effects of adjuvant treatment.

Reference

Furmaniak AC, Menig M, Markes MH. Exercise for women receiving adjuvant therapy for breast cancer. Cochrane Database of Systematic Reviews 2016, Issue 9. Art. No.: CD005001. DOI: 10.1002/14651858.CD005001.pub3.

PLAIN LANGUAGE SUMMARIES

COMPARISON OF DIFFERENT HUMAN PAPILLOMAVIRUS (HPV) VACCINES AND THE NUMBER OF DOSES ADMINISTERED TO PREVENT HPV-RELATED DISEASE IN FEMALES AND MALES

Human papillomaviruses (HPV) are a group of viruses that infect the skin and mucous membranes. Some types of HPV are sexually transmitted and are common in young people. Most infections will be cleared by the immune system, but some people will experience persistent infection with certain HPV types that go on to cause abnormalities in infected cells. These changes are called 'precancerous' because they can develop into cancers of the cervix, vagina, vulva, anal canal, penis, and head and neck. Infection with other HPV types causes warts in the genital area or around the anus.

Vaccination aims to prevent future HPV infections. Three HPV vaccines are in use – a bivalent one (protects against two HPV types), a quadrivalent one (protects against four HPV types), and a nonavalent one (protects against nine HPV types). In women, three doses of the bivalent or the quadrivalent HPV vaccines protect against precancer of the cervix caused by the HPV types contained in the vaccine. Evidence about the nonavalent vaccine, about the effects of the quadrivalent vaccine in males, and about the effects of HPV vaccines in people with HIV infection, has not yet been reviewed thoroughly. Uptake of HPV vaccines remains low in many countries. Simpler vaccine schedules, or giving the vaccine to both girls and boys, could increase the number of people being vaccinated.

Trials of HPV vaccines are not always designed to collect data about precancer and cancer, for several reasons. Firstly, HPV vaccine is routinely given before girls become sexually active, and it is not ethical to take specimens from the cervix of girls who have not had sex. Secondly, HPV-related precancer and cancer are rare and do not develop until years after HPV infection has occurred. Thirdly, participants in a

trial will be offered treatment if precancer develops, so progression to cervical cancer would be even rarer, even without vaccination. An international committee of experts states that, in some circumstances, antibody levels (i.e. showing a strong immune system response), can be used to demonstrate protection against cervical and anal cancer. The antibody levels following vaccination in a trial should not be lower than those found in other studies on adults in whom the vaccine has been shown to protect against severe HPV-related cervical or anal disease.

Review question(s)

How effective or harmful are different HPV vaccine schedules (i.e. number and timing of doses) and different HPV vaccines in females and males?

Main results

These results are based on research evidence to 27 September 2018. We analysed 20 studies involving 31,940 people.

Studies comparing two doses of HPV vaccine to three doses, or comparing the time interval between doses, focus on immune system responses rather than infection or disease outcomes. Two doses of HPV vaccine result in similar immune system responses to three doses, and a longer interval (up to 12 months) between doses gives a stronger immune system response than a shorter interval. There is insufficient evidence to determine whether there was a difference between the vaccine schedules for serious adverse events and death.

In 16- to 26-year-old men, one study showed evidence of moderate certainty that a quadrivalent HPV vaccine provides better protection against external genital lesions and genital warts than a dummy treatment (control). In 16- to 26-year-old women, one study showed that the nonavalent and quadrivalent vaccines provide the same levels of protection against cervical, vaginal, and vulval precancer lesions and cancer (high-certainty evidence).

There was evidence that the quadrivalent vaccine resulted in more local adverse events (such as pain, swelling, and redness at the injection site) than a control treatment in males, and that the nonavalent vaccine resulted in more local adverse events than the quadrivalent vaccine in males and females. Evidence about serious adverse events and deaths from studies comparing different HPV vaccine types or dose schedules was of low or very low-certainty.

In people living with HIV, HPV vaccines result in reasonable levels of immune system response, but evidence about their effects on persistent HPV infection or HPV-related disease outcomes and harms is limited.

Certainty of the evidence

No major issues were identified with the methodological quality of the studies for the measurements of infection and disease outcomes, or for immune system responses. Our certainty in the evidence about serious harms and deaths across all the studies comparing different HPV vaccines and vaccine schedules is low, either because of their low frequency, or because the evidence is indirect, or both. Evidence graded as high certainty means that we were confident that further research is unlikely to change our findings. Moderate -certainty evidence means that there is a possibility that further research may have an important effect on our findings, whilst low -certainty evidence means that our confidence was limited and further research may have an important impact on our findings. Very low-certainty evidence means that we were uncertain about the result.

Conclusion

A two-dose schedule of HPV vaccines in young females results in immune system responses that are comparable with a three-dose schedule. In males, the quadrivalent HPV vaccine appears to be effective in the prevention of external genital lesions and genital warts. Quadrivalent and nonavalent HPV vaccines in young women result in similar levels of protection against cervical, vaginal, and vulval precancer lesions and cancer. Evidence about the efficacy and harms in people living with HIV is limited. Further long-term population-level studies are needed to continue monitoring safety of these vaccines, to determine for how long two doses of vaccine can provide protection against HPV-related disease, the effect against HPV-related cancer, and whether a two-dose immunisation schedule will increase vaccine coverage.

Reference

Bergman H, Buckley BS, Villanueva G, Petkovic J, Garritty C, Lutje V, Riveros-Balta AX, Low N, Henschke N. Comparison of different human papillomavirus (HPV) vaccine types and dose schedules for prevention of HPV-related disease in females and males. Cochrane Database of Systematic Reviews 2019, Issue 11. Art. No.: CD013479. DOI: 10.1002/14651858.CD013479.

ADMINISTERING ANTIMALARIAL DRUGS TO PREVENT MALARIA IN INFANTS

What is the aim of the review?

This Cochrane Review aimed to find out if administering repeated doses of antimalarial treatment to infants living in

sub-Saharan Africa can prevent malaria. We found and analysed results from 12 relevant studies conducted between 1999 and 2013 that addressed this question in infants (defined as young children aged between 1 to 12 months).

Key messages

Intermittent preventive treatment with sulfadoxine-pyrimethamine (SP)

Giving SP as preventive antimalarial treatment to infants probably reduced the risk of clinical malaria, anaemia, and hospital admissions in the African countries it was evaluated. However, this effect was attenuated in more recent studies.

Intermittent preventive treatment with artemisinin-based combination therapy (ACT)

Giving ACT as preventive antimalarial treatment to infants may reduce the risk of clinical malaria. It may also reduce the proportion of infants with malaria parasites in their blood.

What was studied in the review?

In areas where malaria is common, infants often suffer repeated episodes of malarial illness. In areas where malaria transmission occurs all-year, some authorities recommend intermittent preventive treatment, which requires giving drugs at regular intervals (at child vaccination visits) regardless of whether the child has malaria symptoms or not to prevent malarial illness.

We studied the effects of IPTi with SP and other medicines (including ACTs) on malaria-related outcomes. Review outcomes included clinical malaria, severe malaria, death, hospital admission, parasitaemia, anaemia, change in haemoglobin level, and side effects.

What are the main results of the review?

We included 12 studies that enrolled 19,098 infants. All studies were done in sub-Saharan Africa (Gabon, Ghana, Kenya, Mali, Mozambique, Tanzania, and Uganda). These studies compared infants who received IPTi to those who received placebo pills or nothing. The infants in the IPTi group were given different medicines, in different doses, and for different lengths of time.

Ten studies evaluated IPTi with SP from 1999 to 2013. The effect of SP appear to wane over time, with trials conducted after 2009 showing little or no effect of the intervention. The studies show that IPTi with SP probably resulted in fewer episodes of clinical malaria, anaemia, hospital admission, and blood parasites without symptoms (moderate-certainty evidence). IPTi with SP probably made little or no difference to the risk of death (moderate-certainty evidence).

Since 2009, IPTi some small studies have evaluated artemisinin-based combination medicines and indicate impact on clinical malaria and blood parasites. A small study of IPTi with dihydroartemisinin-piperaquine in 2013 showed up to 58% reduction in episodes of clinical malaria (moderate-certainty evidence) and reductions in proportion of infants with blood parasites (moderate-certainty evidence).

How up-to-date is this review?

The review authors searched for studies published up to 3 December 2018.

Reference:

Esu EB, Oringanje C, Meremikwu MM. Intermittent preventive treatment for malaria in infants. Cochrane Database of Systematic Reviews 2019, Issue 12. Art. No.: CD011525. DOI: 10.1002/14651858.CD011525.pub2.

RECENT EVENTS

CAPACITY BUILDING WORKSHOP IN AWKA, ANAMBRA STATE

One of the goals of Cochrane is to produce up-to-date relevant evidence to aid decision making in health. As such one of the key functions of Cochrane is capacity building. Cochrane conducts various workshops to build capacity of volunteers who are interested in undertaking systematic reviews of health care interventions. These include introductory workshops on how to do systematic reviews, review completion courses, GRADE workshops and workshops on statistical methods.

Cochrane Nigeria held a three-day Introduction to Cochrane Systematic Reviews workshop in Awka, Anambra state, in collaboration with the Chukwuemeka Odumegwu Ojukwu University. The workshop was held from 25-27 November 2019. Eight health professionals, including pharmacists and doctors, attended the workshop. The workshop consisted on didactic and practical sessions on how to develop a review question, write a protocol, conduct a literature search, risk of bias assessment, conduct a meta analysis among others.

The sessions were presented by Dr. Ifeanyichukwu Ezebialu (Consultant Gynaecologist, Chukwuemeka Odumegwu Ojukwu University Teaching Hospital); Dr. George Eleje (Consultant Gynaecologist, Nnamdi Azikiwe University Teaching Hospital) and Mrs. Moriam Chibuzor (Senior Research Officer, Cochrane Nigeria). The presentations were dispersed with many practical sessions which the participants found helpful.

Group Photo of Participants

Dr. Ezebialu making a Presentation during a Workshop Session

Participants doing a card exercise on the hierarchy of evidence

Group Work during a Practical Session

New and Updated Reviews from the Cochrane Library

The following new or updated reviews, published recently in the Cochrane Library, were authored or co-authored by Nigerians.

New or Updated Review

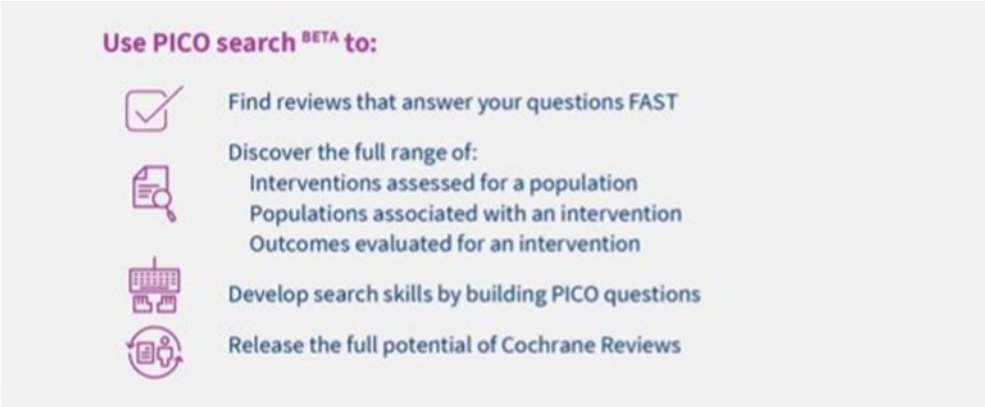
- Intermittent preventive treatment for malaria in infants **by** *Ekpereonne B Esu, Chioma Oringanje, Martin M Meremikwu*. Issue 12, 2019.
- Clonazepam monotherapy for treating people with newly diagnosed epilepsy **by** *Francesco Brigo,* ***Stanley C Igwe****, Nicola Luigi Bragazzi, Simona Lattanzi*. Issue 11, 2019.
- Artemether for Severe Malaria **by** *Ekpereonne B Esu, Emmanuel E Effa, Oko N Opi* and *Martin M Meremikwu*. Issue 6, 2019.
- Palliative interventions for controlling vaginal bleeding in advanced cervical cancer by *George U Eleje, Ahizechukwu C Eke, Gabriel O Igberase , Anthony O Igwegbe ,* and *Lydia I Eleje*. Issue 3, 2019.
- Vaccines for preventing rotavirus diarrhoea: vaccines in use **by** *Karla Soares-Weiser, Hanna Bergman, Nicholas Henschke,* ***Femi Pitan*** and *Nigel Cunliffe*. Issue 3, 2019.
- Ethosuximide, sodium valproate or lamotrigine for absence seizures in children and adolescents by *Francesco Brigo,* ***Stanley C Igwe*** and *Simona Lattanzi*. Issue 2, 2019.

Other Recent Reviews

- Vaccines for preventing invasive salmonella infections in people with sickle cell disease **by** *Friday Odey, Uduak Okomo,* and *Angela Oyo-Ita* . Issue 12, 2018.
- Educational intervention for improving primary caregiver complementary feeding practices for children aged 24 months and under **by** *Dachi Arikpo, Ededet Sewanu Edet, Moriam T Chibuzor, Friday Odey* and *Deborah M Caldwell*. Issue 5, 2018.
- Phytomedicines (medicines derived from plants) for sickle cell disease **by** *Oluseyi Oniyangi* and *Damian H Cohall*. Issue 2, 2018.
- Honey for acute cough in children **by** *Olabisi Oduwole, Ekong E Udoh, Angela Oyo-Ita* and *Martin M Meremikwu*. Issue 4, 2018.
- Contracting out to improve the use of clinical health services and health outcomes in low- and middle-income countries **by** *Willem A Odendaal, Kim Ward, Jesse Uneke, Henry Uro-Chukwu, Dereck Chitama, Yusentha Balakrishna* and *Tamara Kredo*. Issue 4, 2018
- Stiripentol add-on therapy for focal refractory epilepsy **by** *Francesco Brigo , Stanley C Igwe* and *Nicola Luigi Bragazzi*. Issue 5, 2018.

ANNOUNCEMENTS

- **New Edition of Cochrane Handbook released:** Cochrane has released a new edition of the Cochrane Handbook for Systematic Reviews of Intervention. The handbook can be accessed online at https://training.cochrane.org/handbook/current
- **Cochrane PICO search^{BETA}:** This is a pre-release of a new feature on the Cochrane Library. Cochrane PICO Search^{BETA} allows you to search for Cochrane reviews using PICO terms to find reviews relevant to your research or clinical question**:** For more information on how to use PICO Search^{BETA} see: https://www.wiley.com/network/cochranelibrarytraining/how-to-use-pico-search



- **Launch of Cochrane Dissemination Checklist and Guidance:** Cochrane has launched an 18-item Dissemination Checklist and accompanying guidance to improve the quality, consistency and translatability of dissemination products that present findings of Cochrane intervention reviews. The checklist will be useful for anyone who produces, or wants to produce, dissemination products or dissemination product templates. Webinars on how to use the checklist and a PDF copy of the checklist may be accessed at https://www.cochrane.org/news/launch-cochranes-dissemination-checklist-and-guidance
- **Chile Cochrane Virtual Colloquium Content available online**: An unprecedented situation of civil unrest in Chile during the week of the 2019 Cochrane Colloquium led to the cancellation of the Colloquium. In its place, a virtual Colloquium was held from 2-6 December 2019 where 180 digital posters and close to 120 video oral presentations were shared. **All content remains freely available on the Colloquium website (**https://colloquium2019.cochrane.org/**) and open to everyone!**

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