



MEASUREMENT OF MATERNAL POSTPARTUM FATIGUE IN PERU USING STANDARDIZED SCALES

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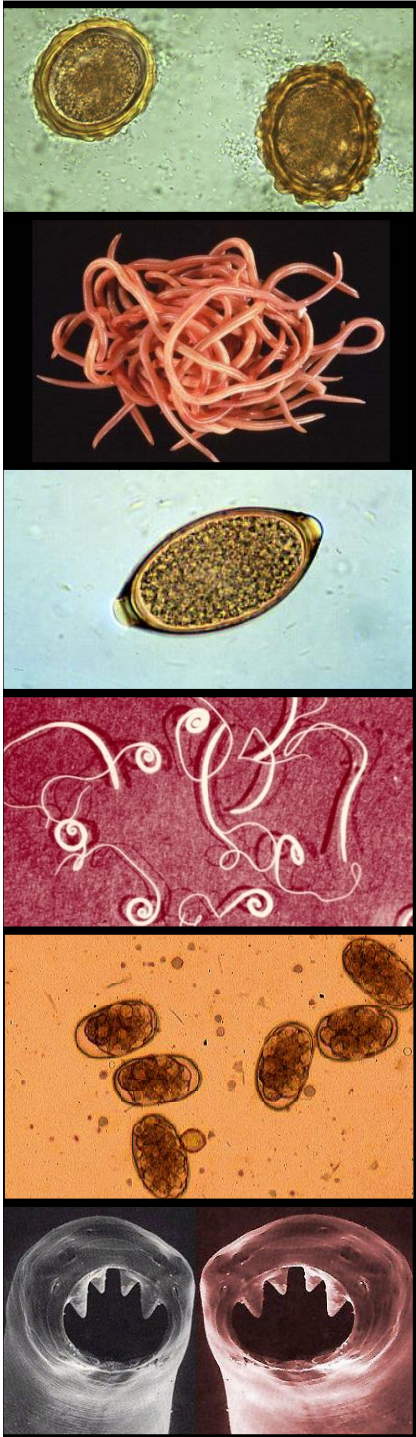


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L'Institut de recherche
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BACKGROUND

Soil-Transmitted Helminths

” The soil-transmitted helminths (STHs) are endemic in over 100 countries, affecting ~1.5 billion people globally

” They include:

- a) *Ascaris* (roundworms)
- b) *Trichuris* (whipworms)
- c) *Necator* and *Ancylostoma* (hookworms)

BACKGROUND

“ CONSEQUENCES

- Nutritional impairment
- Blood loss and anemia
- Fatigue

“ HIGH RISK GROUPS

- Preschool-age children
- School-age children
- **Women of reproductive age (WRA)**
 - Including pregnant and lactating women

DISTRIBUTION

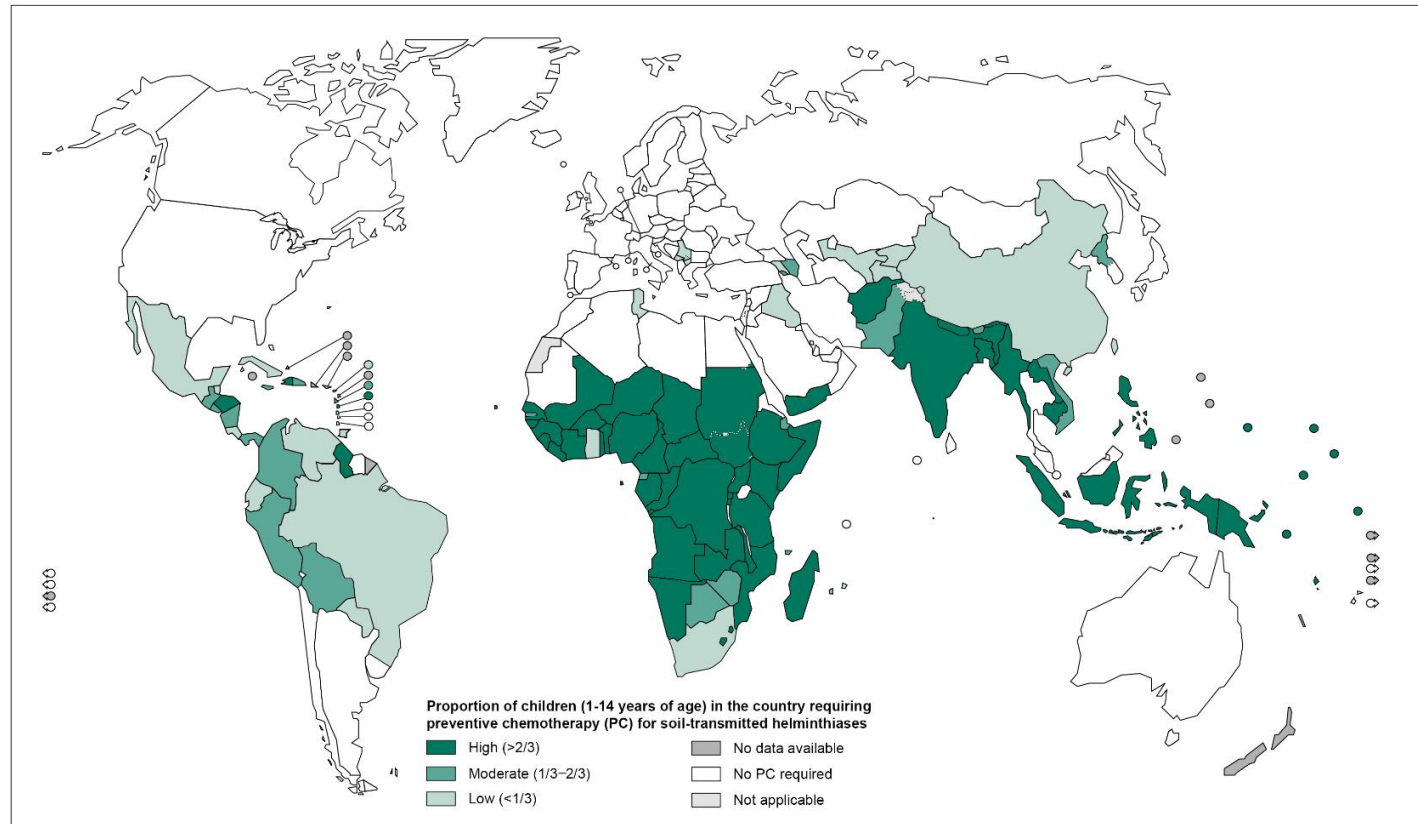


Figure 1: Proportion of children (1-14 years) requiring preventive chemotherapy, 2013

World Health Organization (2015) Preventive chemotherapy and transmission control databank.



DEWORMING

Recommendations in WRA

“ WHO INFORMAL CONSULTATION IN 1994

- Concluded that pregnant and lactating women should be included based on expert opinion and data in other populations
- Called for research on lactation performance following STH control

“ Lack of empirical evidence on benefits to mothers and children; Lactating women still excluded from deworming programs (equipoise)

OBJECTIVES

To estimate the effectiveness of maternal postpartum deworming following delivery at 1, 6, 12 and 24 months postpartum on:

1. Infant growth

2. Maternal fatigue

METHODS

Setting and Design

SETTING

“ Amazon region of Iquitos Peru

DESIGN

“ Double-blind randomized controlled trial

SAMPLE SIZE

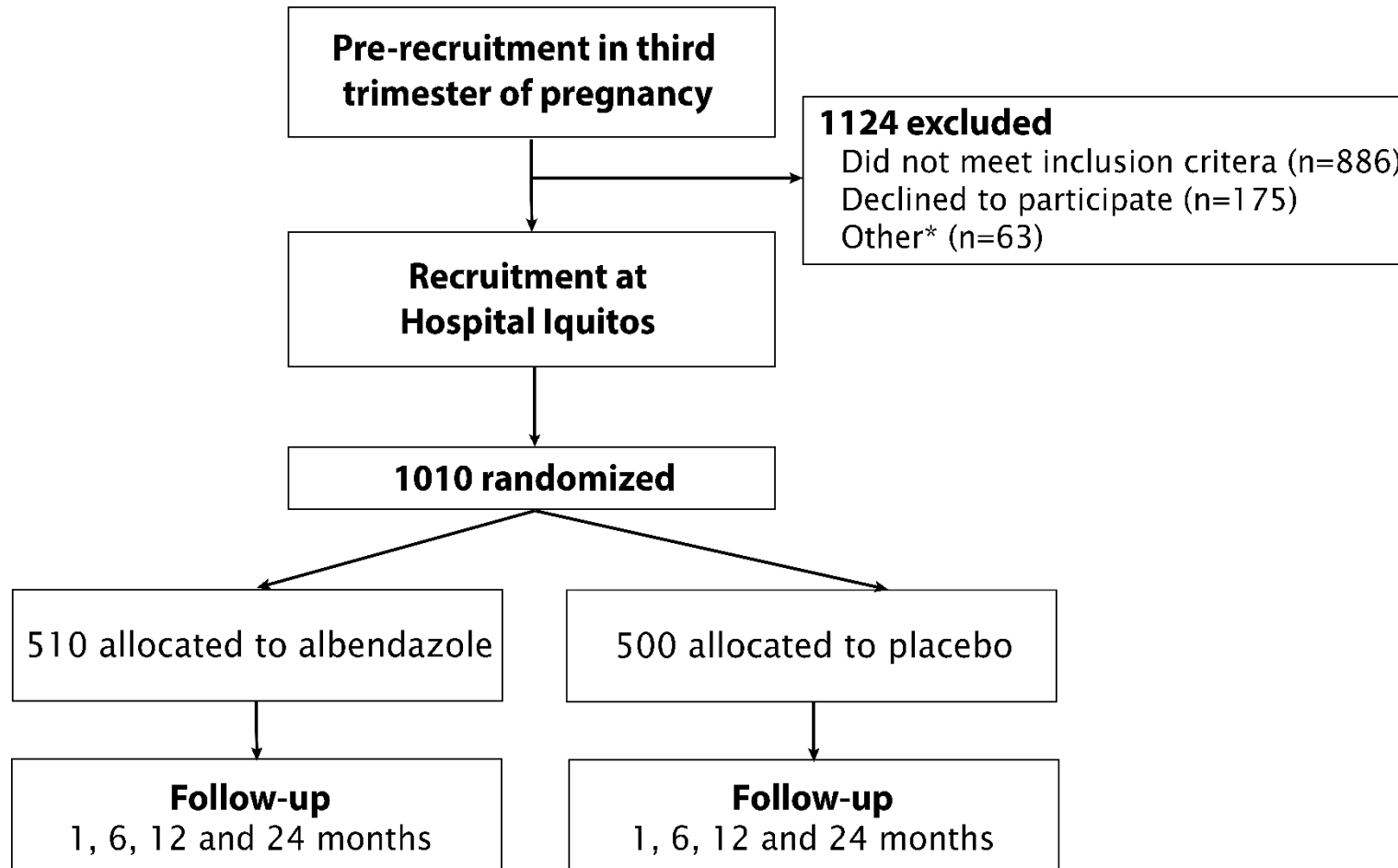
“ 1 010 mother-infant pairs



Figure 2: Map of Iquitos, Loreto, Peru

METHODS

Intervention



METHODS

Fatigue Scales

MAF

- “ 16 questions
- “ Numerical responses
- “ Global Fatigue Index

Example question:

In the past week, to what degree has fatigue interfered with your ability to:

Do household chores

1 2 3 4 5 6 7 8 9 10

NOT AT ALL

A GREAT DEAL

FAS

- “ 10 questions
- “ Numerical/Verbal responses
- “ Scoring with 10 items

Example question:

I get tired very quickly

NEVER SOMETIMES REGULARLY OFTEN ALWAYS

1

2

3

4

5

RESULTS

Table 1: Fatigue scores at 1 month postpartum, as assessed by the Multidimensional Assessment of Fatigue (MAF)

	Albendazole	Placebo
Number of participants	506	493
Mean \pm SD	21.6 \pm 8.1	21.7 \pm 8.0
Range	1 44.0	1 46.6
Cronbach alpha	0.87	0.84
% Fatigued¹	41.9	42.8

¹Cut-offs for fatigue scores of 22 for MAF

RESULTS

1 month (MAF) n=999

	Beta coefficient	95% CI	<i>P</i> value
Treatment group	0.05	-9.0, 1.0	0.925
Age	0.08	0.01, 0.2	0.022
District	-0.07	-1.1, 0.9	0.896
Secondary school	0.3	-0.5, 1.3	0.620
Predominant feeding	-1.8	-3.0, -0.7	0.002

- “ **Older** mothers had higher fatigue scores
- “ Mothers who **predominantly breastfed** had lower fatigue scores compared to mothers who practiced complementary feeding

RESULTS

Table 2: Fatigue scores at 6 months postpartum, as assessed by the Fatigue Assessment Scale (FAS)

	Albendazole	Placebo
Number of participants	489	481
Mean \pm SD	23.5 \pm 5.5	23.9 \pm 5.8
Range	12 43.0	10 43.0
Cronbach alpha	0.74	0.77
% Fatigued¹	61.4	63.8

¹Cut-offs for fatigue scores of 28 for FAS

RESULTS

6 month (FAS) n=970

	Beta coefficient	95% CI	P value
Treatment group	-0.2	-0.9, 0.5	0.509
Age	0.02	-0.03, 0.07	0.397
District	1.0	0.3, 1.7	0.005
Secondary school	0.9	0.2, 1.6	0.017
Hemoglobin (mg/dL)	-0.4	-0.6, -0.09	0.009

- “ Mothers living in the **Belen district** had higher fatigue scores
- “ Mothers who did not complete **high school** had higher fatigue scores
- “ Mothers with higher **hemoglobin** levels had lower fatigue scores

RESULTS

6 month (FAS) n=962

	Beta coefficient	95% CI	P value
Treatment group	-0.9	-0.8, 0.6	0.815
Age	0.02	-0.03, 0.07	0.457
District	1.0	0.3, 1.7	0.006
Secondary school	0.8	0.04, 1.5	0.038
Ascaris infection	1.2	0.2, 2.1	0.017

	Beta coefficient	95% CI	P value
Treatment group	-0.2	-0.8, 0.6	0.676
Age	0.02	-0.03, 0.07	0.506
District	1.0	0.3, 1.7	0.006
Secondary school	0.8	0.09, 1.5	0.027
Hookworm infection	1.7	0.07, 3.4	0.041

“ Mothers infected with **Ascaris** and **hookworm** had higher fatigue scores, adjusted for age, district of residence and education level

DISCUSSION

- “ Fatigue levels were similar in both intervention groups

- “ At 6 months, fatigue was associated with hemoglobin levels, and STH infection
 - First study on STHs to assess fatigue using standardized scales

- “ FAS shows promise in assessing fatigue in STH-endemic areas

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BILL & MELINDA
GATES *foundation*


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IDRC  CRDI

Thank you!

