

SUPPLEMENTARY FILE 1
ADDITIONAL ANALYSES

Tables showing regression slopes for:

Figure 3 (Supplementary Table S1) Menarche effects for iron biomarkers

Figure 4 (Supplementary Table S2) Menarche effects for RDT and malaria parasitaemia

Figure 5 (Supplementary Table S3) Menarche effects (menarcheal - non menarcheal) for parasite prevalence by standardised iron biomarker levels

CONSORT Checklist

Supplementary Table S1: Regression slopes and menarche effects (menarcheal - non menarcheal) for iron biomarkers (Figure 3).

Iron Biomarker	Slope (per year) (95%CI)	Menarche effect (95%CI)
log(adjusted ferritin) (%)	-6.0 (-8.8 - -3.2)	-6.9 (-21.9 - 8.1)
log(sTfR/log ferritin) (%)	2.4 (0.7 - 4.0)	-0.4 (-9.1 - 8.44)
log(hepcidin) (%)	-8.3 (-12.2 - -4.3)	-20.9 (-41.7 - -0.1)
Adjusted body iron stores (mg/kg)	-0.22 (-0.34 - -0.10)	-0.23 (-0.87 - 0.41)

Log-transformed variable slopes are expressed as %/year.

Supplementary Table S2: Regression slopes and menarche effects (menarcheal - non menarcheal) for RDT and malaria parasitaemia (Figure 4).

Parameter	Slope (95%CI)	Menarche effect (95%CI)
RDT by age	0.90 (0.84 - 0.96)	1.27 (0.89 - 1.83)
Parasitaemia by age	0.88 (0.82 - 0.95)	0.79 (0.56 - 1.14)
RDT by BMI Z-score	0.88 (0.74 - 1.05)	1.33 (0.90 - 1.96)
Parasitaemia by BMI Z-score	0.95 (0.80 - 1.13)	0.77 (0.52 - 1.13)

Slopes are expressed as odds ratios per year or BMI Z-score (per SD)

Supplementary Table S3: Regression slopes and menarche effects (menarcheal - non menarcheal) for parasite prevalence by standardised iron biomarker levels (Figure 5).

Iron Biomarker	Slope (per SD) (95%CI)	Menarche effect (95%CI)
log(ferritin)	1.53 (1.11 - 2.11)	0.68 (0.48 - 0.97)
log(sTfR/log ferritin)	0.42 (0.23 - 0.76)	0.67 (0.48 - 0.95)
log(hepcidin)	1.23 (0.98 - 1.55)	0.68 (0.48 - 0.97)
Body iron (mg/kg)	1.05 (1.02 - 1.09)	0.68 (0.48 - 0.97)

Slopes are expressed as odds ratios per standard deviation of sample distribution.

CONSORT CHECKLIST

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