1. Kenyan children with uncomplicated malaria given oral halofantrine (HF; non-micronised suspension; 8 mg base kg-1 body weight 6 hourly for three doses) showed wide variation in the disposition of HF and desbutylhalofantrine (HFm). 2. Eight Kenyan children with severe (prostrate) falciparum malaria who were receiving intravenous quinine, were given the same HF regimen by nasogastric tube. One patient had undetectable HF and two had undetectable HFm at all times after drug administration. 3. The mean AUC(0,24 h) of HF in prostrate children was half (7.54 compared with 13.10 micrograms ml-1 h) (P = 0.06), and that for HFm one-third (0.84 compared with 2.51 micrograms ml-1 h) (P < 0.05) of the value in children with uncomplicated malaria. 4. Oral HF may be appropriate for some cases of uncomplicated falciparum malaria in Africa, but in patients with severe malaria, the bioavailability of HF and HFm may be inadequate