



# Newsletter

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## Pigeon Malaria (HAEMOPROTEUS) - continued

**This disease is caused by a protozoan parasite called Haemoproteus columbae. It is transmitted from pigeon to pigeon by the pigeon fly Pseudolynxia canariensis mainly, but also midges and mosquitoes.**

### The life cycle:

Can be divided into **three** stages/areas:

1. In the salivary glands of the vector. Pigeon fly, midges and mosquitoes.
2. In the cells of blood vessel walls of the pigeon.
3. In the blood stream of the pigeon.

Malaria parasites present in the salivary glands of the vector enter the pigeon, immediately migrating to the cells of the blood vessel walls of the lung, liver and spleen. Here they can cause massive damage to the blood vessel walls. Massive damage here can cause rupture of the blood vessels and organ malfunction, the degree of which would depend on the level of infection.

### This is the stage that would be controlled by Primaquin.

**It would prevent multiplication of the parasites in the blood vessel walls and the release of parasites into the blood stream.**

Untreated parasites would multiply in the cells of the blood vessel walls. After multiplying further, parasites are released into the blood stream.

In the blood stream they invade the red blood cells where they mature into male and female parasites (adults).

**This adult parasite stage is the stage that we see on blood smears.**

### It is this stage of the parasite life cycle that is controlled by Chloroquin.

Untreated parasites in the blood are taken up by the pigeon fly when it takes its next meal. In the gut of the fly they undergo sexual reproduction, oocysts are formed which later rupture, releasing parasites which migrate to the salivary glands. The cycle is then repeated. The whole cycle takes about 30 days.

The parasite is then transmitted to the next pigeon when the vector takes its next meal.

A Haemoproteus infection in racing pigeons will lead to poor performance, and in severe cases – death.

In any loft where Haemoproteus infection and Pigeon flies are not controlled we have:

- A pigeon with Haemoproteus parasites in the blood vessel walls and parasites in the blood stream.
- Pigeon flies on the pigeon which would have parasites in their salivary glands, carrying them from one pigeon to the next.
- In lofts that are not cleaned regularly we would have pigeon flies laying larvae in the accumulated droppings which are found mainly in the nest bowls.

### How do we control and treat Haemoproteus?

- **Primaquin for 10 days in the off season before racing begins. Use 1ml per litre.**

This would take care of most of the parasites in the blood vessel walls.

- **Chloroquin given for 1 to 2 days per week throughout the season/year. It can be given any two days of the week even up to basketing if needed.** Many fanciers have had good results when using Chloroquin during racing.

This would treat the stage of the life cycle found in the blood stream AND by doing so it would prevent pigeon to pigeon transfer of the parasite.

While Chloroquin has not been available we have used Primaquin for the weekly 1 to 2 day treatment. There is no harm in using Primaquin for the 1 to 2 days.

**Once the initial 10-day treatment of Primaquin** has been given in the off season it is best to follow up with the Chloroquin.

Unless testing has been done we do not know if there are parasites in the blood. We need to use Chloroquin for this.

There is no harm though in alternating the two products when the once weekly treatment is being given.

Why do we advise the use of Primaquin for 2 days every now and then, in the season now that Chloroquin is available.?

New infections can be picked up in the basket during the season. Primaquin would work quicker. It would kill the parasites in the blood vessel walls(the nest) at the start of the life cycle in the pigeon.

- **Pigeon fly control: Spray the pigeons regularly with Avian Insect Liquidator.** By killing these you are removing the source of the infection.
- **Prevent the flies from breeding by cleaning lofts and nest pans very regularly.** Burn or bury the faeces. Don't use them on compost heaps.