

Effective Drug Policies for Racing Pigeons

Back in May of 2012, Peta released a “Sting” video about the racing pigeon sport, and from the very beginning, this video was full of misrepresentations and out right lies. However, in one part of the video, a club officer of one of the IF clubs in the NYC area, actually stated on the video that the racing pigeon sport has a doping problem.

What the club officer meant, was that his club had tested birds whose results tested positive for controlled or prohibitive substances. The end results of this person’s statement was that Peta had a confession that racing pigeon fanciers “dope” their birds.

Unfortunately, what this club officer stated, was most likely not the truth. I believe that few if any racing pigeons have ever flunked a drug test. Rather, what I believe is that the technology in the drug testing industry has far outstripped the technological expertise of the local club’s officers. These club officers are not qualified to properly assess the results of a drug test, as it relates to racing pigeons.

Over the past twenty years, the resolution of the drug testing equipment (the ability to find the presence of a substance), has increased by a factor of 500. Back in the 1980’s and 90’s most drug tests reported substances in parts per million, which was usually expressed for racing pigeon samples as micro grams per milliliter ($\mu\text{g} / \text{ml}$).

Drug testing equipment today, routinely reports the presence of a substance in parts per billion, making them hundreds of times more sensitive than the tests done twenty some years ago. Today, when a racing pigeon organization gets test results from one of the professional testing labs, these results are expressed in nano grams per milliliter (ng / ml).

The fact is, the testing equipment of today makes it nearly impossible not to detect the presence of many of the substances we routinely test for. For example, caffeine, theophylline and theobromine are so prevalent in the environment, that you cannot “not test positive” for these substances.

So then, how does one adjust for the high sensitivity of drug testing equipment today? What the sports associations do is set a threshold limit above which the sample must register before it is considered as a positive test for the substance.

Well then, problem solved, all we have to do is apply the same threshold limits as the horse racing industry does, right? Wrong! In the horse racing industry, the tests are conducted within an hour of the race and as such, these drug test are an accurate sampling of the amount of a substance in the horse at the time of the race.

In racing pigeons, we take the sample anywhere from 12 – 36 hours prior to the race release. The samples we take have little correlation to the amount of the substance which will be in the bird at the time of the race release. Why is that, because all these substances metabolize and break down over time. The scientific expression for the rate of this breakdown is called the half-life of the substance.

For example, the half-life of caffeine in humans is about 5 hours. This means that the amount of caffeine in a human athlete will decrease by 50% every 5 hours. Taking this rate of metabolization and applying it to racing pigeons the breakdown for a bird testing 400ng/ml (400 nano grams per milliliter) at the club just prior to basketing would over time be as follows:

400 ng/ml at 8:00 PM Thursday (time of the sample collection)
200 ng/ml at 1:00 AM Friday
100 ng/ml at 6:00 AM Friday
50 ng/ml at 11:00 AM Friday
25 ng/ml at 4:00 PM Friday
12.5 ng/ml at 9:00 PM Friday
6.25 ng/ml at 2:00 AM Saturday
3.125 ng/ml at 7:00 AM Saturday (time of the race release)

Herein, lies the problem, any sample collected prior to basketing the birds for the race, will not accurately reflect the amount of the substance present in the bird at the time of the race release.

Do racing pigeons have the same rate of metabolization of caffeine as do humans? Probably not, but the above example demonstrates the challenges one faces when applying test results taken 36 hours prior to a race, to the actual amount present in a racing pigeon at the time of the race release.

Remember, when horses and greyhounds are tested at the race track, their samples are collected within an hour of the finish of the race and as such, these tests are an accurate snapshot of the amount present during the race. In racing pigeons we are collecting a sample up to 36 hours prior to the race, and these samples will not correlate at all with the amount of a substance present in the racing pigeon at the time of the race.

One other important consideration is that often the sample source is not the same at racetracks and at racing pigeon clubs. For example, at race tracks they take blood as the sample used to test for some substances. In the pigeon sport, on the other hand, we are relegated to depending exclusively upon “dropping” samples, which are a combination of fecal and urine sources.

When one compares the results from blood test to the results from urine samples, one must correct for the differences in the sample source. For many substances, a urine sample will have 1.6 times as much of an ingredient than will the blood sample taken at the same time for comparison. A urine sample will have 4.0 times as much of an ingredient than will a plasma/serum sample taken at the same time for comparison. So, if we were to take a threshold limit for a substance that was collected as a blood sample, and attempt to apply that threshold to a urine sample we must allow at least 1.6 times the blood sample threshold limit.

You may be asking why is there such a difference between a urine sample and a blood sample and the answer is simply that the liver is metabolizing and breaking down substances and the kidneys are filter and flushing them out, with the end result being that often more of a substance ends up being flushed out into the urine than is allowed to remain un-metabolized in the blood. Also, a certain percentage of any substance just never gets absorbed but passes out through the digestive tract. When taking blood or urine samples, this unabsorbed amount is of no consequence as urine and blood samples are only dealing with that portion of the test substance which was absorbed and then routed to either the blood stream (blood sample) or flushed out in the urine (urine sample).

When one is utilizing a fecal / urine sample like what we collect from racing pigeons, we are not only collecting the sample amount passed in the urine but also the amount passed in its raw form, in the feces. Therefore, in some cases, like when testing for caffeine, theophylline or theobromine, one must account for the raw unabsorbed or undigested amount that passes in the fecal matter. Urine tests and blood tests do not take this amount into account when establishing threshold limits, since there is no fecal contribution present in the urine or blood samples.

So, if a threshold limit was 200 ng/ml for a blood sample taken within one hour of a horse race, then when applying that to a sample taken from a racing pigeon fecal / urine sample one might need to, first of all, adjust the threshold limit for a urine sample by a factor of 1.6 raising the threshold to 320 ng/ml. Then one might have to adjust the threshold limit for the fecal contribution depending on the substance being tested for, so if caffeine, we might correct by a factor of 20% raising the threshold limit to 384 ng/ml. Then if collecting the sample 36 hours prior to the race, we might need to adjust that threshold limit to somewhere between 4000 – 40000 ng/ml because the half life of caffeine has not been determined in pigeons, but is about 5 hours in a human and at the human half life rate (see example above), the time corrected sample would be as much as 100 times less that the amount in the sample 36 hours prior to the race release.

Back in the Fall of 2011, I received an email from one of my customers, who had failed one of these NYC area club drug tests after one of his birds won a top capital prize in their race. He asked for my assistance and this is when I became involved with investigating the whole subject of drug testing on pigeons. He reported to me that the test results for the sample taken from his birds registered 101 ng/ml of theophylline and 53 ng/ml of theobromine.

Here is the rub, most race tracks in the USA, allow a threshold / regulatory limit of 400 ng/ml for theophylline in urine and a threshold / regulatory limit of 2000 ng/ml for theobromine in urine. However, the Florida racing commission has set their threshold / regulatory limit to 400 ng/ml for theobromine in urine.

Do you see the problem here? The data from the above racing pigeon test result reported to me would not have caused a race horse to fail a drug test, And the race horse sample would have been collected within an hour of the actual race and not (as in the case of racing pigeons) collected 36+ hours prior to the racing pigeon event.

The problem I believe is that the labs which the State Horse Racing Commissions use to test race horse samples, are required to report the presence of a substance if the concentration is at least 20 ng/ml in urine. Unfortunately, these racing pigeon clubs, who ask for the same testing procedures as those being applied to race horses and greyhounds, are unaware of the rules and regulations of the State Horse Racing Commissions, and therefore, do not realize that reporting the presence of a substance does not in and of itself, disqualify the race horse from winning the race. Failing a drug test only happens if the test sample exceeds the threshold / regulatory limits.

Unfortunately, these officers in the several clubs of the NYC area, adjacent NJ area and Long Island, have not been properly trained in how to interpret these test results. In fact, many are not even able to collect and diagnose their own fecal float samples, let alone deal with the complicated task of converting test results and threshold limits for horses over to the racing pigeon sport.

These officers are acting in a vacuum and are declaring fanciers as having failed drug test, when in fact they have not failed those drug tests. The end result of this activity is that not only has a fancier's reputation been tarnished for life, but Peta then uses these incorrect "certified" failed drug test to "prove" to state's Attorney Generals, and all of the largest newspapers in the country, that we in the racing pigeon sport, routinely dope our birds for the sole purpose of winning and to profit from illegal gambling.

This gives the false appearance, that we do not care about the well being of our birds and only care about gambling and winning at any cost. Which is just the picture that Peta wants to paint concerning the sport of racing pigeons.

I think that very good people in our sport, have been crushed by the unintended ignorance of drug testing committees, which convict them of “doping” their birds, when in reality, the threshold limits applied (if any) to the test sample results are not corrected for the unique conditions which differentiate racing pigeon events from horse and dog racing events.

These drug testing policies are doing extreme harm to our sport, and cast a false shadow of “doping” and inhumane treatment of animals on our sport and all of its members. I urge all racing pigeon fanciers to not support any of these races, with their entries, for so long as they continue to act against the best interest of our sport and continue to pursue drug testing policies that produce false results and cause irreparable harm to the reputations of honorable fanciers in our sport.