

# Water Wise Budgies: How Nature's Design Can Go Wrong in the Breeding Room

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## Introduction

The budgerigar (*Melopsittacus undulatus*), or “budgie,” is a true Australian battler. In the wild, these little parrots have mastered the art of survival in some of the harshest, driest parts of the country. Their bodies are perfectly designed to make the most of every drop of water. But in our aviaries and breeding rooms, we can sometimes create problems for our birds—especially when we provide too much of a good thing. In this article, we'll look at how budgies conserve water, and how over-supplementation of protein, calcium, and vitamins can lead to kidney disease in our beloved exhibition lines.

## How Budgies Save Water

Budgies evolved in Australia's dry interior, where waterholes are few and far between. To survive:

- They produce uric acid, not urea like mammals do. This waste product forms a white paste (urates) that uses very little water to get rid of nitrogen from their food.
- Their kidneys are built for arid life. Unlike mammals that concentrate their urine, budgie kidneys actively pump out uric acid with little water. The intestines and cloaca also help by reabsorbing water before waste is passed.
- They behave cleverly. Wild budgies feed early in the morning or late in the day, when it's cooler, to reduce water loss through breathing. They also choose seeds with a bit more moisture when they can.

All these features mean budgies can go for long periods without drinking, relying on moisture from their food. In the wild, this keeps them healthy even during dry spells.

## When Captivity Challenges Nature

In our aviaries, we often feed and supplement budgies far beyond what their wild ancestors would ever get. This is especially true in exhibition and breeding birds, where the goal is big, robust show birds and healthy, fast-growing chicks. But this well-meaning extra nutrition can sometimes backfire.

### Too Much Protein

Wild budgies eat seeds low in protein. When we add high-protein soft foods, egg mixes, and sprouted seeds—especially during breeding—we can easily overshoot what their bodies need. The extra protein turns into extra uric acid. The kidneys have to work overtime to get rid of it, and if they can't keep up, uric acid crystals can build up inside the kidneys and on organs. This leads to a painful and often fatal condition called gout.

### Too Much Calcium and Vitamin D3

To support egg laying and chick growth, many fanciers add calcium and vitamin D3 supplements. But overdoing it can lead to dangerous calcium levels in the blood. This can cause calcium deposits in the kidneys (nephrocalcinosis) that damage the delicate filters and pipes that keep waste moving. Once the kidneys start to fail, water balance is affected too, and the bird may develop excessive urination (polyuria) and dehydration.

## What You Might See in Affected Birds

Budgies with kidney problems may show:

- Drinking and urinating more
- Fluffed up appearance, lethargy
- Weight loss despite eating
- Poor feather condition
- Swollen abdomen (in some cases)
- White chalky deposits around joints (in severe gout)

Sadly, many birds show no clear signs until their kidneys are badly damaged.

## How Fanciers Can Protect Their Birds

Feed a balanced diet. Breeding birds don't need unlimited high-protein foods. Offer soft foods and supplements thoughtfully, and only as needed during breeding.

Go easy on the calcium and vitamin D3. Avoid stacking supplements (e.g. cuttlefish, grit, vitamin powder, fortified soft food all at once). Remember: more is not always better.

Provide variety. Just like wild budgies, give them access to a range of seeds, greens, and natural foods.

Watch for subtle signs. Birds that seem to be drinking or urinating more than usual may need a vet check. Early detection of kidney trouble can make all the difference.

## Final Thoughts

Our budgies rely on us to give them the best of both worlds—the security of captivity with respect for the brilliant design nature gave them. By understanding how these little desert survivors manage their water, we can make better choices in the aviary and keep them healthy for many years.

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