

# Whitepaper - Jumping Fish

White paper on how fish jump out of open aquariums

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*To serve and protect*

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## Introduction

With the hype of the open aquariums (rimless tanks) came a problem which has yet to be solved elegantly. The rimless tank has got a high standard of design and aesthetics, which has to be preserved when solving the problem of fish jumping from the water.

First we will explore what causes the fish to jump, after which we will look at how a fish jumps out of the aquarium (with a bad ending). At last we will give advice on how to prevent this the best way possible.



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## 1. What causes fish to jump?

There are a lot of causes to be thought of which can cause a fish to jump out of the aquarium. The most common will include but will not be limited to:

- Stress
- Mating rituals
- Territorial drift
- Startle response
- Fighting or bullying
- Poor living conditions
- Traits of the fish
- Parasite infection

These are some causes which can sometimes be prevented, but not always. We can always try to minimize the causes, which is a good thing. We should only know that not all causes can be eliminated. We must thus make sure the fish can jump from the water, without the risk of harming the fish that way, or even letting it kill itself.



## **2. How does a fish jump out of the aquarium?**

It is a question we must ask before covering up the entire aquarium with a cover or a lid. It might be too much protection!

Now how does a fish jump out of the aquarium? It mostly happens due to stress inside of its habitat, which will include bullying, fighting, territorial drift from another fish, or a startle response. This will cause the fish to flee the area where the cause comes from, in a horizontal manner. Meaning that it will at one point, hit the glass. When the fish hits the glass, there is only one way to go: Up. Now the fish is launching itself from the water near the glass side of the aquarium. This mostly results in the fish ending up on the floor, outside of the tank.

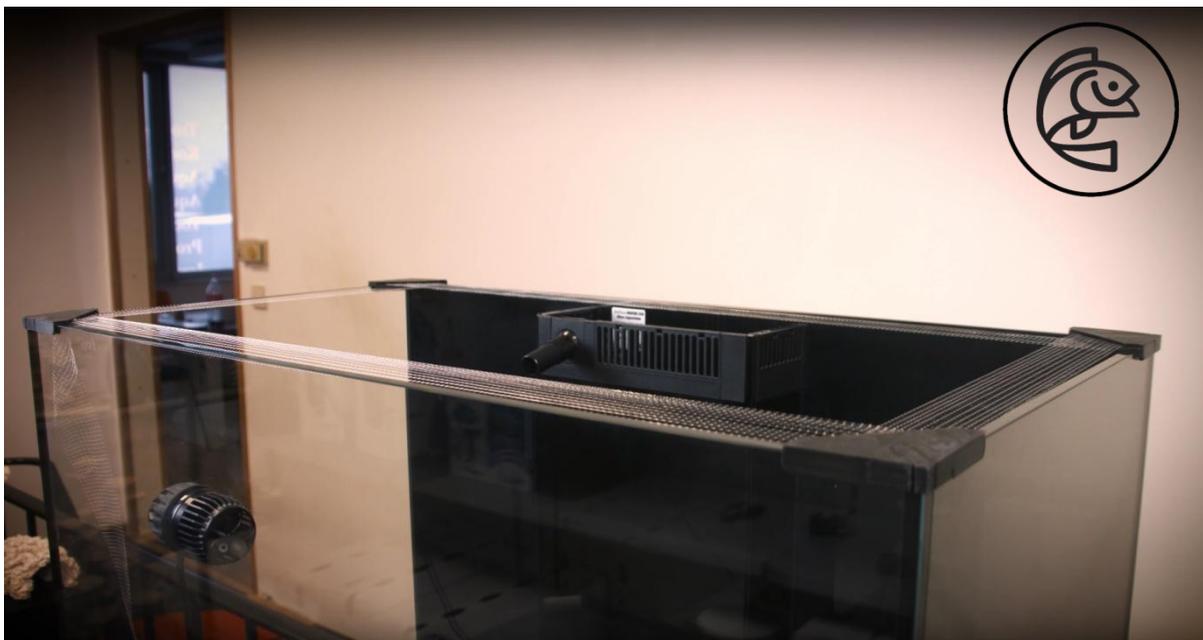
Now there are countless other ways for how a fish jumps out of the water, only we need to understand that this is mostly harmless since it happens in the middle of the aquarium. This then has no risk for the fish launching itself over the edge.



### 3. Solution and advice

Now there are countless solutions thought up during the past years. Most of these solutions made sure the rimless (and open) aquarium was covered with a lid or a cover screen of sorts. Obviously not the reason why an open aquarium is bought in the first place.

Therefore Bananaquarium has developed a solution which is keeping fish inside the aquarium in the cases described in chapter 2.



This system, called the Bananaquarium FishGuard, is a system which needs to be installed only once. After that there is not a single reason why it should be removed from the aquarium. The system works in combination with most rimless aquarium setups. The mesh is flexible and is thus not being restricted by light fixtures, outflow pipes, overflow equipment or other possible obstacles.

We have great trust in our product. Though we know that some fish are very active during the night, and sometimes a fish tends to be a bit enthusiastic jumping from the water. Therefore we advice to put your existing mesh screen on top of our FishGuard during the night, or when you are not at home (Yes our product can be used in **combination** with existing solutions!).

The FishGuard can be used as the only system to keep your fish inside the tank, which we encourage you to do during the hours you can enjoy your aquarium, clean it, feed your fish, or when you have guests over to impress!



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#### **4. Conclusion**

Fish jump out of the water so now and then. This can have multiple causes, which cannot always be prevented. So we require to install products to the aquariums to keep the fish safe when they try to escape. The Bananaquarium FishGuard prevents a lot of cases where fish would normally end up on the ground, which it does with great elegance. Our product is barely visible, and highly effective. We advice to use the FishGuard during the day, and put your old mesh screen on top of it during the night so you can be 100% sure to keep your fish inside!



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