

## Case Report

# Diving and Treatment of Aquaphobia in Cognitive Behavior Therapy: A Case Study

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**Abstract**

Aquaphobia is a persistent and abnormal fear of water. It's a specific phobia that involves a level of fear that is beyond the patient's control or that may interfere with daily life. According to the National Institute of Mental Health, specific phobias normally develop in childhood. Approximately 19.2 million American adults suffer from some type of specific phobia.

The goal of Cognitive-Behavior Therapy (CBT) is to regain control of reactions to stress and stimuli, thus reducing the feeling of helplessness that often accompanies anxiety disorders. CBT works on the principle that the thoughts that produce and maintain anxiety can be recognized and altered using various techniques that change behavioural responses and eliminate the anxiety reaction.

**Keywords:** Aquaphobia; Anxiety; Cognitive behaviour therapy; Psychology; Systematic desensitization

## How Phobias Can Ruin Someone's Life

*"I know all too well the symptoms of fear, wherever it comes from: trembling, rapid heartbeat, cold sweats, suffocation ... even the paralysis that panic can cause. In a situation of fear, we are totally vulnerable, we do not control any of these feelings. We do not recognize ourselves. It often happens that we project our own fears on those who are close to us. Afterward, when the situation of fear disappears and when we become "normal" again, we do not know how to speak to them again, because a great sense of shame overcomes us."*

The fears that we feel in our daily life can ruin the best of times. We focus on fear, and everything else becomes secondary. Some people, like me, can even sometimes be obliged to organize their life around a whole system of uncontrollable fears, caused by phobias.

"Phobias": the word is out!

This way of reacting is based on fear, and can severely impact one's lifestyle. When this persistent fear gets more intense, and because there is an anxiety of being confronted with fearful situations, even going out becomes difficult.

When a phobia overcomes us, all the pleasures of life vanish. All these fears affect day-to-day living, and have the power to make the pleasant times of one's existence, such as holidays, quite painful (anxiety of being in an unknown place, fear of being afraid...)

The way other people perceive us is also hard to endure, because they often make fun of the fearful person's behavior-they get teased and laughed at.

It may also be noted that these obsessive anxieties are generally linked to the fear of dying. It may well be that this is a way to feel that we are still alive and kicking?

Phobias are a disorder which affects millions of people, but we are fortunate enough in being able to treat them. In spite of this however,

the feeling of fear never disappears completely! Phobias may well just be part of the difficulty of living.

This is what Martine answered when we asked her to tell us about her fear of water (aquaphobia). We all have phobias. Does this mean we should consider consulting a doctor or taking medicine for it? Of course not. Treatment is only necessary when a phobia impacts the way we function, our behaviour, if it makes our life a misery. If this is the case, then diving, a leisure activity par excellence may well be a therapeutic tool.

According to the *DSM (Diagnostic and Statistical Manual of Mental Disorders)*, a phobia is a *"persistent and intense fear of unreasonable or excessive nature, caused by the presence or the anticipation of being confronted by a particular object or a specific situation."*

*The exposure to a phobogenic stimulus almost systematically causes an immediate anxious reaction that can take the form of a panic attack, linked to the situation or facilitated by the situation.*

*The subject admits the excessive nature of his/her fear.*

*The phobogenic situation is avoided or experienced through an intensive anxiety or distress.*

*Avoidance, anxious anticipation or suffering in the dreaded situation severely interfere with the person's daily life, their professional activities or his/her social activities or their relations with others, or the fact of suffering from this phobia is accompanied by an important feeling of pain. »*

In practice, the very thought of being in water is enough to distress Martine. She admits that this fear is excessive, but it is beyond her control. The patient is conscious of abnormal nature of her disorder, which forces her to reorganise some situations she needs to face in her daily life.

Let's now see how Martine was helped to overcome her fear of water thanks to diving.

**Treatment**

CBT (Cognitive Behaviour Therapy) is the most effective way to treat simple phobias. This is the most widely accepted method of psychological treatment, recognized by the whole scientific community. CBT is based on techniques that are modified slowly over time in response to research works that evaluate its effectiveness.

Cognitive behaviour therapies, as their name indicates, are effective on any inappropriate behaviour in daily life. (For example: Martine lives on the Mediterranean coast. She would take her children to the beach in summer but she wouldn't let them go into the water. Because if something happened, she couldn't jump into the water to save them. Even when some water splashed over her, she started gasping, her heart started racing and she would break out in a cold sweat, thinking that she was going to die. Therefore, she was obliged to stay away from the water and to take quick showers taking care not to get her face wet. )

CBT also acts on thoughts (cognitions) associated with these inappropriate behaviours (in the case of Martine: "If I find myself in the water, I'm going to drown", "If there is water on my face, I'm going to inhale some and choke", etc.).

It is a matter of altering an inappropriate behaviour so that the person may improve their state of mind as fast as possible (inappropriate acts are fought and removed, appropriate acts are encouraged and reinforced).

**Martine's story**

Martine, aged 43, is a personal assistant in Cannes. She has been widowed for three years, lives in Nice and couldn't stand getting wet: the mere idea of being splashed worried her intensely, which led to avoidance behaviour (she never went to the beach, she couldn't bring herself to take her kids to the swimming-pool) that made life very complicated for her.

The beginning of her disorders goes back to March 2004, when her husband suddenly passed away from a heart attack while he was swimming in the sea. Martine explained that her husband had eating disorders with frequent bouts of bulimia; however, no psychological treatment had ever been requested.

On the day of his death, he phoned his wife, and told her he had a bout of bulimia and suggested that they meet at the beach after her work because he felt distressed. Martine's husband died of a heart attack while he was swimming towards her.

Following this tragic episode, Martine consulted her general practitioner and underwent a treatment with relaxation and was off work for one month with a nervous breakdown. She suffered during this period from very invalidating insomnia, continuous fatigue and depressive thoughts (she thought of death throughout the day). In the course of the following months, while she had gone back to work, Martine fell victim to intense anxiety, called panic attacks, which were characterized by an acceleration of breath, thoracic oppression, palpitations, cold sweats, muscle contraction and dizziness. The fear of dying was the strongest feeling at these times; it came with both

physical and mental agitation, in search of a person that could help her.

Martine avoided going swimming, fearing her anxiety about water might again cause panic attacks. When necessary, her 20-year-old eldest son living with her took responsibility for going to the swimming pool or to the beach with his two 10-year-old sisters. When Martine took a shower, she avoided getting her face wet and washed as fast as possible.

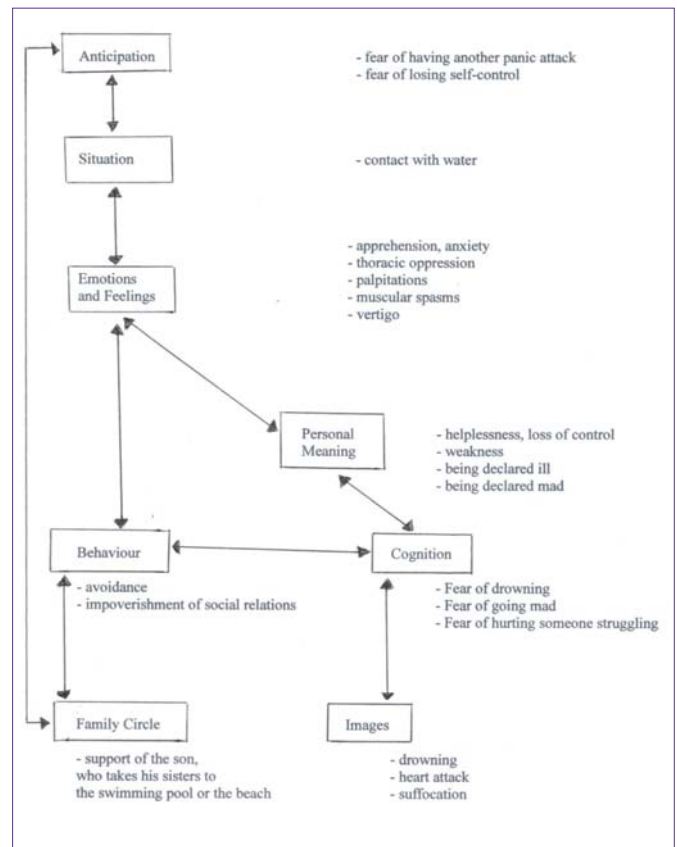
**The analysis of martine's disorder**

Martine suffered from a typical fear of water (aqua phobia). Let's now to define more closely what was making Martine suffers: it is called a "functional analysis" of the anxiety disorder. Therefore, we are going to summarize all the recorded information on a diagram called "SECCA model", a French model of functional analysis used in CBT. SECCA means:

- \_ Situation (causing anxiety),
- \_ Emotion,
- \_ Cognition (thoughts, mental images, different systems of beliefs),
- \_ Conduct or behaviour,
- \_ Anticipation

These are the results of the analysis of Martine's phobia, using the SECCA model:

[Figure 1]



• Focus : Systematic desensitization.

This is a technique which has as its goal to modify the ill-adapted behavior (here avoiding water). First of all, we made a list of situations which Martine felt threatening. Second, we suggested a quiet image to the relaxed patient (“You are at the mountains, near a fire; you are reading a good book. Your cat is purring next to you. Outside it is snowing with big snowflakes but you are cosy here where it is warm.”) Martine had her eyes closed, completely relaxed. After that, we asked her to imagine the least threatening situation on the list. After almost five seconds with the image in her mind, the patient was asked to leave it and to say how anxious she is. Then she relaxed for about 20 seconds.

We went over the same situation a second time for 20 seconds, alternating with relaxation and so on. Once the anxiety was reduced at least by half, we would go back to the top of the list. Little by little, we managed to face up to the most distressing situation. It is almost the same principle as the one used when you focus on allergies during a pollen desensitisation. Ever increasing doses of the substance the patient is allergic to is injected into their body, so that they can gradually get used to it. Here, we were changing the dose of anxiety. Once Martine has managed to face up to progressively more distressing situations in her imagination, she is asked to put herself in a real situation. She then would go to the top of the list. These were the tasks she had to do outside.

## Psychotherapeutic Treatment

We started by giving Martine information on her phobia making it as unthreatening as possible and showing her that she has a well-known disorder which can be treated in a series of sessions using the behavioural cognitive approach.

We informed Martine about the main principles of BCA and the practical aspects, especially about the systematic desensitization techniques.

We explained to Martine, step by step, the way the therapy was going to be done.

We asked her to begin to watch herself carefully in each situation she finds challenging and leads her to an avoidance. We also suggested that in those situations she rate her anxiety on a scale of 0 to 10.

### Aim

Martine wanted to go back to being like she was before. She wanted to go to the beach with her children, to be able to go for a swim and in particular to put her head under the water. The aim of the therapy was therefore just that: to be able to go for a swim and to put her head under water. It was agreed with Martine that she would have about fifteen sessions, and that we would meet once a week for 30 to 45 minutes a time. An agenda was set at the beginning of each session and there was feedback at the end – we asked Martine what she thought of the session.

### The actual sessions

The sessions were held between 4<sup>th</sup> May and 9<sup>th</sup> July 2008. 13 sessions were necessary. This is how they took place. We have brought out some key sessions.

#### Sessions 1 to 3:

The first three sessions were centred on:

- Martine’s life and the story of her disability
- The diagnosis
- The analysis of her disorder
- Working out a “therapeutic contract” defining the aims of the sessions and how they were to take place.
- A review of situations which were a problem and which led to avoidance, putting the situations into a hierarchy (from the most distressing to the least distressing, on a scale from 100 to 0).

**Aim:** to be able to go for a swim and put her head under the water.

100: to go scuba-diving for the first time in the presence of a therapist who is also a diving instructor.

- 90: to go swimming from a boat and put her head into the water
- 80: to go swimming from a boat that is anchored in the middle of the sea without putting her head into the water
- 70: to go swimming from a boat that is moored several meters from the shore without putting her head into the water
- 60: to go on a boat
- 50: to put her head into a tub filled with water
- 40: to splash water on her face
- 30: to enrol in a course about risks of drowning while scuba diving
- 20: to go onboard a boat at a dock.
- 10: to take a walk around the harbour of Nice

#### Session 4:

This session gave information about phobias; using diagrams to explain the psycho physiological phenomenon of anxiousness.

Once all the elements are understood, attention was turned to learning how to control panic attacks. This was done by explaining and practicing rapid relaxation techniques.

Martine turned out to be very receptive since for the first time she could see herself clear to being able to act on her symptoms.

**Outside work for the following session:** Exercise every day rapid relaxation techniques in situations that do not provoke anxiety.

#### Session 5:

The session started with a review of the work done at home. Martine liked this way of working; she was motivated by the method used of calculating her results. She mentioned her will to improve control over her continuing fear of having a panic attack, and was looking forward to being free of this unbearable inner suffering. During the whole session we worked on quick relaxation techniques. Tasks to prepare at home for the next session:

Practice quick relaxation exercises every day in a situation free from anxiety.

#### Session 6:

Martine did her homework very well and was congratulated on it. She had mastered rapid relaxation.

This session was devoted to explanations of links existing between knowledge, emotions, behavior and consequences. Martine seemed satisfied to better understand how her disorder functioned.

Pros	Cons
<p>I will look like I am crazy if I gesticulate without reason.</p> <ul style="list-style-type: none"> <li>- People who do something insane are committed to a mental institution against their will.</li> <li>- Psychiatry is another world, some patients are interned their whole life.</li> </ul>	<ul style="list-style-type: none"> <li>- Not everyone with strange behaviour is committed.</li> <li>- I am healthy</li> <li>- Patients don't die in mental institutions.</li> </ul>

Tasks to prepare at home for the following session: The patient was to do her rapid relaxation exercises every day.

**Session 7:**

We undertook with Martine what is called cognitive restructuring. To do this we proceeded as follows:

Martine: “If I’m in the water having a panic attack I’ll lose my self control and start waving my arms around”.

- Therapist: «*So what will be the result of all this?* »
- Martine: «*People will gather together around me and I will feel silly*»
- Therapist: «*What will happen next?* »
- Martine: «*They will think that I’m mad* »
- Therapist: «*So what if they think you are mad?* »
- Martine: «*I will be committed to a mental institution*»
- Therapist: «*And? What will be the repercussions?* »
- Martine: «*I will die in the mental institution.*».

What has been revealed here is what is at the root of Martine’s behaviour, which can be summarized in the following manner: «*I must avoid going in the water or any situation which can trigger a panic attack, otherwise I’ll be committed and die in a mental institution.*».

Martine has an 80% belief in this.

Then we ask Martine to list the pros and cons of this:

After this contradictory examination, Martine rates her beliefs in all this at 20%.

**Feed back**

Martine was very proud of being able to talk about this problem. She thanked us profusely for “helping her to finally see things more clearly”. Tasks to do for the following meeting:

Wandering alongside the harbour of Nice and go onto a boat which will stay alongside the quay. Use rapid relaxation to help get the anxiety level down.

**Session 8:**

Martine made every effort to achieve the task we had set her, even in spite of the anxiety level ranked at 8 (on a scale from 0 to 8) when the action began, but which came down to 4 after a few minutes. We then had the now relaxed patient recall scenes that were painful for her (picking up the least worrisome one from her list to start off with), according to the principle of systematic desensitization. Martine thus learned to reduce and handle her anxiety by stages.

She seemed very receptive to this kind of technique and shared her satisfaction once the meeting was over. “I would never have thought I would see my anxiety diminish so much” (anxiety ranked at 8 at the beginning and at 3 at the end of the test).

**Tasks to do for the following meeting:**

Enrol for a course on the risks of drowning while diving.

**Sessions 9 to 12:**

These sessions were meant to continue the systematic desensitization, taking as examples increasingly distressing situations. In the same way, the tasks to be undertaken at home increase in difficulty. Some situations previously avoided were dealt with in reality; the thresholds were crossed without any great difficulty.

As from the 12th session, Martine was able to dive off a ship anchored in the sea, without putting her head under water.

Over several sessions, she told us how she felt she was ‘learning how to live again’.

**Session 13:**

This session was dedicated to the assessment of the whole treatment. Martine declared herself very satisfied, since the contract was fulfilled and the therapeutic aims attained: not only has she managed to make her first dive, but she was also tickled pink to do so!

We agreed to meet in two months to evaluate the results and to have back-up sessions if necessary.

**Two months later after the end of the therapy**

Martine explained that she was able to continue to keep on an even keel, thanks to the treatment, and underlined that in two months, she had experienced only two panic attacks, which she succeeded in overcoming. She even signed up for a scuba diving experience in order to obtain her level 1 certificate.

**Phobias: A Widespread Disorder**

Many people suffer from this disorder, that makes their lives and their close relatives’ lives a misery. It is estimated that there are more than 13 million patients who consult a doctor out of panic and phobia disorders in the United States alone. Approximately one person in ten in the whole population suffers from recognizable phobias.

Generally, patients don’t really understand what is happening to them: one day, they are confronted with this pathology coming from nowhere which has been keeping on growing and they are unable to explain what’s happening.

When phobias are not a great handicap for people, they are not a serious matter. They begin to be problematical from the moment

<ul style="list-style-type: none"> <li>Focus on the different kinds of phobias</li> </ul>
<p>Fear of spiders / <b>ARACHNOPHOBIA</b>                  Fear of knives, needles or pointed objects / <b>AICHMOPHOBIA</b>                  Fear of flying / <b>AVIOPHOBIA</b>                  Fear of cancer / <b>CANCEROPHOBIA</b>                  Fear of cats / <b>ELUROPHOBIA</b>                  Fear of dogs / <b>CYNOPHOBIA</b>                  Fear of constipation / <b>COPRASTASOPHOBIA</b>                  Fear of air drafts or wind / <b>ANEMOPHOBIA</b>                  Fear of pain / <b>ALGOPHOBIA</b>                  Fear of water / <b>AQUAPHOBIA</b>                  Fear of thunder and lightning / <b>ASTRAPHOBIA</b>                  Fear of open spaces / <b>AGORAPHOBIA</b>                  Fear of confined spaces / <b>CLAUSTROPHOBIA</b>                  Fear of strangers or foreigners / <b>XENOPHOBIA</b>                  Fear of heights / <b>ACROPHOBIA</b>                  Fear of suffering and disease / <b>PANTHOPHOBIA</b>                  Fear of the night / <b>NOCTIPHOBIA</b>                  Fear of birds / <b>ORNITHOPHOBIA</b>                  Fear of thunder / <b>TONITROPHOBIA</b>                  Fear of thunder / <b>BRONTOPHOBIA</b>                  Fear of needles or pointed objects / <b>AICHMOPHOBIA</b>                  Fear of blushing / <b>EREUTHOPHOBIA</b>                  Fear of sleep / <b>HYPNOPHOBIA</b>                  Fear of mice / <b>MUSOPHOBIA</b>                  Fear of trains, railroads or train travel / <b>SIDERODROMOPHOBIA</b></p>

when they prevent people from living normally, when they ruin their lives. Here, our purpose was to give some basic support to readers. We hope these basic ideas will enable them to understand more clearly what a phobia is and particularly that there are effective and suitable therapeutic means of overcoming phobias. And, in the context of aquaphobia, scuba diving may be very effective and practicing this activity makes people unable to comprehend water with a reassuring view.

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