



IMMERSIVE
HEALTHCARE
TECHNOLOGIES

Integration of TERV in the treatment of anxiety disorders

Confidential Document C1

Do not distribute - Strictly limited to internal use

©C2CARE 2024

SUMMARY

1. Introduction	4
a. Caution	4
b. Integration of CBT	4
c. Integration of Psychoanalysis	4
2. Format	5
3. Hygienic and Dietary Rules	6
a. Resuming Endurance Exercise	6
b. Ceasing Other Stimulants or Excitants	7
c. Exposure to Sunlight	7
d. Consuming Desserts and Chocolate	7
e. Having Frequent Sexual Relations	8
4. Psychoeducation	8
a. Gray's Neurobiological Model	8
b. Conditioning Model (Behavioral Model)	9
c. Barlow's Etiological Model	10
d. Cognitive Model	10
5. Relaxation	11
a. Preparation	12
b. Vagal or Respiratory Relaxation	13
c. Jacobson's Progressive Muscle Relaxation	13
d. Schultz's Autogenic Training	15
6. ACARA	19
a. A for Accepting Anxiety	19
b. C for Contemplating Emotions	20
c. A for Acting with Anxiety	20
d. R for repeating these 3 steps once again	20
e. A for Awaiting the Best	21
7. Cognitive Therapy	21
a. First Stage: Self-Observation	21
b. Second Stage: Evidence Gathering	21
c. Third Stage: Generating a Balanced Interpretation	23
8. Behavioral and Cognitive Strategies	24
a. Strategies for Coping with Temptations	24
b. Adaptive Behavioral Strategies	25
9. Positive Self-Instructions	26
10. Assertion	27
a. Knowing How to Refuse	27
b. Different Techniques to Use	28

11. Mental Imagery	29
12. Virtual Reality Exposure: Key Principles	31
a. Preparation	31
b. Progressive	31
c. Prolonged	33
d. Repeated	33
e. Steps of a VRET Session	34
f. Cyber Sickness Syndrome	37
13. Transition to Reality: Generalization	37
14. Conclusion	38

1. Introduction

a. Caution

C2Care's virtual environments should not be used initially with a phobic patient or someone suffering from another anxiety disorder, as it may sensitize them or provoke a panic attack.

They should be used only after the anxious patient has been prepared and trained in therapy (CBT: cognitive-behavioral therapy, relaxation, emotion management, etc.).

Their therapeutic purpose is to expose the patient to anxiety-inducing environments they typically avoid so that they can employ therapeutic tools in situations, aiming for habituation and extinction of fear.

b. Integration of CBT

This professional manual aims to assist you in integrating Virtual Reality Exposure Therapy (VRET) into your practice of cognitive-behavioral therapy (CBT). General principles, a comprehensive method, and various therapy stages will be detailed in the following chapters.

c. Integration of Psychoanalysis

Regarding psychoanalysis, psychoanalysts can utilize these virtual environments to evoke certain memories of past traumas, bring forth repressed thoughts, freely associate with the anxiety-provoking context, evoke possible symbolic representations in the situation, aid in regression, or simulate patterns related to pleasure points.

Indeed, when confronted with virtual environments representing dreaded or avoided situations (subway, airplane, elevator, blood, etc.), the patient may suddenly recall images, thoughts, or memories forgotten and possibly repressed. Therefore, it can be an additional tool to access the patient's unconscious.

2. Format

One weekly session of approximately 40 to 50 minutes at the hospital or in the office.

8 to 15 sessions in total, equating to 2 to 4 months of treatment.

Periodic follow-up with an interview every 3 months during the first year after therapy's end is conceivable to ensure the maintenance of benefits achieved and to address any questions raised by reality exposure.

Regarding its use in psychoanalysis, the number of sessions is at the therapist's discretion, who must choose between the possibility of transference before exposure or the revelation of repressed impulses, forgotten traumas, or misplaced fears during virtual reality exposure.

Primum non nocere: The aim of treatment is the patient's emancipation, not to make them dependent on the therapist. The patient is an adult who should fly with their own wings. Your role is not to confine them to therapy lasting years but to give them the wings they seek to rise and flourish, enjoying the full potential of their personality and abilities.

The initial 4-5 sessions focus on learning relaxation, cognitive therapy, and anxiety management (detailed in this manual), while the subsequent 4 to 10 sessions involve Virtual Reality Exposure Therapy using the C2Care virtual environment. If the patient has social phobia or obsessive-compulsive disorder, it may be necessary to add modules dedicated to assertiveness (for social phobia) and response prevention (for obsessive-compulsive disorder).

The initial 4-5 sessions of relaxation, cognitive therapy, and anxiety management can be conducted in **groups of 2 to 5 patients**. The group sharing effect, the feeling of not being isolated in one's problem, and the different perspectives are very constructive for therapy. Some patients even spontaneously help each other and exchange contact information.

It seems necessary initially to ensure that the anxiety disorder is not of organic origin. Look for a history of hormonal disorders (hyperthyroidism, Cushing's syndrome, Stein Leventhal syndrome, etc.) or neurological pathologies

(hydrocephalus, chronic subdural hematoma from head trauma, epilepsy, ischemic stroke, encephalitis, etc.), perform a clinical examination to look for neurological signs if necessary. The presence of confirmed signs should prompt a request for biological tests and a brain scan or even an MRI. Sometimes, in psychiatric services, patients have undergone numerous therapies for years without success, whereas ultimately, the origin of the mental disorder is somatic, and a simple medical treatment can resolve the problem in a few weeks. **Indeed, persisting with psychotherapy for a patient with a mentally organic disorder is futile; the treatment will then be medico-surgical.**

During the first session, after establishing the reason for consultation, functional analysis for CBT therapists, a study of parental relationships for psychoanalysis, verifying the diagnosis, the patient's objective and motivation, it is important to provide information on psychoanalysis, CBT, therapy modalities, the number of sessions, their duration, follow-up, and stages.

Note that the patient is not obliged to use all these methods but only those that suit them or those they enjoy. Indeed, some may not always be effective based on the patient's tastes, preferences, and personality. Therefore, it is normal for the patient not to use all these tools after therapy ends.

3. Hygienic and Dietary Rules

These involve simple lifestyle advice. Here are the recommendations to give to your patients.

a. Resuming Endurance Exercise

Engaging in endurance or "cardio" sports is highly recommended: running, cycling, swimming, brisk walking, etc. Indeed, endurance sports alter the secretion of certain neurohormones in the brain, and these modifications have a beneficial effect on mood, pleasant behaviors, and the reduction of anxiety and hostile behaviors. Especially serotonin, which is increased by physical activity. It is advised to engage in sports at least 2 to 3 times a week. Regularity is preferred over intensity: it's better to do 20 minutes of cycling every day than 2 hours of cycling only on Sundays.

b. Ceasing Other Stimulants or Excitants

Excessive coffee and alcohol tend to worsen anxiety due to their stimulating effects. The patient should opt for decaffeinated coffee and drink alcohol moderately (ideally 1 to 2 glasses of red wine per day and occasional excesses).

c. Exposure to Sunlight

Like engaging in sports, exposure to sunlight alters the levels of neurohormones in our brain beneficially, especially serotonin, which plays a role in mood improvement, behaviors, and anxiety reduction. Therefore, it is advisable to expose oneself to the sun by walking outdoors in forests or parks, going to the beach or near rivers (with sun protection and in moderation).

d. Consuming Desserts and Chocolate

Within reasonable limits, of course.

The carbohydrates in desserts lead to an increase in serotonin production in the brain (by allowing a higher transport rate of its precursor). It is therefore advisable to enjoy a delicious dessert at the end of each meal (but not between meals for a balanced diet and to avoid weight gain).

Additionally, some foods, such as chocolate, almonds and cashews, eggs, dairy products, and fish, naturally contain the precursor of serotonin (which is tryptophan). The patient can include these in their diet.

- (en) Wurtman RJ, Wurtman JJ, Regan MM, McDermott JM, Tsay RH, Breu JJ, « Effects of normal meals rich in carbohydrates or proteins on plasma tryptophan and tyrosine ratios », *Am. J. Clin. Nutr.*, vol. 77, no 1, janvier 2003, p. 128–32 (PMID 12499331)

e. Having Frequent Sexual Relations

In hominids like humans, reproductive behavior, which is less necessary due to overpopulation, has evolved into erotic behavior because it provides intense pleasure that can be shared. Sexual relations are the key to bodily intimacy as well as emotional and carnal closeness between both partners in a couple. They produce positive feelings and reflect the quality of the relationship between the two partners. Moreover, the orgasm obtained after sexual intercourse is responsible for the production of endorphins and oxytocin, which besides inducing pleasure, help to soothe conflicts and sexual tensions, alleviate concerns, and consequently reduce anxiety or dependency. The beneficial effects of orgasm not only have short-term consequences but can actually last for at least a week after intercourse. Therefore, it is recommended to have regular sexual intercourse (at least 2 to 3 times a week).

4. Psychoeducation

Psychoeducation will be based on 4 models stemming from biological, neurological, cognitive, and behavioral sciences. It will be necessary to teach these 4 models to patients using clear diagrams and explanations. This teaching should be illustrated with concrete cases using the patient's history or narratives from other patients.

a. Gray's Neurobiological Model

This model reflects anatomical and neurobiological theories regarding anxiety and fear. It was primarily developed by Jeffrey Gray and Lazarus.

During a specific situation such as taking a plane, elevator, giving a speech, or touching a dirty object, the phobic patient interprets this action unrealistically, distorts the information, and perceives it as a threat, thus triggering a primary assessment of the threat with amplification of certain details according to the individual and their cognitive structure (expectations and interests): location of emergency exits, presence of others, emergency button, ventilation, etc.

Following this process, the phobic patient initiates a primary response, i.e., an action in this context of real or perceived threat. Another entity called the FFS (Flight or Fight System) is then engaged. It can induce a fighting behavior, where the individual confronts the situation: taking the plane, using the subway, entering the elevator, speaking in front of an audience, not checking the door more than once, or driving on the highway. Alternatively, it can lead to a flight behavior. The patient postpones their flight, takes the stairs, walks home, cancels a meeting, checks the door 20 times, and avoids the highway by taking a national road.

b. Conditioning Model (Behavioral Model)

This model is based on Pavlov's conditioning theories and Skinner's operant conditioning.

In Pavlov and Betcherev's experiment revolving around the stimulus-response concept, these famous works were initially conducted on dogs, inducing a salivation response (unconditioned response) by presenting food (unconditioned stimulus).

The model later enriched with Skinner's radical Behaviorism theory of operant conditioning (or instrumental conditioning) and highlights a biunivocal stimulus/response relationship. This mode of conditioning derives from Thorndike's Law of Effect (1898) exploited in subsequent concepts of human learning: "an action that produces a desirable result will probably be repeated under similar conditions."

Therefore, operant conditioning relies on a contingency relationship and motivation toward a behavior conditioned by the presence of positive reinforcers (or rewards), which increase the frequency and intensity of that behavior, and negative reinforcers (or punishment), the avoidance of which increases the frequency and intensity of that behavior.

In other words, actions are reinforced by their consequences.

Thus, in the case of a claustrophobe, the relief caused by avoidance, such as taking the stairs instead of the elevator, serves as a positive reinforcer for the flight behavior, and the absence of anxiety serves as a negative reinforcer. In conclusion,

the more the phobic individual avoids, the more they will continue to avoid in the future. By fleeing, they feel relieved in the short term but exacerbate their phobia in the long term.

c. Barlow's Etiological Model

This model summarizes the origin of phobia or other anxiety disorders. It is based on past experiences undergone by the patient, which form the basis of this pathology. These experiences can be:

- Direct (experienced by the patient such as a car accident, elevator breakdown, first panic attack, assault, etc.)
- Indirect, where the phobic individual may witness an event happening to someone else and through a process of excessive identification with that person, become sensitized to that indirectly experienced situation (vicarious experience). When the patient witnesses a car accident, violence against loved ones, drowning, being trapped in malfunctioning elevators, etc.
- Stress, which here corresponds to a form of prolonged pressure over several weeks or months related to emotional, familial, financial, or professional events.
- False information that can lead to alarm processes assimilated and then acquired in the form of general laws of logical thinking systems, ultimately fixing the phobia. This can involve false information about the environment delivered by the patient's parents or relatives: "don't go too far, you'll get lost", "don't come home too late or you'll get attacked", etc.

d. Cognitive Model

Cognitive models are based on information processing theories.

A situation will always require some form of analysis or evaluation before action. However, the environment surrounding us is too rich for our attention to focus on all details of a place simultaneously. Therefore, the patient will use their attentional processes selectively to focus only on certain characteristics of the environment (furniture, animals, objects, etc.).

In summary, they will play a major role in interpreting the situation by selecting certain details (doors, crowd, gaze, etc.) and not others. If they are erroneous, as is the case in anxiety disorders where those concerned are those of danger and vulnerability, they can lead to a selection of details related to danger (exits, hostile gaze, crowd, closed doors, space, rats, etc.). This inappropriate selection will lead to an unrealistic interpretation of the situation resulting in catastrophic thoughts such as:

"I am going to die."

"I will get stuck in the elevator."

"I will go crazy."

"I will be ridiculous, I will be judged badly."

"I will get AIDS or be contaminated."

"I will have an accident," etc.

Ultimately, these more primitive cognitive schemas lead the phobic or obsessive patient into irrational exaggerations, unrealistic conclusions, and stereotyped generalizations of situations that are objectively trivial or harmless (taking the elevator, petting a dog, speaking in public, shaking hands, etc.).

5. Relaxation

On retrouve dans la littérature trois formes de relaxation qui ont fait leur preuve sur plus de 50 ans et que nous emploierons ici afin que le patient obtienne un état de relaxation en situation dans les environnements virtuels C2Care ou dans la réalité. Cet état de relaxation est un élément pertinent pour mieux gérer son anxiété. L'aspect corporel de l'anxiété ainsi que ses manifestations symptomatiques doivent être atténués par ces pratiques de relaxation. L'esprit n'est pas solitaire, il se trouve dans un corps et ces deux entités interagissent en permanence. Apporter de l'apaisement à l'un à de facto des effets bénéfiques sur l'autre : un esprit détendu relâche les tensions du corps et un corps relâché apaise l'esprit.

Les trois formes concernées par cette thérapie sont :

- La relaxation vagale ou respiratoire.

- La relaxation musculaire progressive de Jacobson (Durand de Bousingen, 1992, pp28).
- Le training autogène de Schultz.

In the literature, three forms of relaxation have been proven effective for over 50 years and will be used here so that the patient can achieve a state of relaxation in virtual environments C2Care or in reality. This state of relaxation is a relevant element for better managing anxiety. The bodily aspect of anxiety as well as its symptomatic manifestations must be attenuated by these relaxation practices. The mind is not solitary; it resides in a body, and these two entities interact constantly.

Providing relief to one has beneficial effects on the other: a relaxed mind releases bodily tensions, and a relaxed body soothes the mind. The three forms involved in this therapy are:

- Vagal or Respiratory Relaxation.
- Jacobson's Progressive Muscle Relaxation (Durand de Bousingen, 1992, pp28).
- Schultz's Autogenic Training.

a. Preparation

Outside of any anxiety episode, prior training in relaxation is useful to become familiar with the techniques, to develop the habit of applying their principles, and subsequently to employ them effectively in situations of stress or intense anxiety.

- To practice, choose a quiet place where you know you will not be disturbed. Lighting should be low; therefore, it is advisable to practice in semi-darkness if possible.
- Turn off your mobile phone.
- Free yourself from tight clothing (corset, shoes, girdle, bra, bun, etc.) and loosen your belt and shirt collar.
- It is preferable not to have consumed a heavy meal immediately before (goulash, Christmas log, mooncake, dorayaki, borscht, etc.).
- You can lie down or simply sit to practice.

b. Vagal or Respiratory Relaxation

This is the simplest and quickest method to use during episodes of moderate or intense anxiety; it is easily acquired and often highly appreciated by patients. The patient can lie down or simply sit to practice. Ask them to place their hand on their abdomen to feel their belly.

Inspiration phase: the patient inhales and, in doing so, tenses or swells their abdomen (hence the hand placed to allow the patient to verify that their abdomen is expanding).

Expiration phase: the patient exhales gently, releasing their belly without forcing. They take this opportunity to relax their shoulders or neck.

Then repeat the inspiration phase, and so on. There is no rhythm or counting to be done. To avoid any form of control, the patient breathes at their own pace without counting. This method, by creating depression in the abdomen, allows an increase in the diameter of the inferior vena cava, resulting in a decrease in the flow rate into the left atrium of the heart and stimulation of the vagus nerve, causing a slowing of the heart rate. The patient thus has the ability to voluntarily decrease their heart rate.

c. Jacobson's Progressive Muscle Relaxation

This method is essentially based on becoming aware of a relaxation of muscle tone. In simpler terms, it seeks to reduce muscle tension to create mental or psychological relaxation.

It is based on a succession of a phase of voluntary contraction and a phase of relaxation of certain isolated muscle groups. The focus will be on the difference in sensation between these two states, hence its title. This learning aims to produce a conscious and progressive reduction of the activity of muscle groups.

As a result, this training will lead to a transfer into stressful situations and the ability to contract the muscles necessary for performing a certain activity while keeping the muscles not involved relaxed.

The patient can lie down or simply sit to practice.

1st phase: contraction

Ask the patient to place their right hand on their knee and contract this hand by closing the fingers to form a fist. The contraction should be progressive until an intense contraction of the fist is obtained, almost to the point of pain (contraction at about 80%).

"Squeeze your right hand tightly, harder and harder, to 80%. Focus on the sensations in your right hand; everything else in your body is relaxed, do not tense your shoulder..."

This phase should last about 5 to 10 seconds. The patient should focus on the sensations resulting from the contraction of the hand (sensations of tension, burning, or even slight pain). During this hand contraction phase, everything else in the body should be relaxed (shoulder, neck, thigh, etc., only the hand should be contracted).

2nd phase: relaxation

After 10 seconds of the contraction phase, ask the patient to slowly release their right fist by opening their fingers to achieve total relaxation of the hand. They should then focus on the feeling of decreased tension in the hand, on the relief felt as a result of the disappearance of the muscle contraction in the hand. This phase should last about 15 to 20 seconds.

"Now, slowly release your right fist and focus on the pleasant sensation of reduced tension, burning, or pain. Open your fingers slowly, the palm appears, your hand relaxes until fully relaxed..."

The same contraction and relaxation phases should be repeated for all muscle groups. The patient will thus achieve an increased and direct perception of the tension state of their body and will be able to relax unnecessarily contracted muscles during a posture or action more easily. This relaxation will become a spontaneous reaction and a habit with training.

After the right hand, here is the list of muscle groups that the patient will have to solicit successively and in isolation, always using the two contraction/relaxation phases:

The right biceps (if the patient cannot do it, tell them to raise their right arm against resistance).

The forehead, jaw, neck, shoulders, chest, abdomen, buttocks, front of the right thigh (quadriceps muscle), right calf (anterior tibial muscle), toes of the right foot (toe extensor muscle).

Then repeat this same sequence but for the left half of the body (left hand, left biceps, forehead, shoulders, etc.). To shorten the duration, practice with the right half of the body one day and the left half of the body another day.

d. Schultz's Autogenic Training

Developed in the 1930s by Dr. Schultz, this relaxation technique is based on physiological and psychological data collected between 1905 and 1932. By measuring these parameters and questioning patients under hypnosis, he obtained a set of explicit sensations, emotions, and impressions (warmth, heaviness, etc.). After organizing them into a list of steps and phrases that the patient must mentally repeat, Dr. Schultz arrived at a soothing autosuggestion technique for symptoms manifested during hypnosis. This method is thus considered a form of self-hypnosis.

The goal is to make the patient experience a series of varied sensations:

- Heaviness (muscle relaxation)
- Warmth (indicating vasodilation favoring blood/cell exchanges)
- Awareness of heart rate
- Awareness of breathing
- Feeling of warmth in the solar plexus
- Feeling of coolness in the forehead

The patient should settle into a comfortable position, either lying on their back or sitting with their head against a headrest or a wall.

"Before closing your eyes, take note of your surroundings: the furniture, the sky, nature, sounds, light, the shape of the room (etc.). Once you are ready, close your eyes. Focus your attention on my voice and let yourself be guided during this relaxation session.

First, become aware of your body by imagining its various parts, starting from the feet and slowly moving up to the head. Visualize your feet, their position, shape, and points of contact with the floor. Each time you imagine a part of your body, note the sensations localized in that part. Move up slowly.

Then imagine your calves, the shape of your calves, their position, and points of contact with the floor, mattress, or backrest. Imagine your thighs, the shape of your thighs, their position. Imagine your buttocks, their position, and the points of contact of your thighs and buttocks with the floor or bed. Move up a little more, imagine the curve of your lower back, then slowly move up, imagine climbing your spine, and pay attention to the sensations related to your back's contact points with the floor or mattress. Imagine your shoulders relaxing, imagine their position, then imagine your arms and their position. Imagine your neck and the points of contact of your head with the cushion or headrest of your chair. Imagine your face as if you were looking at yourself in a mirror: your relaxed jaw, chin, cheeks, nose, eyelids, eyebrows, the relaxed forehead, and the points of contact of your neck against the backrest.

Now that you have traversed the different parts that make up your body, you may have noticed multiple sensations, moving sensations, perhaps localized in one part and spreading from there to the rest of your body. Perhaps there are also tensions, and these tensions will gradually give way to feelings of well-being, relaxation, and calm.

To help the feelings of well-being settle in, you can mentally repeat to yourself "I am becoming calm, increasingly calm, very calm" (pause for a few seconds), and repeat it twice in your mind. Pay attention to the changes you may observe in your bodily sensations. Perhaps very different sensations are emerging. For example, a sensation related to the state of relaxation is that of heaviness."

To better feel it, focus on your dominant arm and mentally repeat twice "my arm becomes heavy, increasingly heavy, very heavy." Perhaps a feeling of heaviness is spreading through your arm, localized in a part of your arm, in the forearm, or in the hand, and from there, the feeling of heaviness is increasing and spreading more and more to the entire arm. You may also feel heaviness in the other arm and the rest of the body. Try to closely follow the changes in this sensation. You can mentally repeat "my body becomes heavy, increasingly heavy, my body becomes very heavy."

And now, imagine a place, a place you invent or a place you know well, such as your vacation spot, a room in the house or garden, or a place from your childhood. In this place, you feel good, relaxed, happy, calm, and tranquil. Visualize this place well; you can hear the sounds, smell the scents, see the colors, feel sensations on the skin of your face or the rest of your body. You can move around in this place, move. Take a few moments to imagine yourself in this place and experience the well-being sensations associated with it.

We will leave this place of calm and well-being and return to the sensations of the body lying on the mat. Observe your sensations carefully. You can mentally repeat "I am calm, increasingly calm, very calm, my body is heavy, increasingly heavy, very heavy." Observe the other sensations in your body. Get to know them. For example, another sensation related to the state of relaxation is warmth in winter or cold in summer.

To better feel it, focus on your dominant arm and mentally repeat twice "my arm becomes warm, increasingly warm, very warm." As if your arm were resting on the sand of a beach and exposed to the gentle warmth of the sun. Perhaps a feeling of warmth is spreading through your arm, localized in a part of your arm, in the forearm, or in the hand, and from there, the feeling of warmth is increasing and spreading more and more to the entire arm. You may also feel warmth in the other arm and the rest of the body. Try to closely follow the changes in this sensation. You can mentally repeat "my body becomes warm, increasingly warm, very warm."

IMPORTANT: If the session takes place in summer, replace the sensation of warmth in the arm with the sensation of cold in the arm. As if the patient were dipping their arm on a summer day into the cold water of a lake or beach.

You can repeat to yourself mentally "I am calm, increasingly calm, very calm". Focus on your breathing. The rhythm of your breathing is slow, slower and slower, as if you were about to fall asleep. You can mentally say to yourself "my breathing becomes calm, (deep), slow, relaxed, serene. My breathing becomes calm, increasingly calm, very calm or my breathing becomes relaxed, increasingly relaxed, very relaxed".

Pay close attention to your sensations. You can repeat to yourself mentally "I am calm, increasingly calm, very calm". Your heart is beating slowly too. Slower and slower, very slowly. (Pause for a few seconds).

Pay close attention to your sensations. You can repeat to yourself mentally "I am calm, increasingly calm, completely calm", "my body is heavy, increasingly heavy, very heavy", "my body is warm, warmer, very warm". Notice other sensations in your body. Learn to recognize them. For example, another sensation related to the state of relaxation is warmth in your abdomen, the solar plexus.

To feel it better, you can focus on your abdomen and repeat to yourself mentally twice "my belly becomes warm, warmer, very warm". Imagine there is a sun or a star in your abdomen emitting warm and soothing light. Perhaps a sensation of warmth is spreading in your abdomen, it may be localized in a part of your belly, at the level of your diaphragm, or your sternum, and from that part, the sensation of warmth increases and spreads more and more throughout your belly. Try to closely follow the changes in this sensation. You can repeat to yourself mentally "my belly becomes warm, my belly becomes warmer and warmer, my belly becomes extremely warm" ... "my belly becomes warm, my belly becomes warmer and warmer, my belly becomes extremely warm" (Pause for a few seconds).

IMPORTANT: If the session takes place in summer, replace the sensation of warmth in the abdomen with the sensation of cold in the abdomen. Like someone pouring cold water on the patient's abdomen on a summer day.

Observe your sensations carefully. You can mentally repeat twice "I am calm, very calm, completely calm" or "I am calm, increasingly calm, very calm."

The last sensation related to the state of relaxation is coolness in your forehead. To better feel this coolness, focus on your face, particularly your forehead, and mentally repeat twice "my forehead becomes cool, increasingly cool, very cool." Perhaps a feeling of coolness is spreading across your forehead. Try to imagine that someone who loves you is placing a towel soaked in cool water on your forehead. It's pleasant; you relax completely. Try to closely follow the changes in this sensation.

Observe your sensations carefully. You can mentally repeat twice "I am calm, increasingly calm, very calm."

The return is done gradually through a succession of well-defined steps: arm movement, head movement, lower limb movement, then the whole body, and two deep breaths before opening the eyes. You will slowly begin the recovery, at your own pace, when you desire. The goal is to put some energy back into your body. For example, you can slowly move your fingers, turn your head slowly from side to side, take two deep breaths, then open your eyes. Do the movements you usually do in the morning when you wake up.

6. ACARA

ACARA is an acronym, explaining that each letter of ACARA signifies the term of a technique, aiming to help the patient remember it more easily and use it during anxious episodes in any situation, whether in virtual reality exposure or in reality.

a. A for Accepting Anxiety

Controlling emotions, fighting, or trying to master them only serves to provoke, worsen, or maintain anxiety. It is essential for the patient to choose to accept anxiety by abandoning any form of control, struggle, or resistance. Emphasis must be placed on this notion of choice because it is by no means passive resignation.

The patient must allow emotions or anxiety to come without trying to control them. They must accept it because it is a part of them, just like their hands or legs. Accepting anxiety allows it to exist and depart without judgment from the patient: "I let it come and I let it go" "I know it's harmless because it's a part of me."

Accepting anxiety, and in general, one's emotions, allows for a high level of maturity: without anxiety, there is no maturity...

b. C for Contemplating Emotions

Similar to the cognitive therapy table (see the homonymous chapter), the patient must contemplate and evaluate the intensity of their emotions or craving from 0 to 100. They follow them over time by assessing and noting their fluctuations with a detachment equivalent to an external observer.

By following them in this way, it helps the patient to step back from these emotions, but more importantly, it reminds them of a very useful fact: that the urge to consume may be strong but it is always temporary, even fleeting. There is a beginning and an end to it.

c. A for Acting with Anxiety

During an anxious episode, the patient must continue the action they had started. They must act as if they were not anxious. Their activity may indeed be slowed down or more rigid, but they must continue it. This shows them that even when anxious, one can still be organized.

Anxious patients tend to believe that anxiety sows chaos in their minds and prevents them from acting. By acting even when experiencing anxiety, they demonstrate the opposite.

d. R for repeating these 3 steps once again

The patient must repeat the steps: accepting anxiety, contemplating anxiety, and acting with anxiety once again.

e. A for Awaiting the Best

Explain to the patient that their anxious thoughts, not being realistic, what they fear will not happen.

Therefore, they must expect the best: the elevator doors will open, the plane will land, they will not get sick, the subway will reach its station, their anxiety will pass, they will arrive home, the dog will leave, the spider will come out, etc.

7. Cognitive Therapy

Cognitive therapy has developed from the cognitive model described above. It has been defined and developed by several authors such as Beck, Emery.

It extends over three stages which are written on three successive cognitive therapy tables (I, II, and III) found at the end of the manual.

a. First Stage: Self-Observation

To transition from psychoeducation and the cognitive model mentioned earlier, during the dialogue, you can ask the patient for how many months or years they have been suffering from their phobia or obsession. Based on this information, you then emphasize that over time, like a habit, the patient almost intensely produces a catastrophic thought in a dreaded situation.

These catastrophic thoughts are so rapid that they are sometimes referred to as automatic thoughts. This form of automatism can evolve to the point where the patient is no longer aware of it. Therefore, it is crucial for them to regain awareness of their catastrophic thoughts.

b. Second Stage: Evidence Gathering

Being one's own detective by looking for evidence, The pros/cons technique.

After listing unrealistic beliefs and catastrophic thoughts, encourage the patient to transform into a detective and gradually lead them through the dialogue to

understand their role as a thorough investigator: that of seeking concrete evidence or facts. It seems necessary to emphasize that evidence is objective and indisputable facts, not hypotheses or impressions.

The patient will then need to separate the "FOR" evidence: those that support their catastrophic thoughts and reinforce their unrealistic interpretation, and the "AGAINST" evidence: which contradicts or invalidates these same catastrophic thoughts.

Ex:

Catastrophic Thoughts	FOR Evidence	AGAINST Evidence
<p>I will suffocate in the elevator</p> <p>I will get stuck</p> <p>The elevator will break down</p>	<p>The elevator is a tight space</p> <p>There are no windows</p> <p>The doors are closed</p> <p>It is a mechanical device so a breakdown can occur</p>	<p>Elevators are not designed to be airtight</p> <p>Air circulates</p> <p>The elevator is new</p> <p>I can breathe</p> <p>Other people are calm and breathing</p> <p>My nails are normal color (no cyanosis)</p> <p>I can move around</p> <p>The closure is temporary, the doors will soon open</p> <p>If elevators were dangerous no one would take them</p>

This example illustrates the establishment of facts. Make the patient aware that there are many more "AGAINST" evidence than "FOR" evidence, which blatantly demonstrates the error in the patient's interpretation of the situation.

Furthermore, a mistake to avoid on the part of the therapist is to answer on behalf of the patient or systematically suggest the answers. Resist this urge and take the time to let the patient formulate their answers themselves.

c. Third Stage: Generating a Balanced Interpretation

The final phase following the evidence gathering consists of formulating alternative thoughts that are more realistic and concern the anxiety-provoking or dreaded situation experienced by the phobic or obsessive patient.

The patient may sometimes imagine what they should think if they were another person. However, in absolute terms, it seems useful to help them structure this more realistic thought to bring it to life.

The elaboration of alternative thoughts is established by reminding the patient:

- **To recognize their emotions**

When in a situation that induces anxiety or triggers a panic attack, it is not about denial by saying "everything is fine" but rather about recognizing the presence of anxiety which, in any case, is not dangerous as explained in the psychoeducation chapter. One can then say "it's true, I am anxious, it's a bit tough, it's quite difficult, etc."

- **To seek opportunity in the situation**

The anxiety-provoking situation such as the airplane, the subway, an evening out, a dirty street, etc., represents, on the contrary, an opportunity for the patient to practice the methods they have acquired in the field.

Like the swimmer who has spent months training for the Olympics or a runner who has rigorously trained for a marathon, a dreaded situation represents for the patient the moment to apply everything they have learned during therapy. The patient must therefore see themselves as a champion prepared for this challenge.

- **To briefly review the AGAINST evidence**

This simply consists of briefly reviewing the AGAINST evidence (and only the AGAINST evidence) listed in the previous section (seeking evidence).

- **To state the advantages of the situation**

This aspect is different from opportunity. The patient must realize how the faced situation is an advantage for them.

Ex: the highway allows me to go faster, avoid traffic jams, relax because it requires less attention than in the city center, etc.

- **To conclude on a realistic future**

Since the patient's catastrophic thoughts and hypotheses are not realistic (I will suffocate, be ridiculous, have an accident, etc.), they will not happen in reality. What the patient fears will not come true.

What will happen is simply what is most probable or obvious: the airplane will land, the elevator doors will open, the meeting will end, the anxiety will decrease, the highway exit will be reached, and the patient will reach their goal, arrive safely home, or return home.

8. Behavioral and Cognitive Strategies

a. Strategies for Coping with Temptations

- **Avoidance:** Initially, avoid temptations as much as possible to avoid dangerous situations that could lead to relapse, especially in the first weeks of withdrawal. (Parties, relaxation times, avoiding drinking coffee at first...)
- **Substitution:** Replace the trigger stimulus for craving with another stimulus (for example, the association of coffee/cigarette after meals --> replace coffee with another hot drink like tea, herbal tea...)
- **Change:** Modify the triggering situation (context): Have coffee in a different place, in a different cup, at a different time...

- **Escape:** This technique is applicable when one has not been able to avoid a risky situation, so escaping appears as a good strategy. (Take a break during a stressful meeting to reduce stress; During a party, leave the room, go outside...)
- **Distraction:** Make a list of distracting activities that can be done during an "urgent craving." It is important to make the list in advance so as not to have to think about how to occupy one's time when experiencing an "urgent craving." Distracting activities can be cognitive or behavioral. Goal: By letting time pass while engaging in something else, one observes that after a certain time, the craving decreases and passes. It also allows time to remember all the disadvantages of consumption.
- **Delay:** Wait when the "urgent craving" manifests, allowing us to realize that the craving diminishes rapidly and disappears after a few minutes.
- **Exposure to risky situations:** After practicing multiple times the other strategies and when one is well trained in all methods, one can begin to expose oneself to the craving situation but without consuming. Reinforcement, self-satisfaction, pride, and increased self-efficacy will result from this.

b. Adaptive Behavioral Strategies

- **Relaxation:** Vagal relaxation as seen during session 1.
- **Physical activity:** Physical activity is often used as a substitute. Doing gymnastics, surfing, running, cycling, swimming, windsurfing, practicing brisk walking, doing housework, or gardening can help reduce tension. Furthermore, physical exercise engages you in an activity incompatible with the simultaneous performance of smoking behavior.
- **Alternative consumption:** Celery, carrots, popcorn. Drinking tea and coffee are good substitutes if they were not part of the "smoking routine." Sucking on slowly melting candies (tic-tacs, gums, cachous...) or pens, straws, and toothpicks.
- **Assertion skills:** The ability to refuse to participate in an activity centered on the addiction in question.
- **Brief (and pleasant) activity:** hug, cold drink, a kiss, marshmallow, a massage, consuming a fruit, brushing teeth, bathing in the sea or bathtub,...

- **Support:** Talk to a support person. This will be your "bodyguard." Talk to them about your problems, ask them to motivate you not to relapse by discussing the benefits, engage in an activity with them (sports, games, dance, hug if they are your partner). This help will be collaborative; you should also help them with one of their activities.

Ask the patient to choose 5 strategies that seem most suitable to their personality, to their difficulties.

9. Positive Self-Instructions

To maintain the dialectical aspect of therapy, ask the patient what slogans are. Slogans observed in our society are sentences that are quite simple, impactful, and repeated ad infinitum. Their purpose is to push individuals or masses to adopt specific behavior: choosing and buying a product for commercial slogans, voting for a candidate for electoral slogans, adopting a dogma for political propaganda slogans. Give some examples.

These will be therapeutic slogans: positive self-instructions. The patient cannot control their emotions or thoughts, which is normal (they must accept them), but they can control what they say to themselves because talking to oneself is a voluntary behavior.

The patient can use them by reciting them in their head or by recalling them either during craving episodes or when hesitating to face a risky situation in virtual reality during Virtual Reality Exposure Therapy (VRET), in imagination, or in reality. This moment when the patient makes this choice is the critical decision time.

Here are 15 from the literature (Beck) and from my experience, but everyone is free to add new ones:

- I must force myself
- I must take the plunge
- I must act on impulse
- I don't know until I try
- I must take risks

- I must surprise myself
- I must take risks
- I am strong enough to overcome this
- I must regain my freedom
- I must conquer this place
- The force is with me
- Who said I couldn't do it?
- Anxiety is always temporary, it will pass
- Anxiety seems unpleasant but is not dangerous
- The cave I enter contains the treasure I seek

From these 15 phrases that the patient has carefully noted, they must choose the 5 that best suit them or that they like the most. These should be written on the back of the cardboard sheet (like Bristol) that they used for the ACARA system phrases (cf. ACARA chapter). They must always have them with them to use them in difficult virtual and real situations or when, under the influence of the craving to consume, they have forgotten the content.

10. Assertion

It is being able to express what one feels, what one experiences, or one's needs; While respecting what the other person feels or experiences as well as their needs.

a. Knowing How to Refuse

Knowing how to refuse, the steps to follow:

- Practice active listening, i.e., listen and if necessary, clarify the request.
- Direct and precise verbalization of the response
- Use of the broken record
- Make a "self-disclosure," knowing how to use one's emotions and feelings. Negative emotions ("I'm sorry, don't take it the wrong way but...") as well as positive ones ("I'm glad to see you")
- Empathetic ADS, knowing how to put oneself in the other person's shoes. Communicate primarily to the other person what one understands of their position, their problems, then verbalize our response, opinion, request, or

feeling. Alternatives and compromises and negative assertion can also be used.

- End warmly

The last two points are used especially when the interlocutor is sensitive, or when the response given is difficult for them. Be careful not to justify, digress, or explain too much, otherwise, the formulation of the refusal may become very difficult.

b. Different Techniques to Use

The "broken record" technique:

- Know how to persist
- Repeat the same thing without getting angry, always more kindly
- Do not digress or justify

Do not justify:

- Do not look for too many excuses or give reasons
- Indeed, giving too many reasons reduces the clarity of the message because it gives the interlocutor additional arguments for discussion, see "the stick to beat oneself with"
- Your word is sufficient because you are an adult

Do not digress:

- Do not let yourself be drawn into a topic unrelated to the subject of the discussion: this leads to a loss of clarity of the message and undermines the intended objective

Do not explain too much:

- It is true that explanations are often useful and necessary
- Explaining too much detracts from the clarity of the message and generally leads to justification and digression
- It is better to provide information rather than explain

Correcting erroneous or dysfunctional thoughts:

- My refusal will offend, hurt, it may be very important for the other person that I accept.
- If I refuse, they will be angry with me, have a bad opinion of me, stop appreciating me.
- If the other person reacts poorly to my refusal, expresses sadness or anger, what should I do? I will be helpless.
- If I am asked this, it is because it is important; I cannot refuse, others' needs come before mine.
- Is it worth refusing?

These thoughts must be banned because they are false. They are replaced by more realistic thoughts.

11. Mental Imagery

It consists of a set of methods aimed at using imagination to better manage anxiety.

Positive Substitution

During an anxious episode, the goal is to substitute catastrophic thoughts with pleasant memories from the patient's past. Childhood memories, teenage events, memories of adulthood. The patient must experience this as a true reminiscence of their past. They must thus involve all their senses in this journey through time: what they see, hear, smell, what they feel under their feet, in what position their body is, what they feel on their skin, etc.

Symbolic Image

The patient is asked to imagine an object that will reassure them when they are in an anxiety-provoking situation. The patient must therefore visualize an imaginary object in a real place. This object is related to the theme of their fears and catastrophic thoughts.

Imagining a Positive Future

The goal is to visualize an immediate or distant future that presents a realistic outcome. With two possibilities: to visualize a near future and to visualize a distant future.

In the modality with the near future, the patient is invited to project themselves imaginatively into the minutes or hours following the anxiety-provoking event they are facing.

Example: on the plane, the patient will visualize their arrival, the landing, the opening of the cabin door, the exotic air entering the cabin, the faces of their friends waiting for them, etc.

In the modality with the distant future, the patient imagines themselves in a few years in the same situation. They then see themselves comfortable on the plane, metro, highway, in front of an audience. They see themselves indifferent and relaxed in their situations, no longer paying attention to all the signals they used to watch out for (doors, exits, vents, windows, gaze).

Imagining Escaping a Greater Danger (with humor)

With a certain form of humor and derision or by using cinematographic references, the therapist suggests to the patient to imagine what could happen that is more catastrophic than their fear and that would encourage the patient to face the situation they avoid.

Imagining a Role Model

The main idea is to suggest to the patient to imagine that in the real situation there is a person they love or admire and who reassures them: the role model. This imaginary character can be the spouse, a friend, a parent whether alive or not, or even a person the patient does not personally know like an actor or a manga, comics, or comic book hero. Once again, emphasis is placed on involving all the senses: the patient must visualize the appearance of the person, their face, voice, scent, contact.

Modifying Reality in a Funny or Positive Way

In this last modality, the patient is free to partially or totally modify the reality of the situation they are facing in order to make it amusing or pleasant. They can change the people, the place, details of the environment, sounds, etc.

12. Virtual Reality Exposure: Key Principles

Once the various methods outlined above have been mastered by the patient, they can then be exposed to virtual and real environments. Behavioral models derived from conditioning theories have shown that the desired effect is a form of habituation to anxiety-provoking stimuli in order to achieve fear extinction.

a. Preparation

As specified at the beginning of this work, the phase of exposure to virtual environments or 3D events with the VR headset should only occur after patients have been trained in the therapy methods chosen by the therapist (CBT: cognitive-behavioral therapy, psychoanalysis, relaxation, mindfulness, emotion management, etc.). Without this training, the patient risks experiencing a relapse or intense craving without knowing how to manage the overwhelming emotions. This could result in counterproductive relapse.

The therapist compiles a list of virtual environments or 3D situations available to them that correspond to the patient's feared locations.

For example, for acrophobia (fear of heights): bridge, walkway, rooftop.

From this list, the patient must establish a hierarchy of anxiety-inducing locations or avoided situations. They will rank them from easiest (least anxiety-inducing) to most difficult (most anxiety-inducing).

For example, for agoraphobia, starting with the supermarket, then the cinema, underground parking, then the subway, and finally the airplane.

b. Progressive

The patient should start exposure by facing the easiest environments for them from the list they have established. Indeed, exposure should not be abrupt. It should provoke enough anxiety but at a reasonable level. If it were too intense, the

patient would not be able to apply the methods effectively as they would be overwhelmed by anxiety.

In summary, the virtual or real situation faced should be somewhat challenging but not too much: the patient's anxiety level during exposure should be 50-60 out of 100 at most in a virtual environment. If it is higher than this figure, it means the situation is still too anxiety-inducing, and a simpler situation should be used instead: "take a step back" "slow down" "take a breather".

The patient progresses at their own pace from one situation to another. When the patient's anxiety has decreased to 0 or 10-20 out of 100 after one or more sessions in the same environment, it is a sign that they can move on to the next one.

This notion of progression remains true even within a single real or virtual situation (if configured as such). The same situation can be fragmented into several sub-steps to facilitate progression.

For example, for the airplane:

- The patient will first stay in the airport, anxiety may occur, describing anxiety at 50 and sweaty hands. They then practice breathing relaxation and ACARA (see corresponding chapters).
- Anxiety decreases to 10 after 15 minutes, so they can progress to the boarding bridge, which will temporarily increase their anxiety. They then practice mental imagery and cognitive therapy (see corresponding chapters).
- Anxiety decreases to 10 after 15 minutes, they can move to the airplane cabin without passengers at first, and so on with each session until the patient can take a long flight in a virtual cabin full of passengers.
- If anxiety does not decrease, the patient should not be encouraged to go further but instead invited to stay longer or return to the previous (easier) step to try again multiple times later.

These steps can be elaborated ad infinitum based on the parameters and details described by the patient.

Time of day, accompanied or not, presence of other people, weather, exposure time, number of floors, extent of blood tasks, number of dogs, etc.

c. Prolonged

Since anxiety is a transient phenomenon, habituation to fear can only occur if the patient remains in the situation for a long time (more than 5 minutes and ideally more than 15 minutes). They will then see for themselves that anxiety always fades away in the feared locations.

However, for the patient to remain in an avoided real or virtual location (subway, public airplane, etc.), it must not be too anxiety-inducing or too difficult. Hence the importance of progressive step-by-step progression as specified above.

To help the patient stay in the anxiety-inducing situation, they can practice the therapy methods detailed in the previous chapters (relaxation, ACARA, cognitive therapy, etc.). They can also freely engage in dialogue for the purpose of exploring associations and evoking repressed thoughts for psychoanalysis.

d. Repeated

Learning, regardless of the subject matter, often involves a notion of repetition of the action. Since exposure is a form of learning to become accustomed, to practice, and to see differently, it is advisable for the patient to train several times a week in virtual reality and gradually in reality.

In virtual reality, the patient must choose a step of the virtual environment to expose themselves to (entering a half-full virtual airplane, driving on a highway with a few cars, approaching a floor with bloodstains, etc.). Once this step is chosen, the patient repeatedly confronts it during the same session or from one session to another.

If during the sessions, the patient has experienced several virtual environments but expresses doubts about an environment they have already completed in previous

sessions, it is necessary to go back and propose to redo it as much as possible to ensure that the patient is relaxed and comfortable in the situation in question.

Bonus: Reward

Any exposure in virtual or real reality that has been carried out is a successful exposure. The patient should not seek a form of perfection or expect excellent academic results. Having had the courage to face the situation and to stay in it is in itself a great success.

After a virtual reality exposure session, the patient will often be tired or exhausted. Time will seem to pass more quickly for them. These are normal phenomena related to the level of attention required to manage emotions. They are inconsequential.

To reinforce the sense of satisfaction felt by the patient after a VRET session, it is useful to enhance this feeling by advising the patient to indulge themselves. They must therefore reward themselves by enjoying a quality, pleasurable moment: sipping a glass of champagne, reading a good book, savoring delicious chocolates, watching a favorite movie at the cinema, tasting delicious pastries, treating themselves to a restaurant dinner, a theater outing, an opera, receiving enjoyable massages from their partner, etc.

e. Steps of a VRET Session

The patient will have previously received preparation in CBT or psychoanalysis over several sessions.

- Explain the operation of the VR headset to the patient and any adjustments they will need to make. Show them the space available in your office or clinic to prevent them from bumping into surrounding furniture.
- Start the PC and connect the VR headset to it (USB port for power and tracker, HDMI port for sound or image transmission).
- Launch the chosen virtual environment with the patient, starting with the easiest and least anxiety-inducing from the list of situations established with them (see the above progressive paragraph).

- Ensure that the patient has enough space around them (at least 4m²) to move and turn around. They will also tend to walk or move spontaneously.
- Place the VR headset on the patient's head. Let them adjust it and make the necessary settings. Give them the headphones.
- The patient can now, under your supervision, begin their virtual reality exposure.
- Initially, let them familiarize themselves quietly with the equipment and navigation mode.
- Once they have understood its functioning, you can suggest that they start their exposure: "you can enter the building" "the elevator is to your right" "open the door" "enter the corridor" "walk towards the crowd" etc.
- The patient should be encouraged to act, but they should not be forced; it is up to them to choose their action.
- Once anxious, ensure they practice the therapy methods detailed in the previous chapters.
- At key moments, regularly ask the patient to specify their anxiety level from 0 to 100:
 - From 0 to 30, they can continue to evolve in the situation.
 - From 40 to 60, they must stop their progression and remain in place to practice the therapy methods detailed in the previous chapters.
 - From 70 to 99, the anxiety level is too high; invite them to go back to an easier situation or position.
- Dialogue can certainly be established between the therapist and the patient during exposure:
 - PATIENT: "I feel anxious here, what should I do?"
 - THERAPIST: "What is your anxiety level?"
 - PATIENT: "50"

THERAPIST: "Alright, in that case, stop where you are and what can you do here?"

PATIENT: "breathing relaxation"

THERAPIST: "good, let's do it together"

PATIENT: "I feel a bit better, what should I do next?.. I forgot"

THERAPIST: "start talking to me about the ACARA system, please, you seem to like this system, I believe"

PATIENT: "yes, so the first A means accepting the anxiety, I should not control or fight, I should..." [...]

THERAPIST: "now, tell me about cognitive therapy, what catastrophic thoughts do you have? What are you afraid will happen here?"

PATIENT: "I will suffocate, I won't be able to get out, I will get stuck"

THERAPIST: "very well, give me the evidence for and then the evidence against," etc.

- At the end of the exposure, the patient should have a low level of anxiety (0 to 30) and have left the situation (the elevator, the building, the airplane, the highway, the crowd, etc.).
- Never stop the program while the patient is still in the situation; they must have left it for consistency purposes but also to write in their memory a successful exposure episode where the patient eventually exited the situation with a low level of anxiety. This will enhance self-satisfaction, strengthen self-confidence, and leave a pleasant memory.
- If this is not the case, before concluding the exposure, invite them to exit the situation (leave the elevator, head towards the building exits, pass through the airplane gate, exit the highway, leave the crowd, etc.).
- Finally, discuss their actions in virtual reality, their progress, and compliment them. Then set the date for their next appointment and suggest to them after the 3rd VRET session or more to expose themselves in reality following the same principles and methods as in virtual reality. Emphasize once again the progressive nature of exposure. The patient must expose themselves step by step, starting with the least anxiety-inducing, progressing at their own pace, and not skipping steps in the hierarchy.

f. Cyber Sickness Syndrome

This could be translated as cyber-induced discomfort, cybersickness, or simulator sickness. It represents all functional signs secondary to the use of virtual reality equipment in some patients.

It is similar to eye strain and motion sickness. The symptoms mainly consist of a sensation of instability, dizziness, nausea, and occasionally vomiting, eye fatigue, and a sensation of haze in front of the eyes.

Therefore, if the patient experiences nauseous symptoms during the VRET session, they will be advised to slow down their movements, turn their heads less quickly, and take breaks every 5 to 10 minutes. This troublesome phenomenon for therapy sometimes occurs during a first attempt. The syndrome often diminishes as sessions progress.

13. Transition to Reality: Generalization

Ultimately, the goal is to offer and teach patients a maximum of varied tools to better manage anxiety and achieve the cognitive breakthrough that will allow them to reconceptualize their environment. Their perspective will then generate more realistic and reassuring thoughts.

Exposure will enable them to gain greater self-confidence combined with a sense of pride and self-satisfaction. They have indeed overcome a challenge that once seemed impossible. This will be their personal achievement and the guarantee of a constant evolution in their life. Moreover, the patient is not obliged to use all the tools written here. This is precisely the interest of providing several. Clinical observation has shown that they will prefer some over others, which is a normal process. Let them have the freedom to explore therapy and make it their own as long as it is effective and beneficial for them.

14. Conclusion

Ultimately, the goal is to offer and teach patients a maximum of varied tools. Exposure will enable them to gain greater self-confidence combined with a sense of pride and self-satisfaction. They have indeed overcome a challenge that once seemed impossible. This will be their personal achievement and the guarantee of a constant evolution in their life.

Moreover, the patient is not obliged to use all the tools written here. This is precisely the interest of providing several. Clinical observation has shown that they will prefer some over others, which is a normal process. Let them have the freedom to explore therapy and make it their own as long as it is effective and beneficial for them.

Optional Reading

If you wish to access further knowledge, you can consult the following works:

In French:

- Guide clinique de thérapie comportementale et cognitive. O. Fontaine. Edition Broché.
- Chartier, J.-P. (2001). Introduction à la pensée freudienne. Paris:Payot.

In English:

- AT BECK Anxiety and Phobias a cognitive perspective. Il est ancien mais représente la base de la TCC.
- MARKS Fears, Phobias and rituals. La référence diagnostique des troubles anxieux
- Bateman, A. & Holmes, J. Introduction to psychoanalysis: Contemporary Theory and Practice (Routledge 1995)