



**VIRTUAL REALITY AT  
THE SERVICE OF HEALTH**





. Already more than 30 years that clinical studies on virtual reality exposure therapies demonstrate their medical efficacy.

Today, we are proud to continue to advance research by working in partnership with more than thirty university hospitals and offering you a range of Medical Device certified software that meets your needs.

Virtual Reality is still in its infancy; the revolution it opens up in the medical field is immense. Together let's build the health of tomorrow.



**Romain Streichemberger,**  
President and Co-Founder of C2Care



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## VIRTUAL REALITY AND HEALTH: A LOOK AT THE SCIENCE?

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### **VRET: “An Art of Doing”**

Klein and Borelle (2019) held a study demonstrating that Virtual Reality Exposure Therapy (VRET) was far from being a sign of the end of a more traditional “art of doing” of psycho-practitioners. On the contrary, Virtual Reality Exposure Therapy enriches and renews this «art of doing» therapy.

Virtual reality at the service of health allows for a considerable reduction in costs and risks, not to mention saving time.

VRET encourages patients to develop new cognitive and behavioral responses to problematic situations through two major principles of action in CBT: exposure and activation (Bergstöm, 2013).

Virtual Reality Exposure Therapies highlight an obvious articulated relationship between the real and the virtual. This hybridization dynamic (Jordan 2009) is the constant back and forth that VRETs offer, making them relevant and breaking down any existing boundaries between real and virtual. External noises and real smells ended up merging with virtual images and audios (Klein and Borelle 2019).

TAG	
Levy (2017)	Virtual reality therapy is at least as effective as reality exposure in treating specific phobias, panic disorder with agoraphobia, post-traumatic stress disorder, and social phobia.
Da Costa (2018)	The analysis of data on in virtuo exposures with patients who have amaxophobia showed a significant decrease in anxiety during in vivo behaviors, dysfunctional thoughts, and increased quality of life.
Bouchard (2016)	His study with social phobics showed a significant improvement in the variables studied during in virtuo treatment and a significantly higher preference of the therapists for virtual reality.
Meyenbroecker (2013)	His study on agoraphobic patients shows significant effectiveness in in virtuo exposure and comparable effectiveness between in vivo and in virtuo exposure.
ADDICTION	
Ghita et al (2018)	In their literature review, they highlighted the value of virtual reality in the management of alcohol addiction.
Son et al (2015)	Synthetic stimuli related to craving cues elicit activation of the reward system, allowing physiological states to reproduce similar to those experienced in ecological situations. In other words, virtual reality generates a craving similar to that experienced by patients suffering from alcohol addiction in their daily lives.
Saladin et al (2006)	They obtained similar results when targeting cocaine craving.
Chrétien (2018)	A comparative study between virtual reality exposure and imaginal exposure ingambling addiction treatment demonstrated that Virtuo exposure allows access to significantly more dysfunctional beliefs and thoughts related to the addiction, thus maximizing the therapeutic benefits of cognitive restructuring.
Follow-up Care and Rehabilitation	
Manchester et al (2004)	Patients with problems in daily life may have non-pathological test results (without VR), especially since neuropsychological testing is usually done in a quiet, distraction-free environment.
Renison et al (2012)	The medical application of VR universes offers immersion in situations where it is possible to work on specific cognitive functions or a set of cognitive processes through ecological tasks.
Schultheis & Rizzo (2001)	The work in virtual reality allows total control of the stimulus and the response, thus allowing to adapt the difficulty of the exercises to the capacities of the patients. We also observe a better transfer of skills into daily life than with paper and pencil exercises.
CBT	
Keizer (2016) & Serino (2019)	The results demonstrated an improvement in body estimation and thus underlined the interest of virtual reality in therapeutic strategies for body representation disorders. These results were corroborated by Serino, who emphasizes the rapidity of therapeutic gains obtained when using virtual reality.
Ferrer-Garcia (2017)	He explored the potential of a treatment combining Cognitive Behavioral Therapy (CBT) and In virtuo therapy compared to CBT alone. The disorders treated were bulimia nervosa and binge eating disorder. The CBT-In virtuo treatment demonstrated significantly greater efficacy than CBT alone. The variables assessed (food craving, anxiety, dysfunctional attitudes) decreased substantially in score compared to the control group (CBT).
GERIATRY	
Garcia-Betances (2015)	We can highlight various intrinsic qualities of virtual reality, including accessibility, sensory recruitment, fine-tuning of the different cognitive functions, immediate feedback, promotion of therapeutic commitment, and general improvement in quality of life.
Optale (2010) & Man (2011)	Virtual reality can improve memory capacities in the elderly.
Wallet et al (2011)	Proven effectiveness of virtual reality as a tool for the generalization of skills.
D'Cunha (2019)	Virtual reality is a mediator for improving the quality of life of seniors suffering from a decline.



“ Results show that virtual reality is efficient in helping to reduce anxiety and depressive symptoms and improve quality of life.

- Rus-Calafell et al. (2016)



## Phobias and VRET: What Does Scientific Research Say?

Virtual reality therapies have been observed through the prism of research. Accordingly, many studies have evaluated their effectiveness and obtained significant results, giving VRET a definite clinical relevance.

Concerning social phobia, Malbos (2016) demonstrated the effectiveness of virtual reality on this disorder and highlighted the maintenance of therapeutic gains over the long term.

**The authors also agree on this method's safety, facilitating the patients' engagement in the exposure.**

From the activation of the anxiety response to its extinction, virtual reality therapy proves, concerning the literature, its efficiency in maximizing the therapeutic benefits for treating social phobias, specific phobias, agoraphobia, PTSD, and OCD.

## Treating Phobias through Virtual Reality

A new wave of cognitive-behavioral therapy, virtual reality exposure therapies offer your patients the opportunity to safely and confidentially expose themselves to anxiety-provoking stimuli in your practice.

Garcia-Palacios, Hoffman, Carlin, Furness, Botella, and others recognize virtual reality exposure therapies as significantly more satisfying for patients. They facilitate therapeutic engagement and compliance with care.

**The benefits of virtual reality are numerous and include accessibility, confidentiality, ease of management, patient safety, and financial gain.**

Virtual reality therapies are defined as more accessible by health professionals thanks to the possibilities of controlled graduation of virtual environments and the accessibility of the developed environments.

**C2Phobia is the complete therapeutic software for the treatment of phobias by VRET. It is also an efficient adjuvant to traditional therapies.**



C2Phobia - Agoraphobia

## C2Phobia: Advanced technology for a sense of total realism

Recognized as a CE medical device, C2Phobia's virtual environments have been thought and designed to generate a total immersion and maximize the learning transfer.

**Easy to use for the practitioner and the patient, C2Phobia provides optimal sensory stimulation, immersing the user in a reality similar to the anxiety-provoking situations of his daily life.**

From your «Practitioner» interface, you have visual feedback of what the patient sees in the virtual reality headset. Access multiple features to configure and customize the virtual environment in which he evolves.

You will be able to increase or decrease the crowd's intensity and control the frequency of the avatars' looks towards the user and over their emotions.

You will also be able to interact live in virtuo with your patients under the guise of an avatar that will simulate a conversation.



*C2Phobia - Elevator*

## Case study: How to treat vertigo by in virtuo exposure?

Thanks to C2Phobia, you will be able to perform gradual exposures. The scenes have been designed to respect the hierarchy of anxiety-provoking situations. In the case of acrophobia treatment, the phobogenic contexts are under the control of the health professional. **The realism of the stimuli will increase the cognitive and emotional activation allowing an optimal exposure.** From a building, the patient will be exposed progressively to different heights: immersion at the foot of the building, from the 1st to the 15th floor, up to the roof of a skyscraper.

By controlling the stimulus gradient, the anxiety necessary to extinguish the anxious response can be achieved.

The patient can expose himself to his fear from a balcony or an outside elevator to complete the treatment. The therapist will have control over the environment through functionalities such as the configuration of the walkways (increasing the phobogenic context by adding or removing affordances: low walls, ropes, or absence of protection).  
absence de protection).



*C2Phobia - Airport*



“ Participants perceived a marked improvement in their symptoms in their daily lives. ”

- Navarro-Haro et al. (2019)

## Amaxophobia and VRET: What Does Scientific Research Say?

The fear of driving is a relatively frequent phobia that handicaps daily the people who suffer from it. The researchers agree on the effectiveness of the in vivo exposure to reduce the disorder.

However, the authors underline the insecurity inherent to this type of exposure (for the patient and the therapist). The treatment of amaxophobia by virtual reality has been evaluated through several studies. The results have shown that the treatment of anxiety is entirely possible through virtual environments.

**The combination of in virtuo and in vivo allows to optimize the therapeutic gains.** Qualitative analyses underline that engagement in care is facilitated by the safety offered by the method.



C2Drive - Highway by night

## Treat Amaxophobia with Virtual Reality

Fear of driving is a common phobia, but treating it through in vivo exposure can be complicated.

Virtual reality has allowed us to create environments that simulate realistic anxiety-provoking contexts for drivers and passengers with driving phobias.

C2Drive software allows you to safely expose your patients to comprehensive environments. **The various functionalities will assist the health professional in the care of amaxophobia and will allow an optimal therapy in virtual reality.**



C2Drive - Highway by day

## Realism in Complete Safety!

The C2Drive software is used with a virtual reality headset, a steering wheel, and a pedalboard, creating a perfect driving simulation.

Gradually and safely, you can expose your patients to multiple phobogenic contexts. The health professional will have control over the weather stimuli, the driving context (day/night), and the virtual position of the patient in the car (driver or passenger) to practice an adapted and progressive therapy.

Several situations are proposed by C2Drive, allowing you to target the difficulties of your patients: highway entrance, traffic jams, overtaking trucks, etc.

Our exhaustive environments will ensure optimal exposure.

**The high degree of realism guarantees an ideal simulation of road contexts. The in virtuo exposure is your ultimate therapeutic ally for the safe treatment of the fear of driving.**



*C2Drive - Tunnel with traffic jams*

## Another situation, the fear of entering the highway

Many drivers and passengers are afraid of getting on the highway and then driving fast. Experienced in virtuo by the patient, **this situation can finally be addressed and treated in complete confidentiality and safety in your office.**

Panic at the idea of driving in a tunnel, refusal to take the highway, driving in dense traffic, etc. All these situations are now available in virtual reality on C2Drive



*C2Drive - Moderate traffic with lorries*



“ Simple to use and inexpensive, virtual reality demonstrates its clinical effectiveness and confirms the value of its use

- Giovancarli et al. (2016)



## Addictology and VRET: What Does Scientific Research Say?

In virtuo therapies have been the subject of numerous studies on their effectiveness in the treatment of addiction.

Recently, some authors have underlined the interest in virtual reality compared to exposure by imagination: **virtual reality allows generating significantly more dysfunctional automatic thoughts.**

This tool has real clinical relevance in cognitive restructuring work.

This research also demonstrates **an efficiency equal to the intensity of craving experienced during in virtuo exposures compared to that in vivo. It engenders superior therapeutic engagement through Virtual Reality Exposure Therapies.**

Validated for exposure to tobacco, drugs, alcohol, and gambling addiction, in virtuo therapies, benefit from significant results conferring them a strong clinical interest.



C2Addict - Casino

## C2Addict: A complete treatment for addictions

Thanks to the realism of the environments, the emergence of the cognitions, emotions, and problematic behaviors underlying the addiction will be possible in the office. Stimuli related to the use of the substance will offer the possibility to evaluate the severity of the craving.

**The ecological contexts will allow for efficient exposure. the in virtuo exposure helps to overcome the ethical and ecological limits of the exposure by imagination and in vivo in addictology.**

## Treating Addictions in Virtual Reality

Virtual reality has allowed us to create environmentally friendly virtual environments **to treat addiction to tobacco, alcohol, gambling, and drugs.**

We have developed optimal settings to treat addictions in virtual reality and allow the transfer of therapeutic benefits into the daily lives of your patients.

The environments have been designed to trigger the craving in the patient. **They will trigger the same cognitive, emotional, and behavioral responses as those experienced by the addict in their daily life.**

C2Addict will allow you to expose your patient safely and confidentially in your office.



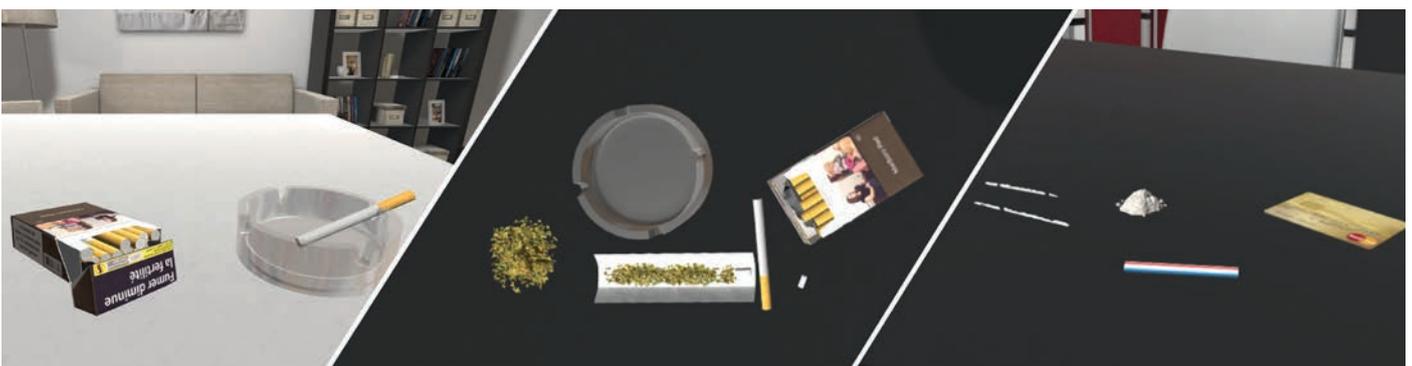
*C2Addict - Drugs in an apartment*

## Target the craving!

Our environments are the result of the cooperation between our scientific team and academics specialized in addictology.

Thus, they have been thought and created to allow the assessment, treatment, and prevention of relapse risks by putting craving at the forefront.

**Different contexts are accessible depending on the targeted pathology: bar, home, casino. Situations conducive to the emergence of permissive thoughts are proposed (waiting, home, social contexts) from which the patient will be able to choose the most craving-generating stimuli.**



*C2Addict - Consumption*



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The use of virtual reality in mindfulness groups offers enhanced therapeutic engagement

- Navarro-Haro et al. (2019)

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## VRET and Relaxation: The Prism of Research

**The scientific literature highlights the interest in using virtual reality in protocols, including relaxation.**

Navarro-Harro (2017) demonstrated that immersing patients in a relaxing virtual environment significantly reduced their negative emotions.

This same author, in 2019, highlighted through her study that coupling VR and Mindfulness was significantly more effective than Mindfulness practice alone.

Furthermore, research conducted in Oncology and Algology has provided relevant data on virtual reality use in reducing pain, stress, and increasing well-being.

**The researchers underline the effectiveness of virtual reality as a therapeutic solution in its own right.**

In addition, its use also complements traditional treatments.



*C2Hypno - Diving under the sea*

## Multisensoriality through virtual reality

C2Hypno offers multiple environments (mountains, sea, forests, parks, etc.) to facilitate patient acceptance and meet their needs. The virtual places visited are enriched by auditory stimuli consistent with the environment.

(Singing birds, wave sounds, etc.) and will facilitate immersion and the feeling of presence. **You can personalize the applications by activating a hypnosis voice** or enhance your session with classical music.

## Emotional Management and Relaxation through Virtual Reality

Stress and anxiety are very present in the origin of physiological and psychological disorders. Whether they are pathological or simply a shadow on your patients' daily lives, C2Hypno will assist you in their treatment.

The many environments available will allow you to initiate positive emotions and create a state of calm.

**Optimize your mindfulness, sophrology, hypnosis, and relaxation sessions with environments resulting from the collaboration between our scientific team and relaxation and hypnosis specialists (psychologists, hypnotherapists, sophrologists).**



*C2Hypno - A creek*

## C2Hypno: The Software with Multiple Virtues

C2Hypno is an efficient adjuvant to traditional therapies. The proposed environments and functionalities will act in interoperability with your care methods and the other C2Care software. The reduction of anxiety and stress markers maximizes therapeutic success: **immerse your patients in virtual universes that will be an excellent support for the learning of breathing, letting go and meditation techniques.** Thanks to multisensory stimuli, **the triggering of positive emotions will be easy and will reduce pain perception during medical procedures** and ease the stress inherent to them.

Prepare your patients for a peaceful night's sleep by stimulating their capacity for mental imagery coupled with calm breathing.

**The Snoezelen module is available in the C2Hypno solution. Snoezelen, in virtual reality, was designed to provide moments of soothing and multisensory stimulation.**

In addition to the other C2Care software, perform systematic desensitization. The relaxing environments will be ideal scenes to familiarize your patients with virtual reality or positively end your consultations.



*C2Hypno - Snoezelen*

## Cardiac Coherence in Virtuo

To facilitate the learning of cardiac coherence exercises, you can provide your patients with assistance in the virtual environment: a breathing aid bubble, representative of your patient's diaphragm, personalizes the inhalation and

exhalation, thus stimulating the breathing anchoring exercises.

Bubbles are used to help visualize the process of letting go and complete the relaxation process.



*C2Hypno - Hot air balloon ride*



“Virtual reality was quickly adopted by the field of motor rehabilitation, providing participants with repetitive practice, feedback on their performance, and improved motivation

- Holden (2005) ; Weiss et al. (2004) ”

## VRET and motor and praxis disorders: What Does Scientific Research Say?

Virtual reality used for the evaluation and rehabilitation of functional mobility has proven its effectiveness numerous times. **Studies have demonstrated significant improvements in balance and physical functioning (Karahan 2015). There is also an increase in walking speed (Nicholson 2015) and muscle endurance (Keogh 2013).**

Results also highlight the associated psychological bonus. Users could benefit from a higher psychological quality of life (Karahan 2015), a boost in confidence towards physical

activities of daily living, and a decrease in their fear of falling (Orsega-Smith 2012).

The experiments further demonstrated a significant difference in favor of virtual reality in reducing post-exercise pain experienced.

The management of motor disorders in virtual reality obtains results not only on the physiological condition of the users but also on psychological appeasement.

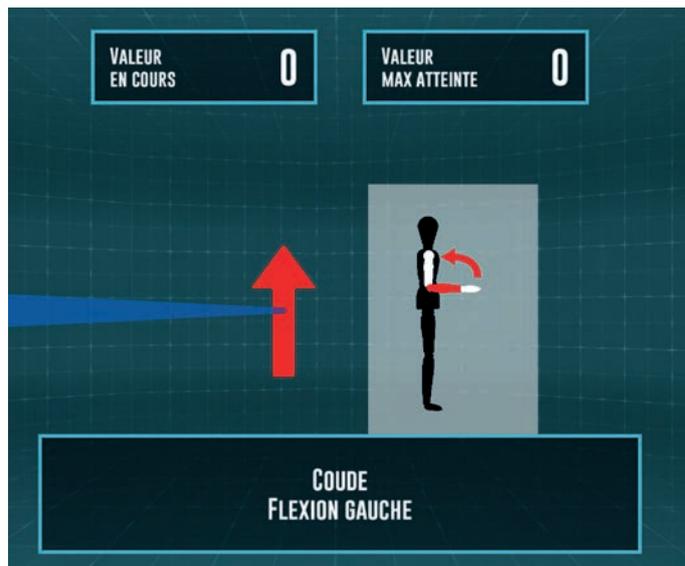


## Evaluation and Management of Motor and Praxis Disorders in VR

The assessment of functional mobility with virtual reality offers many advantages: accuracy, reproducibility, reduced impact of external factors, and automatic recording of values in the patient file.

Brain injuries frequently lead to body scheme and proprioception disorders. C2Physio allows the assessment the patient's positional sense thanks to a quick and precise quantification of the positional error

**Virtual reality increases patients' motivation and involvement in rehabilitation.** Thanks to real-time feedback, patients can correct their movements at any time to achieve their objectives, thus optimizing their rehabilitation



*C2Physio - Functional rehabilitation*

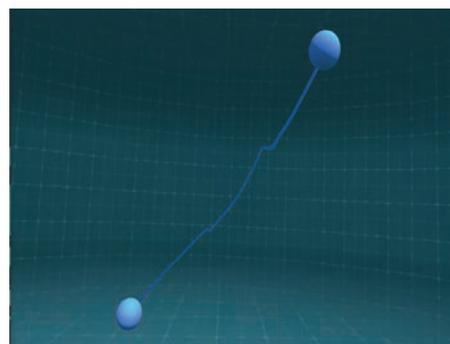
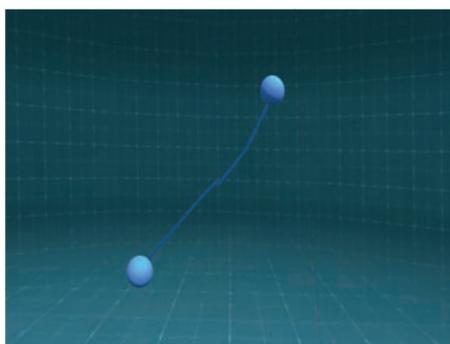
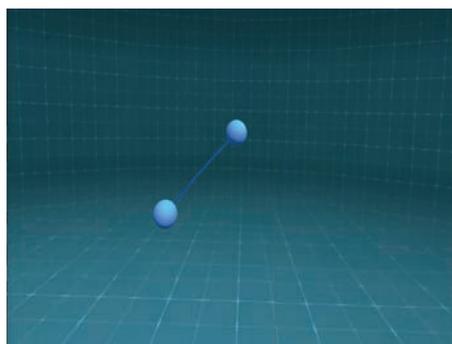
## C2Physio: At the Service of Mobility

C2Physio is a physiotherapy solution software designed and developed by a team of researchers and practitioners. Our C2Physio solution uses virtual reality to immerse the patient in an environment that allows mobility assessment, vestibular rehabilitation, and functional rehabilitation (upper and lower limbs).

The proposed exercises are used to work on the gain of amplitude in the search for joint mobility, the follow-up, and the precision of the gesture to improve the fine control of

the movement and the maintenance in a position to increase the strength endurance of the patients. In orthopedics, it is possible to start rehabilitating an immobilized limb as soon as possible or relieving the pain of a phantom limb.

The C2Physio application can also be used for vestibular physiotherapy. Immersive environments are created to treat vestibular disorders. Several exercises are available and customizable (vection, optical flow, optokinetic stimulation, motion sickness, vertigo).



*C2Physio - Personalized movement*

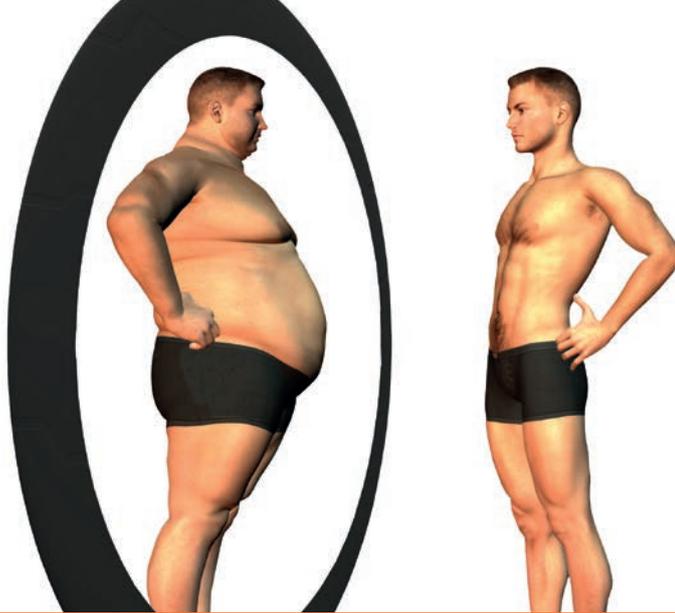
## C2Physio: At the Service of Mobility

C2Physio is also an effective tool to cope with kinesiophobia. The users, even in geriatrics, **will be able to perform natural rehabilitation movements through play. Pain is forgotten, and concentration is stimulated.**

Through play, coordination and mobility enable muscular strengthening and a playful, global rehabilitation without anguish and suffering.



*C2Physio - Archery*



“ The results demonstrate the interest in using virtual reality as a new method to reduce body dysmorphia

- Keizer et al. (2019) ”

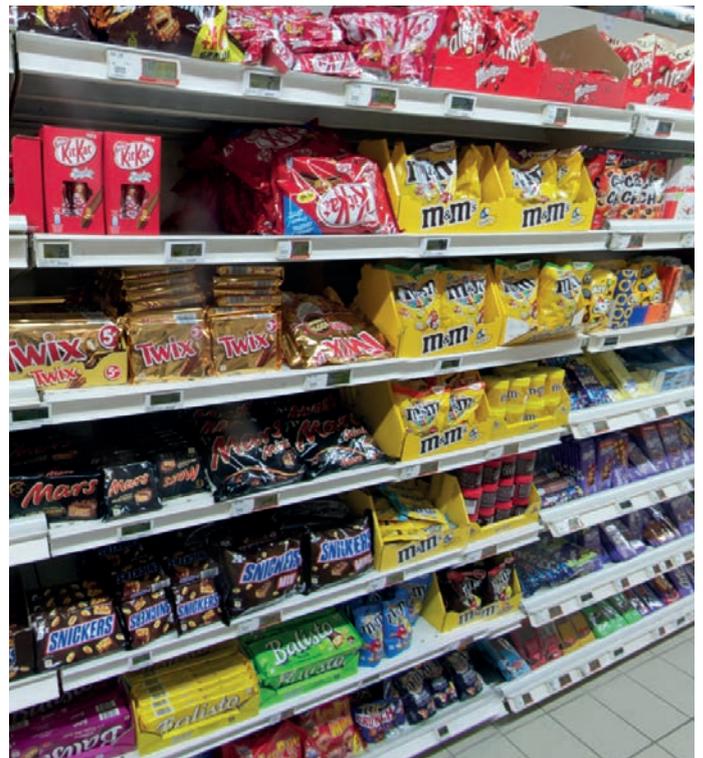
## VRET and Eating Disorders: What does the scientific research say?

Research on the use of virtual reality for the treatment of eating disorders is increasing.

The convincing results offer new perspectives to both researchers and clinicians. Marco (2013) has demonstrated the relevance of using virtual reality to treat body dysmorphia in anorexic patients. Virtual Reality Exposure Therapies coupled with CBT resulted in significantly more clinical improvement than CBT treatment alone.

The impact of virtual reality has also been evaluated in the processes underlying obesity. Studies have shown that in virtuo exposure has reduced binge eating but also maximized weight loss and long-term maintenance.

**Current literature also highlights the value of virtual reality for cognitive and emotional activation concerning problematic eating behavior.**



C2Nutri - Supermarket



C2Nutri - Composition of Food Plates

## Treating Eating Disorders with Virtual Reality

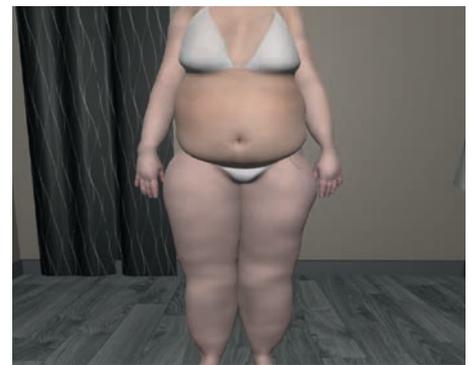
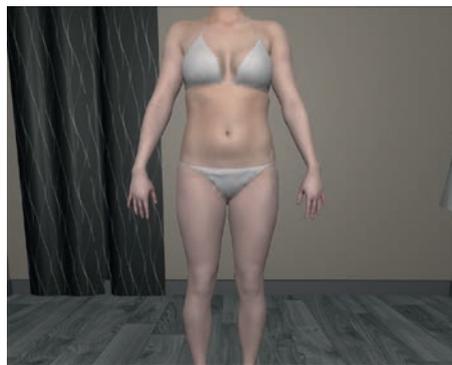
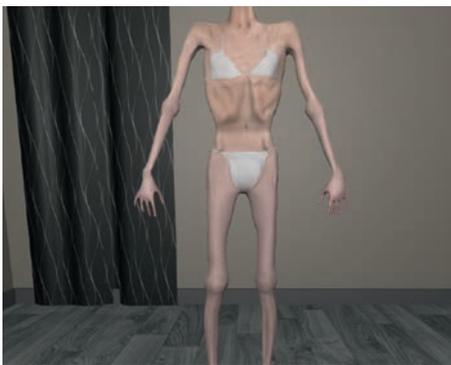
C2Nutri software has been developed to enable an efficient treatment for eating disorders. The available applications have been designed by our scientific team and our medical and paramedical partners.

**The different scenes developed will assist you in the treatment of anorexia nervosa, bulimia, hyperphagia, and obesity.**

The available features will allow you to target the major substrates of these disorders.



*C2Nutri - Exposition*



*C2Nutri - BMI Women*

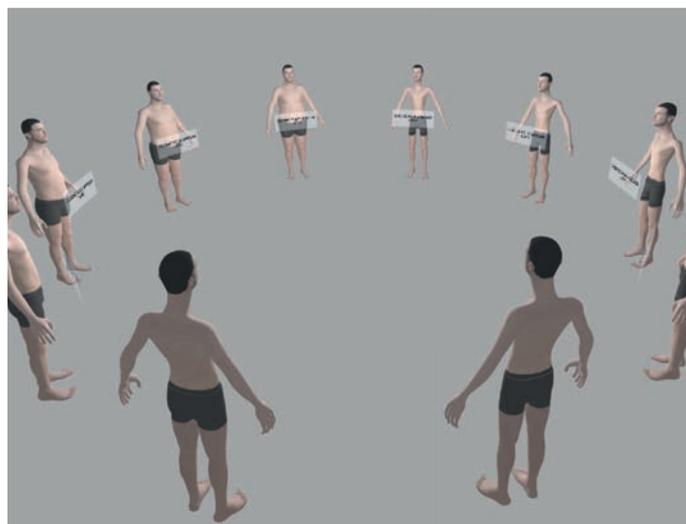
## From the awareness of the disorder to the treatment in virtual reality

C2Nutri is a software designed to treat the factors underlying eating disorders.

The silhouette test will allow you to evaluate the severity of dysmorphophobia and to promote awareness of your patients' disorder. Thanks to the fitting room environment, you will be able to correct the cognitive and emotional correlates of body dysmorphia. Patients will be able to perceive the gap between their self-perceived body shape and the real one (calculated according to BMI).



*C2Nutri - Mirror photo*



*C2Nutri - Male Body Shape Test 17*

**Expose your patients to food craving through ecological environments** like supermarket, flat, and appetitive stimuli.

**Work on dietary re-education by immersing your patients in an environment where they will compose their own meal tray:** this module will help you to improve your patients' nutritional knowledge and facilitate the reintroduction of forbidden foods in anorexics.

C2Nutri is the additional solution for the management of APD in a collaborative and multidisciplinary perspective, maximizing therapeutic benefits.



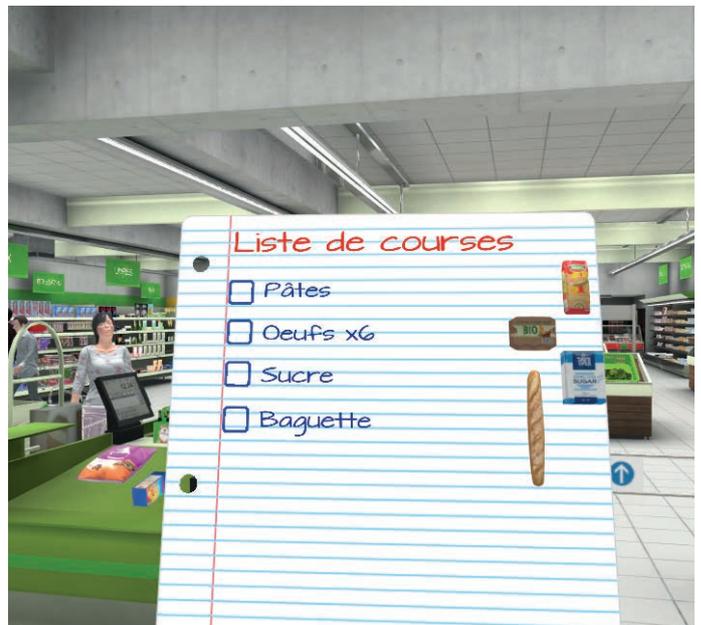
“ Virtual reality makes it possible to work on the integrated aspects of disorders since it allows for the evaluation of both cognitive and sensory behaviors ”  
 - Viaud-Delmon (2007)

### VRET and neurological rehabilitation: what does science say?

In cerebral-injured patients with disorders in daily activities, **Virtual Reality Therapy is the only therapy that tests the patients' executive disorders. The cognitive demands are more comprehensive and complex than in traditional tests. (Klinger 2006)**

Regarding cognitive function, it appears that the best way to prevent cognitive decline is to train the brain and the memory. The famous quote «use it or lose it» is particularly true in this field. (Laver et al., 2011, Massetti et al., 2018)

Repeated exploration and training in immersive environments improves spatial memory (Stanton et al. 1998) and allows for the transfer of spatial learning (McComas et al. 1998).



C2Neuro - Supermarket



C2Neuro - Supermarket

## C2Neuro: A Virtual Supermarket

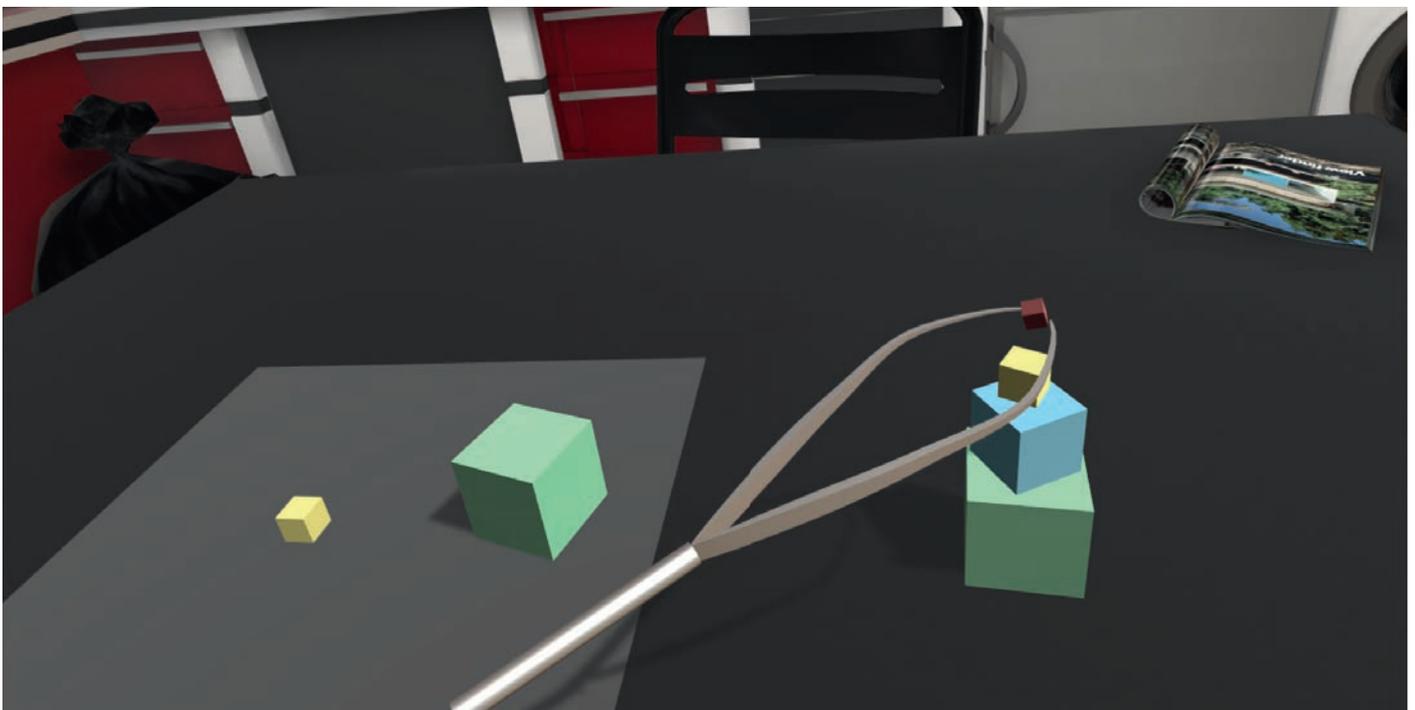
C2Neuro is a virtual supermarket with many applications like shopping with a list, shelving and grabbing items.

The patient will have to situate themselves in this supermarket and navigate from shelf to shelf using environmental cues. The evaluation and rehabilitation of instrumental activities of daily living are crucial elements for rehabilitating brain-damaged people.

**Shopping in a supermarket involves many functions such as executive functions, working memory, orientation, and spatial navigation.** Moreover, these are essential skills for independent living.



C2Neuro - Grabbing items



C2Neuro - Prehension using thumb and index fingers

## A simplified and optimized evaluation

Thanks to this ecological environment, you will place your patients in daily life activities to assess executive functioning.

This environment reproduces the supermarket paper-and-pencil test in virtual reality, thus offering an optimized evaluation. The sequential tasks allow working on cognitive functions in an independent and targeted way.

Immersion will be the most appropriate experience to work on cognitive decline and maximize the transfer of learning. C2Neuro is part of the new wave of neuropsychological support in virtual reality.

Going to the supermarket is no longer a necessity.

**The use of C2Neuro allows for an ecological method of evaluation and remediation that is inexpensive in terms of time and personnel while guaranteeing the total safety of the patient (Schultheis & Rizzo, 2001).**

C2Neuro can be used for cognitive functions as well as for motor and praxis functions.



“

**Patient interaction with puppies on an ad hoc basis reduces the level of depressive symptoms**

- Barker SB, Dawson KS

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## VRET and neurological rehabilitation: what does science say?

**L'animal de compagnie digital prodigue des bienfaits à la fois médico-psychologique et sociaux (Janne 2017) et impact notablement le stress, les comportements d'anxiété et la dépression.** Selon Yeh (2005), la zoothérapie améliore le processus de guérison et la qualité de vie chez les patients. Cette relation thérapeutique en réalité virtuelle crée chez le

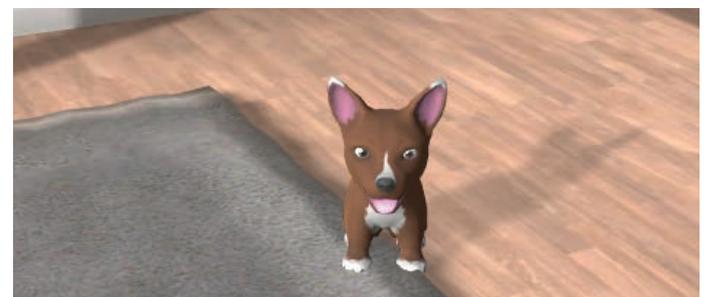
patient une fascination pour le chien. (Gaunet 2003) Cette qualité de relation immersive est une factrice essentielle à l'atténuation des troubles cognitifs. Cette relation et ces interactions avec l'animal de compagnie créent un support émotionnel inconditionnel et fournissent aux utilisateurs un sentiment d'acceptation et de reconnaissance.

## C2Companion: Playful resources with therapeutic intentions

C2Companion is a software program that allows users to play with and care for a virtual pet in a stimulating environment to perform multiple activities.

through the priming effect of caring for the animal. Users will activate positive memories related to this type of experience, maximizing the hedonic potential.

This program has been designed to stimulate cognitive functions and body mobility without the negative weight of paper and pencil training. **Through the playfulness of the virtual reality and the program, users will relive positive experiences that challenge their semantic and procedural memory.**



*C2Companion - Inside*

Virtual Reality Exposure Therapy sessions with C2Companion will provide your patients with new incentives. C2Companion is an innovative and fun alternative to target anhedonia:

## A Wide Range of Applications

Controlled by head movements, the environment is accessible to patients with motor or praxis impairments and can be used as a hobby or occupation during care. The social aspect of animal care also makes this application ideal for patient-caregiver bonding or group mediation (Siriraya et al., 2014).

C2Companion can also be a tool used to get out of the ordinary, out of the routine. **This software encourages sharing and controlling emotions while promoting focus and sponging off negative feelings. (Gaunet, 2003)** C2Companion can be used as a catalyst to reduce agitation, aggressiveness, and temper tantrums.



“ Virtual reality technologies offer new ways to assess and rehabilitate cognitive function

- Klinger (2006)



## Cognitive stimulation and VRET: What Does Scientific Research Say?

Virtual reality combined with cognitive rehabilitation encourages the therapeutic process of increasing the patient's ability to process and use incoming information.

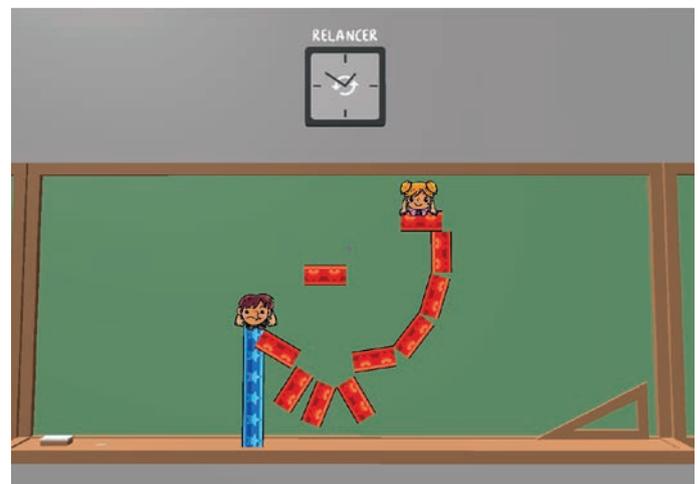
With their interactive and immersive approach, virtual environments provide training applications inducing an

improvement of performances by exploiting preserved procedural and implicit capacities. **Consequently, cognitive processes can be restored through procedures practiced repetitively. (Klinger, 2006)**

## C2Brain: the alliance between performance and fun

The C2Brain software has been designed for cognitive training and studied to be used simply and playfully in virtual reality. Several cognitive training modules conceptualized as stimulating games are available. We have developed this application considering the sensory and motor difficulties that some of your patients may have.

**C2Brain helps remedy cognitive deficits thanks to its systematic treatment method that integrates the best rehabilitative and functional approaches. (Rose et al., 1996; Rizzo and Buckwalter, 1997)**



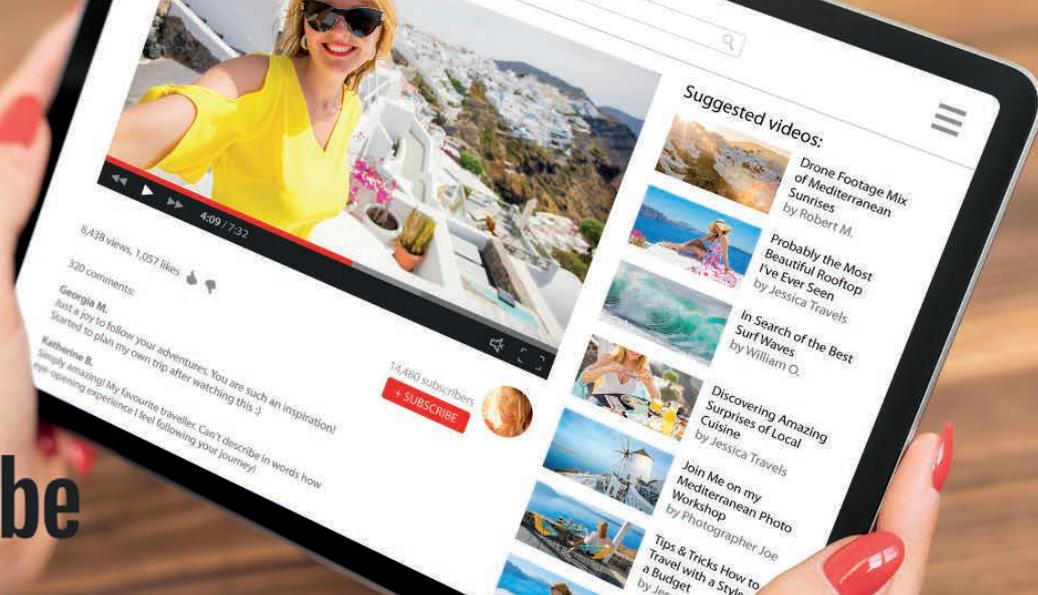
C2Brain - Save me!

## Focusing on Concentration through Engagement

C2Brain allows making choices and decisions that lead to a cascade of actions and reactions. These scalable attributes, depending on the difficulty of the level of play, make it possible to either reproduce traditional tests (Pugnetti et al. 1998) or propose more complex tasks by considering the time, interest, and commitment of the subjects (Zhang et al. 2001). The levels are evolving according to the success.

**C2Brain provides a cognitive rehabilitation approach by focusing on attention, memory, visual perception, anticipation, problem solving, decision-making, and executive functioning.**

Virtual Reality Exposure Therapy creates approaches that systematically target patients' memory and provides rehabilitation environments using playful motivators.



“ Customization of content provides the participant with scenarios that challenge the individual in the best way to target improvement. ”  
 - Vaughan et al. (2016)

## Customize your virtual reality tool

C2Custom is the application that allows you **to customize your care so that your patients can access a multitude of exposure environments.**

This software allows you to watch images, videos, and 360° videos.

Import them easily from the internet; you can project them in different formats.

C2Custom is a complement to C2Care software to allow therapists to maximize the therapies they practice: whether it is for phobias, addictions, eating disorders, or relaxation,

**thanks to C2Custom, you can set up 360° photo, video, or video environments, which perfectly match the needs - sometimes very specific - of your patient.**

C2Custom also allows you to customize your environments with panoramic «street view» from Google Maps. Your patient will be able to access ultra-customized environments. For example, in cases of PTSD following an assault, your patient will be able to be exposed to the precise location of the trauma.



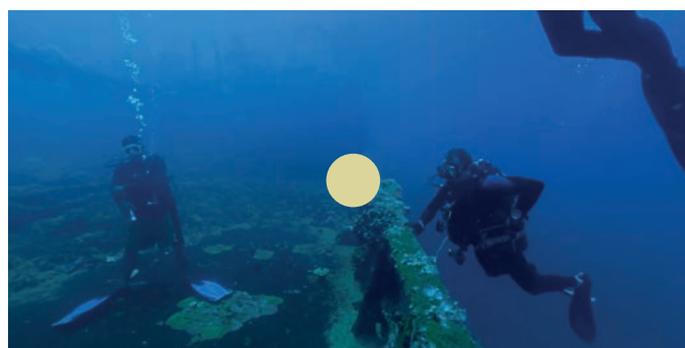
C2Custom - Streetview

## Access to alternating bilateral stimulations

C2Custom is also intended for therapists who practice Alternate Bilateral Stimulation (ABS).

**These therapies use bi-alternating sensory stimulation and auditory stimuli that we have recreated in a dedicated environment.**

The joysticks provided with the virtual reality headset replace the buzzers and be simply held by the patient.



C2Custom - ABS



## THEY USE OUR SOLUTIONS





**C2Care**

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