



## Introduction



Embark on a transformative journey towards not just healthy aging and cognitive vitality, but also comprehensive health management with OptiChroniX's groundbreaking approach.

As the world grapples with a growing aged population and the impending challenge of dementia, there arises another intricate layer - managing the comorbidities of hypertension and diabetes, which have proven interconnections with cognitive decline.

The urgency of these health concerns underscores the need for cutting-edge solutions. The silver lining? Many dementia cases, as well as complications from hypertension and diabetes, can be potentially delayed or even prevented through conscious lifestyle shifts. By emphasizing weight control, physical activity, and dietary modifications, one can actively manage these interconnected health challenges.



Enter myAVOS: OptiChroniX's holistic digital platform that extends beyond brain health and ventures into managing comorbidities like hypertension and diabetes.

With its roots in evidence-based strategies, myAVOS serves as a comprehensive health guide. It not only supports those looking for cognitive wellness but also those striving to manage associated health concerns holistically.

OptiChroniX acknowledges that health challenges, be it cognitive or related to other conditions, have profound impacts on individuals and their families. Hence, a caregiver-centric version of myAVOS has been crafted, ensuring families can actively participate in the wellness journey of their loved ones.



Grounded in robust scientific research, myAVOS advocates for a comprehensive approach to health management. Its intuitive design makes it effortless for users to integrate these valuable insights into their daily lives.

Here's to a holistic journey towards overall wellness. Your commitment to embracing a comprehensive health approach deserves nothing but the highest esteem.

René Gilvert  
Founder

Roger Bullock MD  
Chief Medical Officer



## INSTRUCTIONS FOR USE

### DIRECTIONS FOR USE

This instruction manual is used to help you make the best use of myAVOS. Please read the information below and follow the instructions.

### PURPOSE

myAVOS is a tool that helps you with healthy (brain) aging, by keeping track of your progress and giving you tips to help you learn more about your health.

It gets information from things you wear or carry with you, like a watch or phone, or other devices that can provide wireless information.

This can help you make better choices about your medicine and other things that can affect your health, especially if you have Alzheimer's disease.

It is designed for:

- people like you who want to stay healthy.
- People (carers and friends) who take care of someone with early memory problems.
- and people who have chronic illnesses like diabetes, hypertension, or early dementia.

**However, it is not meant to replace your doctor or other healthcare providers and should not be used to make decisions about your health.**

**Users can share their health assessments with healthcare providers. However, the information provided by the app cannot be used for making diagnostic or therapeutic decisions or to offer any medical advice.**

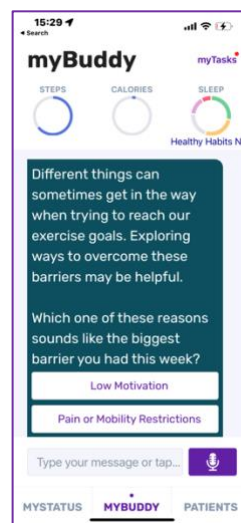


Figure 1 Engaging with Laura

### FUNCTIONALITY

The main feature of myAVOS is **the dialogue** (the chat) that you may have with your digital coach ("myBuddy").

This can be started by asking a question directly in the chat, or the digital coach may ask you questions around the observations made around activity levels, diet, medication, mood, anxiety, and stress.

The chat responses are labelled in the bottom left to provide a source and level of confidence:

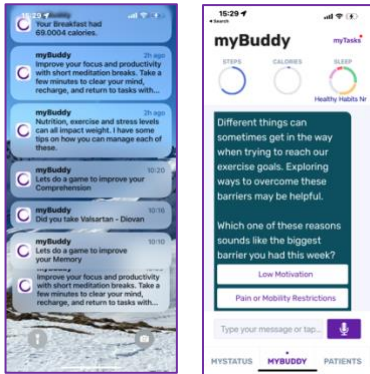
**CURATED:** Our medical staff has created the response

**GPT-3:** It is sourced in an open AI environment and might not be accurate enough to solely rely on. You can have a real-time AI conversation about the topic with your digital coach.

**INTERNET:** It is sourced directly from Internet and might not be factual.

myAVOS aims to provide CURATED answers for clinical and or harmful questions. myAVOS does not replace seeking professional consultation with a healthcare provider.

Alternatively, myAVOS might send you notifications that asks you to perform an action in the myTasks section in the top right of the chat page.



An example of a conversation between you and your digital coach around medication:

The interactive online program responds individually to patient responses and adjusts the content accordingly.

Figure 2 Notification and Medication Adherence Coaching

It's important to note that while these factors have been associated with an increased risk of dementia, they do not necessarily cause dementia, and the relationship between these factors and dementia is complex and not fully understood.

myAVOS provides information about you on the **myStatus** page.

### myLifestyle

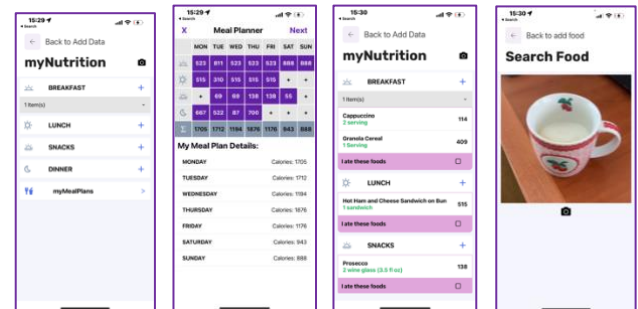
- Activity
- Mindfulness
- Sleep
- Nutrition

Here are some screenshots how myAVOS can help you plan meals in advance so that logging your

## BIOMETRICS AND LIFESTYLE

Several lifestyle factors and medical comorbidities have been linked to an increased risk of developing dementia. These include:

- **Cardiovascular risk factors:** High blood pressure, high cholesterol, and diabetes have all been linked to an increased risk of dementia.
- **Smoking and alcohol consumption:** Both smoking and excessive alcohol consumption have been associated with an increased risk of dementia.
- **Physical inactivity:** A sedentary lifestyle is linked to an increased risk of dementia.
- **Obesity:** Being overweight or obese is associated with an increased risk of dementia.
- **Depression:** Studies have shown that individuals with depression have an increased risk of developing dementia.
- **Low educational attainment:** Lower levels of education have been linked to an increased risk of dementia.
- **Poor sleep:** Chronic poor sleep has been linked to an increased risk of dementia.
- **Nutrition:** Studies suggest that a diet that is high in saturated fats, sugar, and processed foods, and low in fruits, vegetables, and fish is associated with an increased risk of dementia



nutrition is

Figure 3 Nutrition Logging

made easy daily. You can use the camera to take a picture of your food item, or use a barcode scanner, or manually search for items.

### myHealth

#### myHealthOutlook

- Cognitive Health Outlook
- Cardio Health Outlook

#### myVitals

- Blood Pressure
- Pulse

#### myBrain

- Mood
- Anxiety
- Cognition (Brain Function)
- Burnout



myMetabolics

- Weight
- Waist
- Glucose
- Cholesterol

Ideally, you link myAVOS with smart watches and wireless devices to passively acquire the information for your digital coach, but you can also add the data manually by pressing the + sign in myStatus

ASSESSMENTS

myAVOS will perform different assessments that will inform the dialogues that you will have with your digital coach.

- 1) Weekly assessment on the likelihood of late life cognitive changes based on biometric and lifestyle observations.
- 2) Weekly reassessment of your cardio health outlook to provide insight in the likelihood of a cardiovascular event within the next 10 years.
- 3) a weekly screener with two questions that will determine if follow up questions will need to be asked to assess mood and anxiety and burnout.
- 4) A monthly questionnaire for both patient and caregiver to query performance in activities of daily living.
- 5) A monthly Brain Health exercise, where your digital coach will get insight in your performance in 6 different cognitive domains. This may trigger certain brain games to help strengthen the weaknesses.

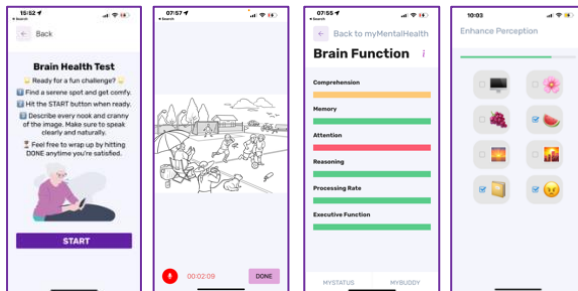


Figure 4 Brain Function / Cognitive Performance Exercise

Your Healthy Habit Number

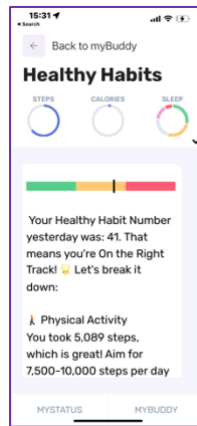


Figure 5 Healthy Habit Number

Our "Healthy Habit Number" feature provides you with a comprehensive assessment of your lifestyle's impact on your health and well-being. Based on various factors, including physical activity, diet, tobacco and alcohol use, weight management, chronic disease management, mental health, sleep, and more, the feature calculates a daily health number on a scale from 1 to 100. This number falls into five classifications:

- 0–20: Needs Significant Improvement
- 21–40: Room for Growth
- 41–60: On the Right Track
- 61–80: Good Progress
- 81–100: Optimal Health and Well-Being

The main drivers that influence your score are highlighted, and personalized feedback is given for each area, along with itemized suggestions for improvement if needed.

Additionally, if your anxiety (GAD7) or depression (PHQ9) scores warrant concern, the feature provides appropriate recommendations. It's a valuable tool to track your progress and make informed decisions to lead a healthier life.

COACHING FOR ALL USERS

myAVOS helps you stay healthy by teaching you ways to think and act that can improve your health.

It gives you information about common health problems that people with memory problems or Alzheimer's disease may have, like high blood pressure, diabetes, or being overweight.



The tips and exercises it provides are based on recognized elements of cognitive behavioural therapy, which is a type of therapy that helps people change the way they think and act.

It also gives you tips and exercises to help you stay healthy and stay on track with these tips. It will guide and support you in implementing these tips in your daily life.

Here are two examples of a conversation:

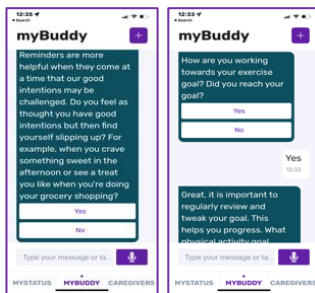


Figure 6 Digital Coaching

control. We use these skills every day to learn, work, and manage daily life.

### Attention and Perception

The capability of generating, selecting, directing and maintaining adequate levels to process relevant information.

### Exercises

**Mindfulness Exercise:** This exercise fosters healthy aging by cultivating present-moment awareness, enhancing cognitive function, and promoting emotional resilience, ultimately supporting overall brain health and vitality.

**Breathing Exercise:** This exercise promotes healthy aging by enhancing relaxation, reducing stress levels, and improving overall mental well-being through focused and controlled breathing techniques.

## BRAIN GAMES

Based on the Monthly Brain Health assessment, you may be given specific brain games to enhance capabilities in the following domains:

### Memory

The ability to register, store and elicit different experiences, which could be ideas or images.

### Comprehension

The capability of understanding, analysing and thinking about information received.

### Reasoning

Being able to solve problems, extract conclusions and learn in a conscious manner from the events.

### Processing Speed

The relationship between cognitive execution and invested time, the ability to process information rapidly.

### Executive Functioning

Executive function is a set of mental skills that include working memory, flexible thinking, and self-

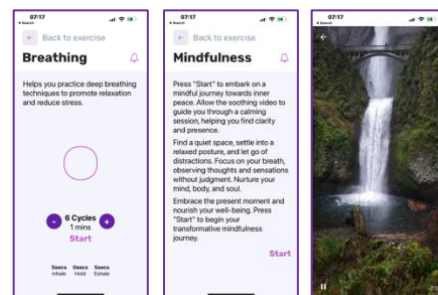


Figure 7 Breathing and Mindfulness

## Resources

You will find access to Articles and Video Tutorials under Resources

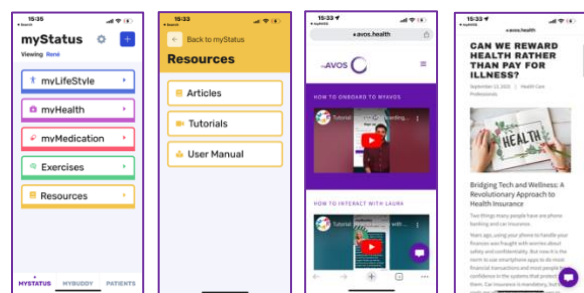


Figure 8 Articles and Video Tutorials



## Patient Carer Linking

myAVOS has unique features for both caregivers and people with MCI or Early Alzheimer’s, in order to get the maximum benefit, it is recommended to link the caregiver application with the patient application.

The carer can invite patient with the patient’s email ID or a patient can invite up to five carers.

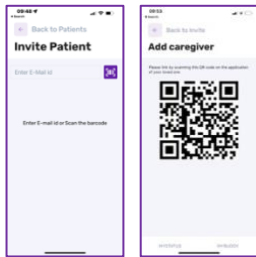


Figure 9 Linking of Patient and Carer

When patients and cares are linked, information will be shared from the patient with the caregiver.

## myStatus / hisStatus / herStatus

All the personal information we gather to provide you a personalized program can be found on myStatus. As a patient, you will only see your own data.

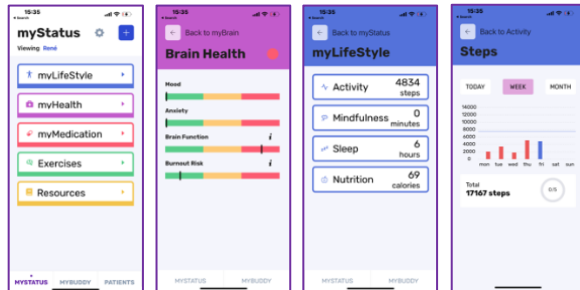


Figure 10 Patient Screens myStatus

As a carer, you can see you own data and the patient’s data by pressing on the name below ‘myStatus’.

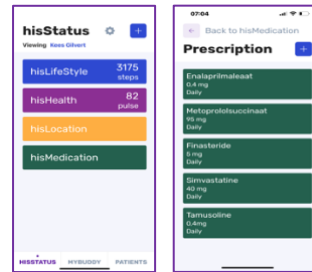


Figure 11 Carer Screens his / herStatus

A carer can switch between patient and carer data, help monitor medication adherence, set reminders, and find the patient’s location if location sharing is enabled

Remember, **you own the data** provided and will have the key to unlock the ability to share this data with 3<sup>rd</sup> parties.

myAVOS is password protected and available at any time via the Internet. This enables time- and location-independent use. The processing of personal data is always carried out in accordance with the General Data Protection Regulation (GDPR) and the German Federal Data Protection Act (BDSG).

## GeoFencing and GeoLocation

If desired, you can activate a function that would enable a carer to find their loved one, and a patient to find their way home.

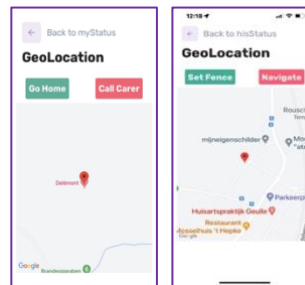


Figure 12 Geofence screens carer and loved one

Geofencing may decrease battery life significantly and you may need to charge your phone more frequent.

If this function is not (yet) needed, we recommend disabling location tracking in the **Settings** of your smartphone





## WHAT YOU NEED TO USE myAVOS

- You need a smartphone and an email address and you need to complete the onboarding questionnaire.
- For an optimal experience **a connection to an activity tracker** (ex. Apple Watch, Garmin, Fitbit) is recommended.
- Use of a wireless scale, a blood pressure monitor, a sleep monitor (ex. Withings) will provide the digital coach with all the health metrics that will inform the conversations with you.

Since myAVOS guides you through the program in a dynamic dialog, no special computer knowledge is required.

### APPLICATION

myAVOS is used to support people with an interest in healthy (cognitive) aging.



## WHEN SHOULD myAVOS NOT BE USED

myAVOS should not be used by patients with psychotic diseases (e.B. schizophrenia), severe dementia, suicidal risk or inability to use a smartphone.

### Explanation

A suicidal risk exists if a patient had a serious intention to take his or her life in the last 90 days (regardless of whether there was a concrete plan for implementation). There is also a risk if a patient has tried to take his or her life in the last 12 months.

## TYPE AND DURATION OF APPLICATION

myAVOS is accessible via an access key required for registration. The useful life per access key is 180 calendar days after the first registration.

During this period, you will also be encouraged by notifications to your smartphone to actively engage with the offered information and suggested

exercises and to integrate them into your everyday life.

## CONSULT YOUR DOCTOR

Any deviation from already prescribed medications or treatments requires prior consultation with the responsible doctor/psychotherapist. You should contact your doctor or psychotherapist if your condition or mood does not improve or even deteriorate over a longer period of time (several days/weeks).

If you develop suicidal thoughts or the intention to inflict suffering, we strongly recommend that you consult your doctor or psychotherapist.

## FREQUENCY OF USE

Experience shows that myAVOS should ideally be used a few times per day, when Laura, your digital coach engages with you.

## AGE LIMITATIONS

18 years. No usage data are available for patients under 18 years of age.

## SIDE EFFECTS

It is possible that not every user benefits from the use of the program, which could possibly trigger feelings of disappointment.

If dealing with the program is too stressful for you, you should take a break, suspend program use and talk to your carer, partner, physician, and/or psychotherapist about it.

Not every exercise or recommendation is equally suitable for every patient. If an exercise or recommendation causes/amplifying discomfort, do not perform it further. If necessary, consult your doctor or psychotherapist.



If you experience any side effects associated with using myAVOS, report them to your doctor or psychotherapist immediately or contact [help@optichronix.com](mailto:help@optichronix.com)



## DEVELOPER

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## INTERACTIONS

So far, no interactions are known.

## INFORMATION FOR EMERGENCIES

In case of emergencies (e.B. crises, risk of suicide, deterioration of your health status) contact your treating doctor/psychotherapist immediately or select the emergency numbers of the fire brigade or police that apply to your country.

Here are some examples:

### UK

- Emergency call in general: 999 and 112
- Emergency call rescue: 112
- Police: 101

### USA

- Emergency call in general: 911

### GERMANY

- Fire Brigade and Ambulance Services: 112
- Police 110

### SWITZERLAND

- Emergency call in general: 112

If you can't reach anyone at the phone numbers provided or don't get help, check if the phone numbers may have changed.

## STAND OF INFORMATION

2024 February 9

## FOR MORE INFORMATION

If you have any technical questions, you can contact [support@optichronix.com](mailto:support@optichronix.com) by e-mail.