

# Web app to lower blood pressure by promoting a healthy lifestyle

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Designed by doctors and psychologists from Valencian universities, the interactive web application has so far been tested on 100 overweight or obese patients.

A healthy diet and [physical exercise](#) are essential to managing hypertension in overweight and [obese patients](#), the numbers for which are rising in the Spanish population. However, the usual means of promoting weight loss and an active lifestyle are not always effective.

Researchers from three Valencian universities, among them, Juan Francisco Lisón and Enrique Rodilla from the Universidad CEU Cardenal Herrera (CEU Cardenal Herrera Univeristy, CEU-UCH), have designed a [web application](#) called Vivir mejor that allows patients to monitor their dietary and exercise habits, with a view to lowering blood pressure.

The clinical study to compare the effectiveness of this online application against existing methods is already up-and-running at Sagunto Hospital, Valencia.

Rodilla and Lisón, explain their approach: "The Internet can be our best ally for promoting healthy lifestyle changes, which can counter hypertension and its associated cardiovascular complications. But there are still very few studies that prove its effectiveness, which derives mainly from that fact that it is the patient who controls and evaluates their own progress via the online tool".

## Online interactive programme

The web application is made up of nine modules that progressively encourage the users to adopt healthy habits and make important lifestyle changes related to diet and physical exercise. It includes online questionnaires to be completed by the patient: "Via self-assessment the patient can see how they play a lead role in their own progress, which makes them more motivated to keep it up" (Rodilla).

It also has the advantage of being available to more users than it would be possible to treat in a clinical setting, "overcoming geographical boundaries and reducing costs, since health care professionals can monitor the results remotely over the Internet" (Rodilla).

The first modules focus on inspiring change and establishing healthy eating and [exercise habits](#) for overweight or obese patients with high blood pressure. They also propose strategies for overcoming cognitive barriers and unhelpful thought patterns, and reassessing the decisions they are making about food and exercise.

From module five onwards, the patient is set new nutrition- and physical exercise-related objectives every two weeks. They are also given strategies for dealing with emotional obstacles, particularly those related to food, which are common among people who are overweight or obese.

The final module reviews all of the strategies developed, so as to consolidate the progress made and ensure that the new habits last.

## Protocol for evaluating lifestyle

For the design of Vivir mejor, the researchers – doctors and psychologists by profession – established an evaluation protocol for

lifestyle. It consists of evaluating participants before using the programme, and then again after three, six and twelve months of use, with a view to measuring how well the new habits are maintained, and for how long. Indicators include medical factors, such as [blood pressure](#) and body mass index, along with other variables related to habits. It is based on internationally-validated questionnaires for measuring quality of life and levels of physical activity, such as the Quality of Life Index ([QLI](#)) and the International Physical Activity Questionnaire ([IPAQ](#)), among others.

After obtaining the results from this first clinical study, the research team expects to develop new versions of Vivir mejor, which will include other important variables of a healthy lifestyle, such as alcohol and tobacco consumption, stress management and sleep quality, which will extend the use of this online tool to other chronic illnesses.

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