

# A Web-based lifestyle intervention supports weight loss in patients with non-alcoholic fatty liver disease

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Patients with non-alcoholic fatty liver disease (NAFLD) who participated in a web-based lifestyle modification intervention achieved similar levels of weight loss and more rapid normalization of their liver enzymes than patients who participated in an intensive, group-based programme. The results of this Italian study, which were presented today at The International Liver Congress 2018 in Paris, France, also suggested that the degree of weight loss achieved by some patients in both intervention groups was likely to have resulted in fibrosis regression.

"We were impressed that more than one in 10 patients in both [intervention](#) groups achieved a weight loss target of 10%", said Professor Giulio Marchesini from the University of Bologna, Italy, who presented the study findings. "This weight loss threshold has been associated with resolution of non-alcoholic steatohepatitis and regression of fibrosis in studies that have evaluated NAFLD histology."

NAFLD is the most common [liver disease](#) in Western countries and is characterized by excessive hepatic fat accumulation. The global prevalence of NAFLD has been estimated to have reached 25% of adults, and both genetic and lifestyle factors contribute to the pathogenesis of the disease. Lifestyle modifications geared towards weight loss, increased physical activity and improved dietary habits are central to the management of NAFLD, and structured intervention programmes are recommended in the guidelines.

"Lifestyle changes are mandatory for patients with NAFLD, but these are very difficult to achieve in busy clinical units," explained Prof. Marchesini. "We wanted to develop a web-based programme to help them achieve these changes, and to compare its effects with a structured, face-to-face programme involving a multidisciplinary team. The participation of patients with NAFLD in structured lifestyle programmes may be jeopardized by job and other time constraints, and a web-based intervention may be better suited to young, busy patients."

The study undertaken by Prof. Marchesini and colleagues included 716 patients with NAFLD. They either attended a 5-week intensive group-based lifestyle modification programme, created by a multidisciplinary team of physicians, dieticians and psychologists which encouraged a healthy diet and regular physical activity (n=438), or participated in a web-based intervention (n=278). The web-based programme included five modules, with interactive games, offline contact with the study centre, and questionnaires. Surrogate markers of NAFLD severity were tested at 6-, 12-, and 24-months of follow-up. The primary outcome measure for the study was the percentage of patients who achieved 10% weight loss.

According to Prof. Marchesini, body mass index decreased in both groups by almost 2 points, and the 10% weight loss target was achieved by 14% of all participants (12% of participants in the web-based intervention and 15% in the group-based intervention). All liver enzymes decreased significantly, irrespective of the intervention, but individuals in the web-based intervention were more likely than those in the group intervention to have a normal alanine aminotransferase (ALT) level at both 6 months (OR 2.34; 95% CI 1.27, 4.30) and 12 months (OR 2.22; 95% CI 1.33, 3.73). Surrogate markers of fibrosis decreased in both intervention groups, with statistically significant improvements from baseline observed in the Fibrosis-4 (FIB-4) index.

"Our study has shown that a web-based lifestyle modification programme is a feasible and practical way of achieving a clinically meaningful level of [weight](#) loss in our NAFLD patients," said Prof. Marchesini. "Ideally, we would now like to roll out the intervention to other liver units."

"Weight loss has long been recognized as an effective therapy for NAFLD, but the challenge has been creating the infrastructure to achieve it," said Prof. Phil Newsome from the Queen Elizabeth Hospital and University of Birmingham, Birmingham, UK, and EASL Governing Board Member. "Most studies have used conventional resource-intensive regimens which are not widely available in most clinical practices. This study by Prof. Marchesini demonstrates the potential of web-based approaches to achieve this at scale. The challenge now will be to see if [patients](#) are able to sustain the [weight loss](#) for longer periods of time."

Provided by European Association for the Study of the Liver

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