

Cardio could hold key to cancer cure

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Regular exercise has been proven to reduce the chance of developing liver cancer in a world-first mice study that carries hope for patients at risk from hepatocellular carcinoma (HCC).

The research announced at the International Liver Congress 2013 involved two groups of mice fed a [control diet](#) and a high fat diet then divided into separate exercise and sedentary groups. The exercise groups ran on a motorised treadmill for 60 minutes per day, five days a week.

After 32 weeks of [regular exercise](#), 71% of mice on the controlled diet developed tumours larger than 10mm versus 100% in the sedentary group. The mean number and volume of HCC tumours per liver was also reduced in the [exercise group](#) compared to the sedentary group.

EASL's Educational Councillor Prof. Jean-Francois Dufour said the data showed the significant benefit of regular exercise on the development of HCC. Exercise decreased the level of non-alcoholic [fatty liver disease](#) in mice receiving a high-fat diet. He said: "We know that modern, [unhealthy lifestyles](#) predispose people to non-alcoholic fatty liver disease which may lead to liver cancer; however it's been previously unknown whether regular exercise reduces the risk of developing HCC. This research is significant because it opens the door for further studies to prove that regular exercise can reduce the chance of people developing HCC."

Prof. Jean-Francois Dufour added: "The results could eventually lead to some very tangible benefits for people staring down the barrel of liver cancer and I look forward to seeing human studies in this important area in the future. The prognosis for liver cancer patients is often bleak as only a proportion of patients are suitable for potentially curative treatments so any kind of positive news in this arena is warmly welcomed."

HCC is a cancer originating in [liver cells](#) and is one of the most common types of tumour. Worldwide,

HCC accounts for approximately 5.4% of all cancers and causes 695,000 deaths per year, including 47,000 deaths in Europe per annum. It is the fifth most common cause of cancer in men and the eighth most common cause in women.

More information: 1 A.C Piguat, EFFECT OF REGULAR TRAINING ON HEPATOCELLULAR CARCINOMA DEVELOPMENT IN HEPATOCYTE-SPECIFIC PTEN-DEFICIENT MICE. Abstract presented at the International Liver CongressTM 2013

2 Hepatocellular Carcinoma. Wikipedia. Available at en.wikipedia.org/wiki/Hepatocellular_carcinoma. Accessed 04.04.12

3 Kumar Vinay, Nelso Fausto and Abul Abbas. Robbins & Cotran Pathologic Basis of Disease, 7th ed. Saunders; 2004.

4 Cancer fact sheet. World Health Organisation. February 2006. www.who.int/mediacentre/factsheets/fs297/en/ accessed 04.04.12

5 EU Burden of Liver Disease: A review of available epidemiological data. European Association for the Study of the Liver Disease. 2013. www.easl.eu/assets/application/845caec619f_file.pdf. Accessed 26.02.13

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