

Greg Arnold, DC, CSCS

4165 Blackhawk Plaza Circle, Suite 250 Danville, CA 94506 (925) 321-4668 PitchingDoc@msn.com www.PitchingDoc.com

<u>Treadmill vs Elliptical Training: How Running Shoes Cause Injury</u> July 18, 2011

Elliptical machines are the most popular cardio- machines in the gym and are preferred over treadmills because of their low-impact nature, even according to the Mayo Clinic:

http://www.mayoclinic.com/health/elliptical-machines/AN01620

But new research is showing how the pain many runners experience may be due to their running shoes. 2 scientists from the Skeletal Biology Lab at Harvard:

http://www.barefootrunning.fas.harvard.edu/

Published a study in 2010 showing how running shoes may be causing injuries, NOT preventing them:

 $\frac{http://www.ncbi.nlm.nih.gov/pubmed?term=Foot%20strike%20patterns%20and%20collision%20}{forces%20in%20habitually}$

Testing those running more than 12 miles per week (20 km):

- The cushioned sole of running shoes caused runners to land more on the heel of their foot, putting stress to their feet, knees, and low back equal to 3 times their bodyweight!
- Those who ran barefoot landed on the front of their foot and had 3 times LESS trauma to their joints at foot impact and had HALF the trauma to their joints overall.
 - This explains why the "advances" in running shoe technology have not changed the number of running injuries since the 1970's!

http://www.ncbi.nlm.nih.gov/pubmed?term=is%20your%20prescription%20of%20distance%20running%20evidence%20based

So before you eschew the treadmill for the elliptical machine, try running more on the front of your foot and see if this helps your back, knee, and foot pain.

Hope this helps. Best of luck.

Greg Arnold, DC, CSCS Complete Chiropractic Healthcare 4165 Blackhawk Plaza Circle, Suite 250 Danville, CA 94506 Phone: (925) 321-4668

Fax: (925) 886-4897 www.PitchingDoc.com

©Copyright 2011 Complete Chiropractic Healthcare, Inc. All Rights Reserved. This content may be copied in full, with copyright, contact, creation and information intact, without specific permission, when used only in a not-for-profit format. If any other use is desired, permission in writing from Dr. Arnold is required.