

Luigi Fontana, M.D., Ph.D.

Instructor in Medicine

Research Interests

Trained in both internal medicine and metabolism, Fontana has an interest in nutrition, aging and longevity. His research focuses on the potential role of diet and exercise in retarding the aging process. He is investigating the effects of severe calorie restriction, plant-based diets and endurance exercise on outcomes such as cardiovascular risk factors and function, inflammation, immune function, glucose tolerance, bone metabolism and quality of life. He is also studying the endocrine role of abdominal fat storage as a mediator of insulin resistance and accelerated aging.



Meredith Averill and Luigi Fontana

Publications

Modulating Human Aging and Age-Associated Diseases.

Fontana L.

Biochim Biophys Acta. 2009 Feb 9.

PMID: 19364477

The scientific basis of caloric restriction leading to longer life.

Fontana L.

Curr Opin Gastroenterol. 2009 Mar;25(2):144-50.

PMID: 19262201

Long-term effects of calorie or protein restriction on serum IGF-1 and IGFBP-3 concentration in humans.

Fontana L, Weiss EP, Villareal DT, Klein S, Holloszy JO.

Aging Cell. 2008 Oct;7(5):681-7.

PMID: 18843793

Publications

Long-term effects of caloric restriction or exercise on DNA and RNA oxidation levels in white blood cells and urine in humans.

Hofer T, Fontana L, Anton SD, Weiss EP, Villareal D, Malayappan B, Leeuwenburgh C. Rejuvenation Res. 2008 Aug;11(4):793-9.
PMID: 18729811

Neuroendocrine factors in the regulation of inflammation: excessive adiposity and calorie restriction.

Fontana L.
Exp Gerontol. 2009 Jan-Feb;44(1-2):41-5.
PMID: 18502597

Calorie restriction and cardiometabolic health.

Fontana L.
Eur J Cardiovasc Prev Rehabil. 2008 Feb;15(1):3-9. Review.
PMID: 18277179

Nutrition, adiposity and health

Fontana L.
Epidemiol Prev. 2007 Sep-Oct;31(5):290-4. Review. Italian.
PMID: 18274233

Caloric restriction in humans.

Holloszy JO, Fontana L.
Exp Gerontol. 2007 Aug;42(8):709-12. Epub 2007 Mar 31. Review.
PMID: 17482403

Calorie restriction or exercise: effects on coronary heart disease risk factors. A randomized, controlled trial.

Fontana L, Villareal DT, Weiss EP, Racette SB, Steger-May K, Klein S, Holloszy JO; and the Washington University School of Medicine CALERIE Group.
Am J Physiol Endocrinol Metab. 2007 Jul;293(1):E197-202. Epub 2007 Mar 27.
PMID: 17389710

Aging, adiposity, and calorie restriction.

Fontana L, Klein S.
JAMA. 2007 Mar 7;297(9):986-94. Review.
PMID: 17341713

Publications

Improvements in glucose tolerance and insulin action induced by increasing energy expenditure or decreasing energy intake: a randomized controlled trial.

Weiss EP, Racette SB, Villareal DT, Fontana L, Steger-May K, Schechtman KB, Klein S, Holloszy JO; Washington University School of Medicine CALERIE Group.

Am J Clin Nutr. 2006 Nov;84(5):1033-42.

PMID: 17093155

Effect of long-term calorie restriction with adequate protein and micronutrients on thyroid hormones.

Fontana L, Klein S, Holloszy JO, Premachandra BN.

J Clin Endocrinol Metab. 2006 Aug;91(8):3232-5. Epub 2006 May 23.

PMID: 16720655

Excessive adiposity, calorie restriction, and aging.

Fontana L.

JAMA. 2006 Apr 5;295(13):1577-8..

PMID: 16595760

Long-term calorie restriction is highly effective in reducing the risk for atherosclerosis in humans.

Fontana L, Meyer TE, Klein S, Holloszy JO.

Proc Natl Acad Sci U S A. 2004 Apr 27;101(17):6659-63. Epub 2004 Apr 19.

PMID: 15096581