

Stroke Related Death (n=92627) in Changing Montly Cosmophysical Activity. 216 Months Comparison. Lithuania, 1990-2007.

Eliyahu Stoupel¹, Ramune Kalediene², Jadviga Petrauskiene², Skirmante Starkuviene², Evgeny Abramson³, Peter Israelevich⁴, Jaqueline Sulkes³

¹ *Cardiology Department, Rabin Medical Center, Sackler Faculty of Medicine, Tel Aviv University, Petach Tikva, Tel Aviv, Israel,* ² *Medical Management, University of Medicine, Kaunas, Lithuania,* ³ *Informatics & Epidemiology, Rabin Medical Center, Petach Tikva, Israel,* ⁴ *Geophysics & Planetary Sciences, Tel Aviv University, Tel Aviv, Israel*

Background: Environment physical activity is affecting human homeostasis. The **aim** of this study was to explore the cosmophysical (Solar (SA), Geomagnetic (GMA) and Cosmic Ray (CRA) activity links with concomitant monthly stroke related death distribution.

Methods: 764441 deaths in the Republic of Lithuania were compared with the mentioned physical factors monthly (n=216, 1990-2006); 92627 stroke related deaths (12.1% of total), (34920 men, 57707 woman).

The Space Weather data came from space science centers in the USA, Russia, Finland.

Results: Monthly Stroke related death number was significantly correlated with Year, month of the Year (acrophase second week of February), CRA;

inverse links with SA and absence of significant correlation with monthly level of GMA.

The yearly ratio of deaths from Ishemic Heart Disease (IHD) / Stroke show a significantly negative correlation ($r=-0.74$, $p<00001$), indicating the growing role of the latter in cardiovascular mortality. in both gender..

Conclusion:

1. Monthly stroke related deaths number is growing yearly in comparison to IHD
- 2 Monthly Stroke death number .correlate with cosmophysical activity levels
3. Stroke mortality is annually rhythmic, with February acrophase in this part of the Globe of the Northern Hemisphere..