

## Study reveals clue about causes of longevity in Nicoya Peninsula

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**--The presence of these minerals is one more element that could explain the high Longevity rates in the population.**

Four of the blue areas in the world have a feature in common: they are on the coast. Further, according to several researchers, among the main factors for longevity are listed proper nutrition with minerals thru the consumption of vegetables and hard waters with calcium and magnesium content.

The Nicoya Peninsula fulfills most of those aspects, especially water consumption mineralized and tortilla based on corn and cured with Calcium carbonate.

“These factors cause higher longevity, strength, vitality and happiness in the inhabitants of the blue zone from the Nicoya Peninsula”.

**- What is the importance of water in this process?**

The only food consumed every day throughout life, is water. Depending on where you live and the features of the water you have access to, this is how your health would be. (...) That is, it is not occasional consumption, is the daily consumption of water.

**- That's the water they consume in the blue zone, what about the rest of Costa Rica?**

- Most water in Costa Rica is between moderately hard and soft. The hard and very hard water is found in coastal areas.

**- This study confirms the relationship between longevity and water hardness. What else can you find in this study?**

- First, it is clear from the statistical point of view that natural calcium and magnesium concentrations in water are one more protective factor for the longevity of the inhabitants of the corresponding zone.

“And the other thing, based on this, is that it should be established the maximum admissible water hardness value for human consumption.

**- Related to water hardness, what should such value be?**

- It should be 300 and not 500 milligrams per 34 fl oz as a maximum.

**- What is the optimal water for human consumption?**

- The optimum is between 90 to less than 270 milligrams per 34 fl oz. It should be classified as moderately hard or hard.

### X-ray analysis of the water

Investigation of the National Institute of the Costa Rican Aqueducts and Sewers AYA

The study is titled WATER HARDNESS FOR HUMAN CONSUMPTION AND LONGEVITY RATES BY DISTRICTS IN GUANACASTE INHABITANTS OF 80 YEARS AND OLDER. The average water hardness data (DA) were calculated with at least 3,000 physiochemical analysis, performed in 425 aqueducts in the 2007-2013 period. The rates of longevity by districts were reviewed and the hardness was compared with the average longevity rates.

The classification used for the study was as follows: 0-90 mg per liter (mg/l) soft water, 90-180mg/l moderately hard, from 180-270mg/l hard, and more than 270mg/l very hard.

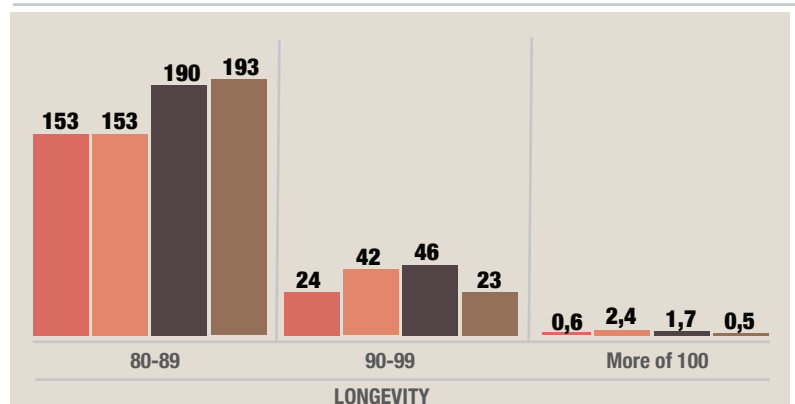
SOURCE NATIONAL LABORATORY OF WATERS, AYA.

#### BLUE ZONE

### The harder the water, the more Longevity

RATE FOR EACH 10.000 HABITANTS

WATER HARDNES: 0-90 90-180 180-270 270 or more



SOURCE: WATER HARDNESS FOR HUMAN CONSUMPTION AND LONGEVITY RATES BY DISTRICTS IN GUANACASTE INHABITANTS OF 80 YEARS AND OLDER 2007-2013