




CENTENARIANS.

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SUPERAGERS AND THEIR SUPERPOWERS



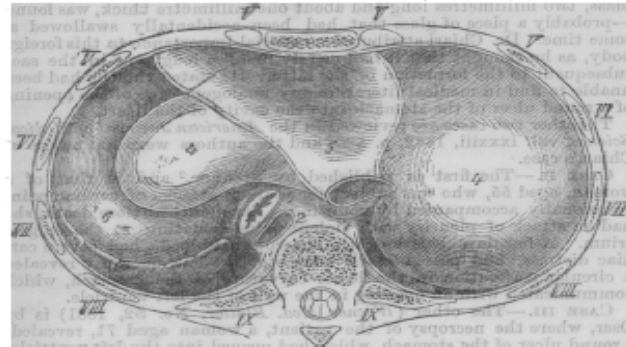
WHY CENTENARIANS ?

- UNIQUE GROUP.
- MODEL OF SUCCESSFUL AGEING.
- EXAMINING THEIR PSYCHOSOCIAL DEMOGRAPHICS MAY HELP IDENTIFY FACTORS WHICH ALLOW ACHIEVING EXCEPTIONAL LONGEVITY.
- ESCAPERS CONCEPT.

PUBMED

- **836,714 PUBLICATIONS.**
- **FIRST EVER: 1886 (ONE STUDY).**
- **BEST YEAR: 2016; 50,315 PUBLICATIONS.**
- **FOCUSED MESH SEARCH: 861 PUBLICATIONS ONLY.**
- **CLINICAL STUDIES: 7 (GENETICS)**
- **INTERVENTIONS: 1 STUDY ONLY TO DATE....**

gram, the identical plate of Braune's taken from his frozen sections;



1. Oesophagus. 2. Aorta. 4. Liver, right and left lobes. 5. Pericardial layer of diaphragm. 6. Stomach. [Section at the level of the fifth rib in front. Braune.]

and it will be seen that the only part of the diaphragm upon which the heart rests (5) which can come into contact with the stomach, is the small triangular portion marked off by dotted lines. This corresponds in its thoracic aspect to the under surface of the left ventricle, and on its abdominal to the anterior wall of the stomach, two inches and a half from the cardiac orifice, and two from the lesser curvature—points which strikingly correspond with the situation of the two pathological conditions which exist in the case I have recorded.

I had an opportunity of verifying this anatomical relation in one recent subject. A pin passed through the chest-wall, in the left fifth intercostal space inside the nipple, and directed downwards, traversed the pericardial aspect of the diaphragm, and impinged on the anterior wall of the stomach in the situation pointed out.

It would, therefore, appear as an anatomical condition to permit a perforation of the pericardium and heart from the stomach, that the left lobe of the liver should be smaller and narrower than it is known to be in the majority—or any way in a very large number—of instances.

CENTENARIANS: MISS HASTINGS, WHO DIED AGED 104.

By G. M. HUMPHRY, M.D., F.R.S.,
Professor of Surgery in the University of Cambridge.

I THINK it worth while to send the particulars of the case of Miss Joanna Hastings, forasmuch as, irrespectively of her being the sister of the founder of our Association, they present many points of interest.

The particulars were furnished by Dr. Pike, of Malvern, her medical attendant, and were supplemented by myself on a visit to her, last September.

Her age is authenticated by the entry, which I saw, in the family Bible; that her father and mother were married at Chipping-Norton, February 21st, 1781, and that Joanna was born March 14th, 1782, and baptised at Sutton-Coldfield.

She had always been in comfortable circumstances, had led an active life, busying herself in works of benevolence and attendance upon the sick, and taking a good deal of out-of-door exercise, in walking and, in her youth, riding.

In September last, that is, when at the age of 103 years and 6 months, she was in good condition, rather fat, and tolerably strong, but not able to walk. She thought she could walk, but had been advised not to try to do so since her confinement to bed by bronchitis during the winter. She had a clear full voice, and, though deaf and obliged to resort to an ear-trumpet, she was remarkably happy, fond of conversation and hearing the news, taking an interest in the things of life, and in everything that passed; she amused herself with crochet, and had the newspaper read to her daily. She never talked, her niece told me, about dying, and on taking leave of her friends, never observed "I shall not see you again," but usually said, "I hope when you visit Malvern again you will come and see me." This happy feature, I may observe, is not uncommon in very old people,

particularly those who retain their health, and are not much troubled by the weaknesses and annoyances attendant upon failing strength.

She was about 5 feet 6 inches in height, and her figure was rather bent. She required glasses only during the last six years, but her sight was failing, cataract having developed in one eye and commencing in the other. Six teeth remained, all in the lower jaw; namely, two incisors, two canines, and two bicusps. She had never used artificial teeth. Pulse 84 (it was under 70 when I counted it at 6.30 p.m.), regular, large and compressible. The radial artery was visible, but no unevenness or knottiness was discoverable in its coats. Respiration 24, and regular. Little arcus senilis. Micturition was natural. There was no apparent failure in any organ, and the sounds of the heart were natural. The chest-girth was 37 inches during inspiration, and 36½ in expiration; that is, and this is usual in old people, there was little movement of the thoracic wall in respiration. Elasticity of the costal cartilages could not be distinctly made out. I should say, that she was habitually, during the last eighteen months at least, a sufferer more or less from bronchitis; but, on the day on which I saw her, she appeared to be free from it; and she had none of the aching pains which sometimes trouble old people. Her feet often swelled a little, especially in warm weather, if they were hung down. She usually slept well for about eight hours, went to bed at 9.30, and awoke about 7. She enjoyed good appetite and good digestion, but was a moderate eater, taking three ounces of meat daily, with a cup of beef-tea and a table-spoonful and a half of brandy, and a cup of tea morning and evening, with the addition sometimes of corn-flour. The bowels acted usually on alternate days, with the assistance of a little aperient about twice in a week. Her intellectual powers are said to have been high, her memory good for recent as well as for long past events, and her disposition energetic, though of late years placid, "nothing appearing to ruffle her."

She had lived at Martley Rectory, in Worcestershire, at Worcester, and lately at Malvern. She was the first child of a family of fifteen. In earlier life, she was a spare person, but robust, with good health, good digestion, regular daily action of bowels, a good sleeper, rising at about seven, with good appetite, but a small eater, taking a glass of beer or cider for dinner, but no wine or spirit; meat at one meal, and tea, latterly coffee, for breakfast. She had acute and severe bronchitis at the end of 1877, again for two months in March, 1881; erysipelas of the head and pneumonia in September, 1881. She became subject to cough about sixty years ago, and had it for many winters. She dislocated her shoulder forty years ago, and injured her hip by a fall thirteen years ago, since which she had been lame. She told me that she had understood she was a remarkably small baby.

Her father died at the age of 100 years and 6 months; her mother at 84, of cancer or ulceration of the stomach; her brothers (1) aged 13, of water on the brain; (2) aged 39, in India (of fever?); (3) aged 87; (4) aged 64, of paralysis; (5) Sir Charles Hastings, the founder of the British Medical Association, aged 72, of cancer of the stomach; (6) aged 74; (7) aged 78, of heart-disease; her sisters (2 and 3) of brain-fever; (4 and 5) of consumption after measles; (6) of lung-disease after measles. It is probable, therefore, that these all died early, with suspicion of tubercular disease, which also arises in the case of the eldest brother; whereas she herself, the first-born of the family, out-lived all the others, and reached the age of 104.

Her father was aged 26 at her birth, and her mother 22. There was no blood-relationship between them. The members of the family are said to have been gifted above the average; but her father for many years suffered under mental depression, supposed to have been induced by many and various troubles.

In October, 1885, a month after my visit to her, I heard from her niece that the cataract in the "well eye" was advancing, and that, in connection apparently with her failing sight, another symptom appeared. "She sees 'sights,' as she calls them—wide plains, fields, trees, houses, children. The sights are almost always pleasant; only twice have they been at all disagreeable. Once, some weeks ago, she saw women at the window making faces at her; and last night she saw horrid-looking men. She talks about them, and wishes much to know the cause." I may mention, in relation to this symptom, that, not long ago, I was attending a gentleman, aged 78, who, in connection with severe photophobia, induced by overstraining his eyes, was terribly afflicted with these "sights," often of the most ugly and disagreeable nature. I am glad to say that he quite recovered, though the convalescence was slow.

Dr. Pike writes to me, that Miss Hastings died on March 12th, "from exhaustion, the cold weather, I think, considerably hastening her death. About six weeks previously, she got an attack, serious, of pneumonia of the bases of both lungs. This passed through its ordinary course, and she threw off the disease wonderfully, the lung clearing

PUBMED

- **CLINICAL STUDIES: 7 (GENETICS)**
- **INTERVENTIONS: 1 STUDY ONLY TO DATE....**
- MALAGUARNERA ET AL. AM J CLIN NUTR. 2007 DEC;86(6):1738-44.
- L-CARNITINE TREATMENT REDUCES SEVERITY OF PHYSICAL AND MENTAL FATIGUE AND INCREASES COGNITIVE FUNCTIONS IN CENTENARIANS: A RANDOMIZED AND CONTROLLED CLINICAL TRIAL.
- OBJECTIVE: THIS STUDY EVALUATED THE EFFICACY OF L-CARNITINE ON PHYSICAL AND MENTAL FATIGUE AND ON COGNITIVE FUNCTIONS OF CENTENARIANS.
- SIXTY-SIX CENTENARIANS WITH ONSET OF FATIGUE AFTER EVEN SLIGHT PHYSICAL ACTIVITY WERE RECRUITED TO THE STUDY.
- CONCLUSIONS: ORAL ADMINISTRATION OF LEVOCARNITINE PRODUCES A REDUCTION OF TOTAL FAT MASS, INCREASES TOTAL MUSCULAR MASS, AND FACILITATES AN INCREASED CAPACITY FOR PHYSICAL AND COGNITIVE ACTIVITY BY REDUCING FATIGUE AND IMPROVING COGNITIVE FUNCTIONS.

COMPARISON OF PSYCHOSOCIAL VARIABLES ASSOCIATED WITH LONELINESS IN CENTENARIAN VS ELDERLY POPULATIONS IN NEW ZEALAND

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THE GREAT ESCAPE.

1963 DRAMA. “WITH ITS IMPECCABLY SLOW-BUILDING STORY AND A CAST FOR THE AGES, THE GREAT ESCAPE IS AN ALL-TIME ACTION CLASSIC. ROTTEN TOMATOES 93%.

CENTENARIAN ESCAPERS’ EXCEPTIONAL HEALTH: IT’S THE JOURNEY THAT COUNTS.

“HEALTHY LONGEVITY: A FOCUSED LITERATURE REVIEW OF CENTENARIAN STUDIES.”

- DR EMILY BRUCHEZ, PROF PAUL GLUE MD AND A/PROF YORAM BARAK MD, MHA.

UNDERSTANDING FACTORS BEHIND LONGEVITY IN NZ: IS THE CENTENARIAN RATIO A GOOD ENOUGH INDICATOR FOR ASSESSING THE LONGEVITY PHENOMENON?

Table 1. Indicators of the old-age structure.

Indicators	Definition	Rationale	References
Centenarian ratio	Number of centenarians per 100,000 people	To reflect the extreme regional longevity rate	Song et al., 2016, [5]
Longevity index	The proportion of 90 ⁺ /65 ⁺ population	To reflect the extreme longevity among the elderly population	lv et al., 2011, Song et al., 2016, Magnolfi et al., 2007, [2,5,9]
Longevity level	The proportion of 80 ⁺ /60 ⁺ population	To reflect the secondary longevity rate of the elderly population	Li et al., 2013, [26]
Aging tendency (60 ⁺ ratio)	60 ⁺ elderly population/total population	To reflect the total local elderly population proportion and aging tendency	Wang et al., 2015, [11]
80 ⁺ ratio	80 ⁺ elderly population/total population	To reflect the proportion of the second oldest group in the total population	Wang et al., 2016, [6]
90 ⁺ ratio	90 ⁺ elderly population/total population	To reflect the proportion of extreme elderly in the total population	lv et al., 2011, [2]
95 ⁺ ratio	95 ⁺ elderly population/total population	To reflect the proportion of extreme elderly in the total population	

AGEING BADLY: INDICATORS OF THE OLD AGE STRUCTURE IN AUSTRALIA AND NEW ZEALAND.

A/PROF YORAM BARAK AND PROF PAUL GLUE.

- HEALTH INEQUALITY (MINORITIES) ?
- ONCOLOGY ?
- CVD MORTALITY ?
- DIVERSITY ?
- ACCESS TO CARE ?
- OTHERS ?

THANK YOU

**JUST REMEMBER,
ONCE YOU'RE OVER
THE HILL, YOU BEGIN
TO PICK UP SPEED.**

ARTHUR SCHOPENHAUER 1788-1860

