


The efficacy of an antioxidant-fortified fruit juice in reducing the ageing process of the human body

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1.0 Abstract

An antioxidant-fortified fruit juice is made in the consumer's home, by adding a proprietary formulated blend of food antioxidants, to the consumer's choice of fruit juice. The formulated blend contains fat-soluble and water-soluble antioxidants. The resulting antioxidant-fortified fruit juice, is claimed to have anti-ageing properties when consumed by people on a daily basis, at a serving size of 100ml.

It is suggested that the anti-ageing effect is most pronounced when the starting age of consumption is 40 years of age or less. It is claimed that the appearance of ageing – in particular skin wrinkles – is significantly reduced when this product is part of the person's diet for a period of 30 years. Further it is suggested that the reduction in the rate of ageing, equates to about half the normal apparent ageing rate. In other words, the reduction in the rate of ageing can be expressed as 5 years reduction in apparent ageing for every 10 years of consumption.

In order to investigate these claims, a survey was conducted using 2 people who have consumed the daily serve of 100ml of antioxidant-fortified fruit juice for 30 years, as test subjects. The test subjects were aged 35 to 40 years at the beginning of the trial and 65 to 70 years at the completion of the trial.

From the results of the survey, it was concluded that the claim the antioxidant-fortified fruit juice effectively reduces the apparent ageing process of the human body, was substantiated.

The quantified reduction in the appearance of ageing, can be expressed in approximate terms, as the test subjects aged by 5 years for every 10 years they consumed the antioxidant-fortified fruit juice.

2.0 Introduction

2.1 BACKGROUND

This manuscript relates to a proprietary formulated blend of food antioxidants. The antioxidant formula is added to fruit juice of the consumer's choice, to make Antioxidant-Fortified Fruit Juice hereafter referred to as 'AFFJ'. The formula of the AFFJ was developed by Frank Dungan, the author of this report.

Around the year 1985, the author developed the AFFJ formula to include as part of his family's daily diet. The formula added water-soluble and fat-soluble antioxidants to fruit juice, along with synergistic minerals to strongly boost the natural antioxidants and flavonoids present in the fruit juice. Now, in 2015 some 30 years later, there has been strong and ongoing anecdotal suggestion, that the family parents have aged in appearance more slowly than the general population has aged over the same period. The two people (the family parents) received comments of 'you look younger than your age', from as early as 5 years after starting to consume the AFFJ. The current comments are that they appear 15 years younger than their actual age (actual age approximately 70 years at the time of this survey).

The hypothesis was proposed, therefore, that the AFFJ formula is effective at reducing the rate of ageing of human beings and that the rate of ageing is reduced by half.

It is claimed that the effect is particularly noticeable in people who consume the product at a rate of 100ml per day, starting from an age of about 40 years or less.

This study conducted a survey with the aim of confirming this hypothesis. In the survey, members of the general public were invited to visually assess the age of the two people. The age assessment was made by viewing photographs of the two people alongside photographs of two control subjects of similar ages.

Antioxidants are known to contribute to reducing the negative effects of the ageing process, but the results with the AFFJ are claimed to be greater than expected. The anti-ageing benefits are quantified by the 30 year experience of these two people.

3.0 Method

3.1 PUBLIC SURVEY

A decision was made to survey members of the general public to determine their visual assessment of apparent ageing. The survey respondents were invited to examine photographs of the two test subjects (the parents who had been consuming the AFFJ for 30 years) and two control subjects (two similarly aged adults who had not consumed the AFFJ). The age of each of the 4 subjects was estimated to the nearest one year by the survey respondents.

3.2 SURVEY PHOTOGRAPHS

Detailed photographs of the subjects were taken by a professional photographer. The photographs were cropped to head and shoulders and modification of the images was strictly forbidden.

Clothing was not permitted to be visible in the photographs - this was to avoid the survey respondents being influenced by clothing when making their estimates. The lighting used in the photography was made deliberately revealing, in order to emphasise any skin-wrinkling of the subjects. Make-up of the subjects was limited to lip make-up and hair dyeing of the females and nothing for the males. For the survey, the photographs were displayed on an 80cm video screen giving larger-than-life images for the survey respondents to examine.

3.3 SURVEY BOOTH

A booth was constructed at a cost of \$1400 for materials, labour and advertising banners. The booth was transported and assembled on site at the 'Caribbean Market' in suburban Scoresby (Melbourne, Australia). The booth was manned by 2 staff at a cost of \$400 per day for labour, equipment and site fees and was operated for 3 days of 6 hours each day. The dates of the surveys were 26 August 9 September and 23 September 2015. Photographs of the booth were taken on each survey day.

3.4 SURVEY RESPONDENTS

The people traffic past the booth was approximately 1000 people per day and the number of respondents participating was 15 per day which represented about 1.5%. The reluctance of people to volunteer for any surveys was evident. A total of 47 respondents participated in the survey.

4.0 Results & Discussion

4.1 ACKNOWLEDGED LIMITS

The test and control subjects were just two of each. Ideally it would have been more scientifically significant, if larger groups of subjects had been available.

However the trial began 30 years ago and at that time, there was no way of knowing that the product had the significant age-reducing effects that are shown by this survey.

To wait another 30 years for more test subjects would be an unreasonable delay to reporting the efficacy of the antioxidant formula, to the service of the well-being of the community.

4.2 SURVEY RESULTS

The survey procedure of using photographs of the 4 subjects gave useful data.

One observation made was that the male control subject had consistently *higher* age estimates compared to his actual age. The female control subject had estimates that were *lower* than her actual age. This may have been due to the hair-colouring used by the females.

4.3 FEMALES

The results were interpreted by comparing the test subject directly with the corresponding control subject. A statistical comparison of the results of the test and control subjects was made using a paired t-test. The p-value was calculated to be less-than 0.001 which means there was a highly significant mean difference between the test and control subjects.

The control subject mean age difference was -5.0 years (5.0 years less than her actual) and the test subject mean age difference was -11.3years. Comparison of the means is interpreted therefore as the test subject appearing -6.3 years against the control (6.3 years younger than the control).

Extending that comparison of the means of the test and control subjects further, it is useful to consider the spread of age estimates. It was decided to select the top 75% quartile as a significant representative majority of the estimating population.

As the population of estimators was 47, then 75% equals 35 estimators. The control-corrected spread for the test subject was found to range from minus 1 to minus 26 to give an average of minus 14 years (or 14 years younger than the control) in appearance.

This result (14 years reduction of ageing for 30 years of consumption) aligns well with the claim that the rate of age reduction is 5 years for every 10 years of consumption.

4.4 MALES

The male control subject had a mean apparent age of 3.5 years older than his actual age. The test subject had a mean apparent age of 3.9 years less than his actual age. A statistical comparison of the results of the test and control subjects was made using a paired t-test. The p-value was calculated to be less-than 0.001 which means there was a highly significant mean difference between the test and control subjects.

The control subject mean age difference was +3.5 years (3.5 years older than his actual) and the test subject was -3.9 years. Comparison of the means, is interpreted therefore, as the test subject appearing -7.4 years against the control (7.4 years younger than the control).

As with the females, extending that comparison of the means of the test and control subjects further, it is useful to consider the spread of age estimates. It was decided to select the top 75% quartile as a significant representative majority of the estimating population. As the population of estimators was 47, then 75% equals 35 estimators.

The control-corrected spread for the test subject was found to be minus 8 to minus 27 to give an average of minus 18 years (or 18 years younger than the control) in appearance.

This result (18 years reduction of ageing for 30 years of consumption) is better than the hypothesis claim that the rate of age reduction is 5 years for every 10 years of consumption.

4.5 CONFOUNDING OBSERVATIONS

In the general population, the apparent rate of ageing varies significantly from one person to the next. The point could validly be made, therefore, that the two test subjects were genetically predisposed to having naturally slower rates of ageing which in turn caused the positive results of the survey.

Negating this is the fact that the two people are not genetically related and yet both have aged much more slowly than their peers according to the survey. Additionally, the two people currently have virtually zero skin wrinkles on the face and that is an extremely rare occurrence in people aged over 70 years and it supports the view that the survey results are valid.

5.0 Conclusion

The results of the survey show the Antioxidant-Fortified Fruit Juice (AFFJ), reduced the appearance of ageing of 2 people who consumed the AFFJ on a daily basis for 30 years.

The results show the rate of reduced apparent ageing, is 5 years reduction of age for every 10 years of consumption of the Antioxidant-Fortified Fruit Juice (AFFJ).

The results confirm the hypothesis that the Antioxidant-Fortified Fruit Juice (AFFJ) is an effective anti-ageing product when consumed in accordance with the suggestions given.

