



## Artery Research

ISSN (Online): 1876-4401

ISSN (Print): 1872-9312

Journal Home Page: <https://www.atlantis-press.com/journals/artres>

---

### **P100: THE ASSOCIATION BETWEEN DAIRY PRODUCTS CONSUMPTION AND ARTERIAL STIFFNESS: A META-ANALYSIS**

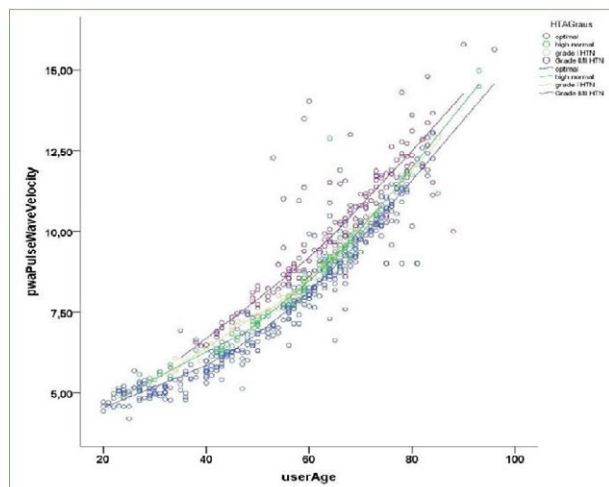
Celia Álvarez-Bueno, Iván Cavero-Redondo, Alba Soriano-Cano, Diana P. Pozuelo-Carrascosa, Blanca Notario-Pacheco, Estela Jimenez-Lopez

**To cite this article:** Celia Álvarez-Bueno, Iván Cavero-Redondo, Alba Soriano-Cano, Diana P. Pozuelo-Carrascosa, Blanca Notario-Pacheco, Estela Jimenez-Lopez (2018) P100: THE ASSOCIATION BETWEEN DAIRY PRODUCTS CONSUMPTION AND ARTERIAL STIFFNESS: A META-ANALYSIS, Artery Research 24:C, 108–108, DOI: <https://doi.org/10.1016/j.artres.2018.10.153>

**To link to this article:** <https://doi.org/10.1016/j.artres.2018.10.153>

Published online: 7 December 2019

**Results:** Participants recruited for the project account for 658, 65.7% women, with a mean age of  $57.34 \pm 16.26$  years (range: 20–96 years). Brachial BP was  $126.60 \pm 16.43$  mmHg and  $79.89 \pm 11.54$  mmHg, and central BP was  $115.80 \pm 15.35$  mmHg and  $81.18 \pm 11.60$  mmHg, respectively for systolic and diastolic BP. Mean pulse wave velocity (PWV) was  $8.45 \pm 2.28$  m/s. The proportion of participants with increased PWV was 19.9%. Participants with increased PWV were significantly older and had higher brachial and central BP and BMI. Multivariate linear regression indicated age, Gender, BP and abdominal fat as independent determinants of PWV. AS trajectories were significantly different as a function of arterial hypertension and cardiovascular risk classification (figure 1). **Conclusions:** The preliminary results of this pioneering large scale study measuring arterial function in communal pharmacies provides the grounds for the operationalization of subclinical target organ damage screening in pharmacies, as a strategy to improve cardiovascular risk monitoring and to promote adherence to treatment.



#### P100 THE ASSOCIATION BETWEEN DAIRY PRODUCTS CONSUMPTION AND ARTERIAL STIFFNESS: A META-ANALYSIS

Celia Álvarez-Bueno<sup>1</sup>, Iván Cavero-Redondo<sup>2</sup>, Alba Soriano-Cano<sup>2</sup>, Diana P. Pozuelo-Carrascosa<sup>2</sup>, Blanca Notario-Pacheco<sup>2</sup>, Estela Jimenez-Lopez<sup>2</sup>  
<sup>1</sup>Universidad de Castilla-La Mancha, Centro de Estudios Socio-Sanitarios, Cuenca, España  
<sup>2</sup>Universidad de Castilla-La Mancha, Health and Social Research Center, Cuenca, España

**Background:** Dairy products consumption has been related to some metabolic risk parameters. Specifically, some studies have associated higher intake of dairy products with lower pulse wave velocity (PWV) values, although discrepancies persist in this relationship.

**Objective:** To determine the association between dairy products consumption and PWV.

**Methods:** A search strategy was conducted in Medline, SCOPUS and WOS, from their inception to June 2018, for observational studies addressing the association between dairy products and PWV. Effect sizes (ES) were estimated by using random-effects meta-analysis models based on Der Simonian and Laird method. Subgroup analyses were conducted based on dairy products type (i.e., milk, cheese, and yogurt).

**Results:** Six studies were included in this systematic review and meta-analysis. The ES for the association between total dairy products and PWV was  $-0.01$  (95% CI:  $-0.08$ ;  $0.05$ ) (Figure 1). Subgroup analysis could be only performed based on milk consumption ES:  $0.00$  (95% CI:  $-0.07$ ,  $0.08$ ; I<sup>2</sup>:  $0.0$ ;  $p = 0.865$ ). Systematic review showed similar results for cheese, and yoghurt. Conversely, low fat dairy products were associated with lower PWV values.

**Conclusion:** There was no association between total dairy products, milk, cheese and yoghurt consumption and PWV. Low fat dairy products consumption has been related to lower levels of PWV. These findings add

further evidence supporting that dairy products consumption does not pose any additional cardiovascular risk factor. Further research is needed to elucidate the role of each dairy product type on cardiovascular disease risk factors.

#### P101 REFERENCE VALUES OF DIFFERENT PARAMETERS OF VASCULAR FUNCTION IN CAUCASIAN POPULATION WITHOUT CARDIOVASCULAR DISEASES. EVA STUDY

Marta Gomez-Sanchez<sup>1</sup>, Leticia Gomez-Sanchez<sup>1</sup>, Gristina Lugones-Sanchez<sup>1</sup>, Jesus Gonzalez-Sanchez<sup>1</sup>, Rosario Alonso-Dominguez<sup>2</sup>, Jose I. Recio-Rodriguez<sup>1</sup>, Olaya Tamayo-Morales<sup>1</sup>, Manuel A. Gomez-Marcos<sup>2</sup>  
<sup>1</sup>Institute of Biomedical Research of Salamanca (IBSAL), Primary Health Care Research Unit, La Alamedilla Health Center, Salamanca, Spain  
<sup>2</sup>Institute of Biomedical Research of Salamanca (IBSAL), Primary Health Care Research Unit, La Alamedilla Health Center, Health Service of Castilla y León (SACyL), Salamanca, Spain

**Objective:** To describe the mean values of different parameters of vascular function, evolution with age and differences by gender in the general population without cardiovascular diseases.

**Design and method:** An observational, descriptive, cross-sectional study. Study population: From the population assigned to the participating health-care centres, a cluster random sampling stratified by age and gender was performed to obtain 501 participants aged between 35 and 75, 100 per decade, (50% women) without cardio or cerebrovascular disease. Measurements: pulse wave velocity femoral carotid (cfPWV) was determined using the SphygmoCor System, Cardio Ankle Vascular Index (CAVI) and the pulse wave velocity ankle arm (aaPWV) using the VaSera.

**Results:** Mean values: age  $55.9 \pm 14.2$  years (Males =  $65.9 \pm 14.3y$ , Females =  $55.8 \pm 14.2y$ ,  $p = 0.935$ ); CAVI:  $8.0 \pm 1.4$  (Males =  $8.1 \pm 1.5$ , Females =  $7.9 \pm 1.4$ ,  $p = 0.043$ ); aaPWV =  $12.9 \pm 2.7$  m/seg (males =  $13.2 \pm 2.5$  m/seg and women =  $12.7 \pm 2.9$  m/seg,  $p = 0.064$ ) and cfPWV:  $6.5 \pm 2.0$  m/sec (Males =  $6.8 \pm 2.2$  m/sec, Females =  $6.2 \pm 1.8$  m/sec,  $p < 0.001$ ). For each year that the age increases, an increase of the CAVI of  $0.073$  ( $y = 3.919 + (0.073 \cdot \text{age})$ ), in males  $0.075$  ( $y = 3.943 + (0.075 \cdot \text{age})$ ) and in women  $0.071$  ( $y = 3.900 + (0.071 \cdot \text{age})$ ). An increase in aaPWV of  $0.137$  m/sec ( $y = 5.276$  m/sec +  $(0.137$  m/sec \* age) , in males  $0.118$  ( $y = 6.554$  m/sec +  $(0.118$  mm\*age)) and in women  $0.156$  ( $y = 3.978$  m/sec +  $(0.156$  m/sec\*age)) and an increase in cfPWV of  $0.092$  m/sec ( $y = 1.417$  m/sec +  $(0.092$  m/sec\*age)), in males  $0.104$  ( $y = 1.075$  m/sec +  $(0.104$  m/sec\*age)) and in women  $0.080$  ( $y = 1.748$  m/sec +  $(0.080$  m/sec\*age)).

**Conclusions:** The mean values of CAVI and cfPWV as well as the annual increase are greater in males than in females. However, there are no differences in the mean values of the aaPWV and the annual increase is greater in females.

#### References

- Namekata T, Suzuki K, Ishizuka N, Shirai K. Establishing baseline criteria of cardio-ankle vascular index as a new indicator of arteriosclerosis: a cross-sectional study. *BMC Cardiovasc Disord.* 2011;11:51.
- Boutouyrie P, Vermeersch aSJ. Determinants of pulse wave velocity in healthy people and in the presence of cardiovascular risk factors: 'establishing normal and reference values'. *Eur Heart J.* 2010 Oct;31(19):2338-50.
- Wohlfahrt P, Cifkova R, Movsisyan N, Kunzova S, Lesovsky J, Homolka M, et al. Reference values of cardio-ankle vascular index in a random sample of a white population. *J Hypertens.* 2017 Jun 07;34(234-48)
- Vlachopoulos C, Aznaouridis K, O'Rourke MF, Safar ME, Baou K, Stefanadis C. Prediction of cardiovascular events and all-cause mortality with central haemodynamics: a systematic review and meta-analysis. *Eur Heart J.* 2010; 31 (15):1865-71.

#### P102 WITHDRAWN BY AUTHOR

#### P103 REFERENCE VALUES IN A REPRESENTATIVE SAMPLE FOR A CERTAIN COUNTRY

Pedro Forcada<sup>1</sup>, Carlos Castellaro<sup>2</sup>, Sergio Gonzalez<sup>3</sup>, Carol Kotliar<sup>4</sup>, Sebastian Obregon<sup>4</sup>, Jorge Chiabaut Svane<sup>4</sup>  
<sup>1</sup>Cemic, Argentina