COFFEE AND CARDIOVASCULAR RISK

Sebastiano Marra

Fesc

president

Amici del Cuore

PIEMONTE ONLUS

Associazione di volontariato per la prevenzione delle malattie cardiovascolari

WHAT "WAS" COFFEE ?

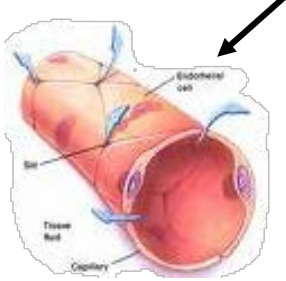
© Alamy


ON SECOND THOUGHT... MAKE MINE HOT CHOCOLATE.
COFFEE
UNITED FEATURE SYN — ©1986 SAN DIEGO/NEWS JOURNAL HERALD

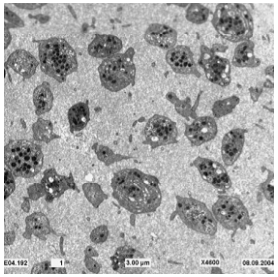
COFFEE AS A REMEDY?

Blood Pressure Reduction

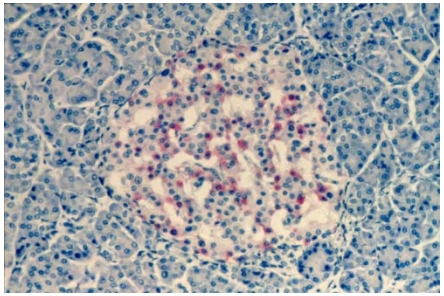
Other:
Anti-Inflammatory



Improved endothelial function



Reduced platelet reactivity



Improved insulin sensitivity

COFFEE AS A REMEDY?

Blood Pressure Reduction

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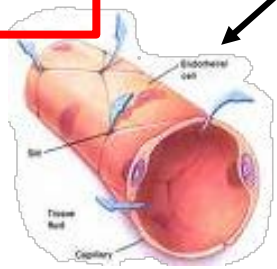
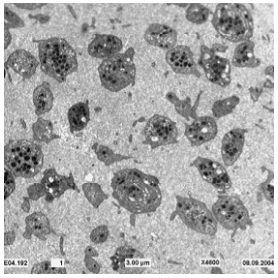
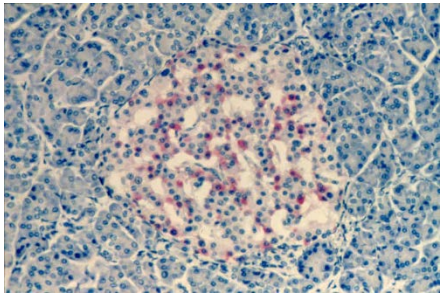
Anti-Inflammatory



Improved endothelial function



Reduced platelet reactivity



Improved insulin sensitivity

Contents lists available at ScienceDirect

International Journal of Cardiology

journal homepage: www.elsevier.com/locate/ijcard

Coffee consumption and risk of cardiovascular events in hypertensive patients. Results from the HARVEST

Paolo Palatini [a,*,1], Claudio Fania [a,1], Lucio Mos [b], Guido Garavelli [c], Adriano Mazzer [d], Susanna Cozzio [e,1], Francesca Saladini [a], Edoardo Casiglia [a]

[a] Department of Medicine, University of Padova, Padova, Italy
[b] Town Hospital, San Daniele del Friuli, Italy
[c] Town Hospital, Cremona, Italy
[d] Town Hospital, Vittorio Veneto, Italy
[e] Town Hospital, Trento, Italy

Table 1
Clinical characteristics of the study subjects.

Variable	Coffee intake, cups per day				p-Value
	Total	0	1–3	>3	
	N = 1204	N = 316	N = 768	N = 120	
		26.2%	63.8%	10.0%	
Age (years)	33.1 ± 8.5	30.5 ± 9.0	33.6 ± 8.3	36.8 ± 6.8	0.000
Body mass index (kg/m^2)	25.4 ± 3.4	24.6 ± 3.3	25.7 ± 3.4	26.1 ± 3.5	0.000[a]
Sex (m/f, %)				71.7/28.3	0.89

5. Conclusions

a median follow-up of 12.6 years,

The present results indicate that caffeinated espresso coffee is a dietary risk factor for adverse cardiovascular outcomes in hypertension. Our findings are in contrast with several previous epidemiologic studies in general populations that have considered coffee a safe or even beneficial dietary nutrient. Originally espresso coffee was an Italian beverage, but nowadays it is widely consumed also in USA, Japan, and other countries [54]. Thus we disagree with the conclusion made by Ding et al. in their recent meta-analytic study that long-term heavy consumption of coffee is not associated with cardiovascular risk also in hypertensive patients [2]. Our findings suggest that it is prudent to discourage hypertensive people from drinking coffee.

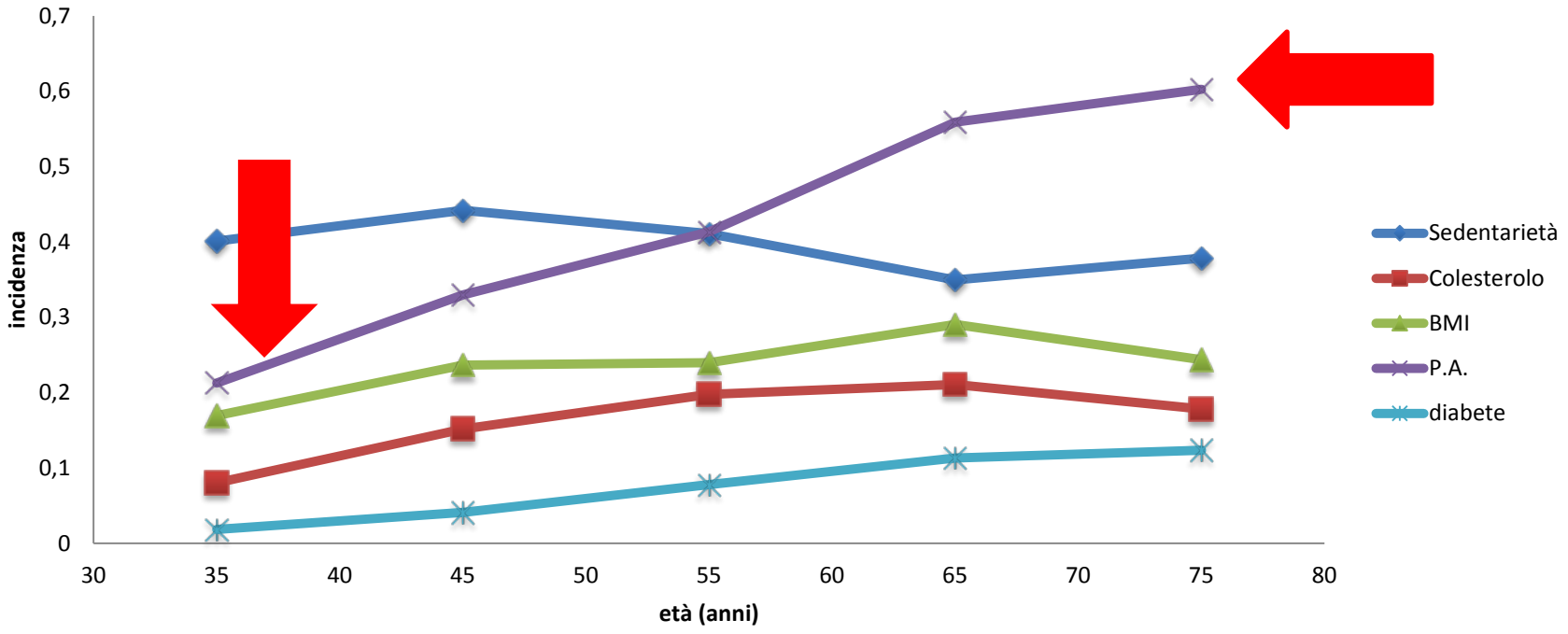
About …Coffee Properties

- **Are we looking for the right answers from the right persons ?**

- ARTERIAL HYPERTENSION :
- Young people with a very severe disease.
- Aging 30-36.
- Have they a heavy genetic predisposition?
- What is the mean age of the hypertensive population ?

HYPERTENSION and AGING in Piemonte

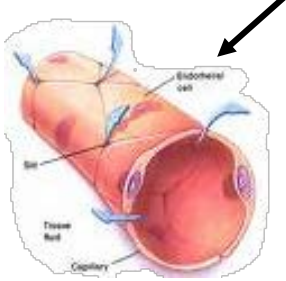
RISK FACTORS and AGE in MEN



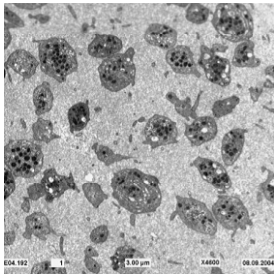
COFFEE AS A REMEDY?

Blood Pressure Reduction

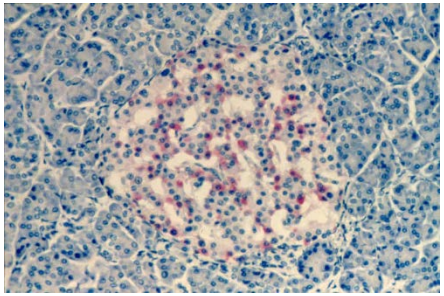
Other:
Anti-Inflammatory



Improved endothelial function

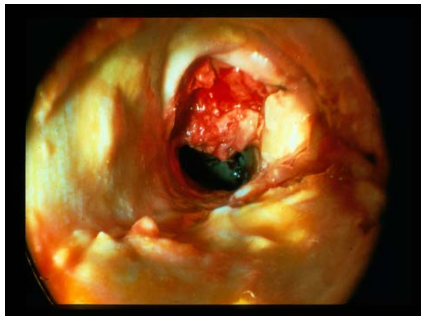


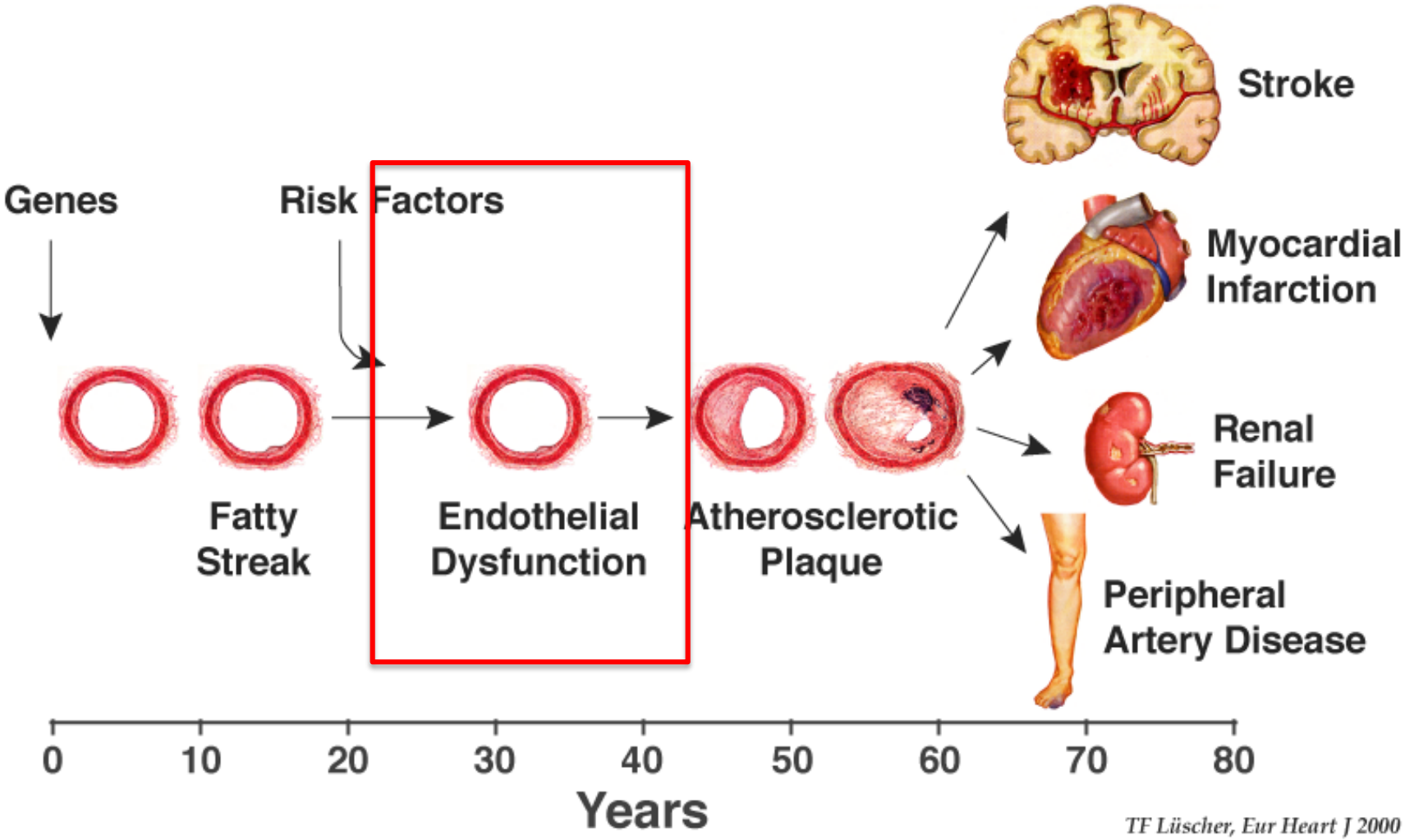
Reduced platelet reactivity



Improved insulin sensitivity

The Pathogenesis of Atherosclerosis – *Vascular function*





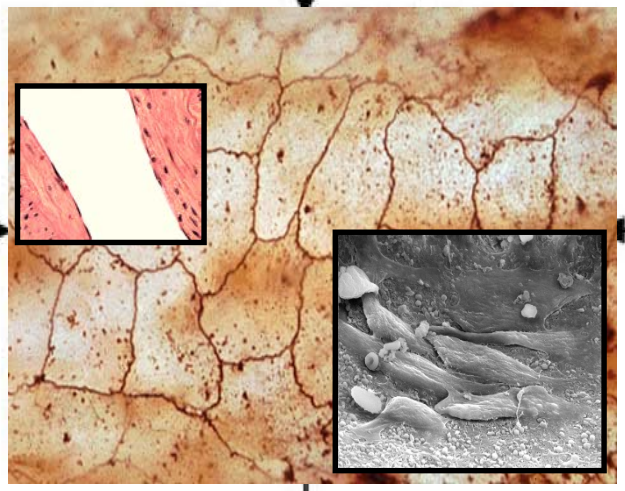
TF Lüscher, Eur Heart J 2000

ENDOTHELIAL DYSFUNCTION

Traditional Risk Factors

Non-traditional Risk Factors

Local Factors



Genetic Predisposition

Unknown Factors

E.D. is the Risk of the Risks Factors

Vascular Lesion and Remodeling

Inflammation

Vasoconstriction

Thrombosis

Plaque Rupture/Erosion

Modified form Pierro Bonetti and Amir Lerman et al, ATVB 2003

Impact of Acute Caffeine Ingestion on Endothelial Function in Subjects With and Without Coronary Artery Disease

Michael Shechter, MD, MA[a,f,*], Guy Shalmon, RD[a,f], Mickey Scheinowitz, PhD[b,f], Nira Koren-Morag, PhD[f], Micha S. Feinberg, MD[a,f], Dror Harats, MD[c,f], Ben Ami Sela, PhD[d,f], Yehonatan Sharabi, MD[e,f], and Pierre Chouraqui, MD[a,f]

Although coffee is a widely used, pharmacologically active beverage, its impact on the cardiovascular system is controversial. To explore the effect of acute caffeine ingestion on brachial artery flow-mediated dilation (FMD) in subjects without coronary artery disease (CAD; controls) and patients with CAD, we prospectively assessed brachial artery FMD in 40 controls and 40 age- and gender-matched patients with documented stable CAD on 2 separate mornings 1 week to 2 weeks apart. After overnight fasting, discontinuation of all medications for ≥12 hours, and absence of caffeine for >48 hours, participants received capsules with caffeine 200 mg or placebo. One hour after drug ingestion, participants underwent brachial artery FMD and nitroglycerin-mediated dilation (NTG) using high-resolution ultrasound. As expected, patients with CAD were more oftein diabetic, hypertensive, obese, dyslipidemic, and smoked more than controls ($p < 0.01$ for all comparisons). Aspirin, Clopidogrel, angiotensin-converting enzyme inhibitors, β blockers, and statins were significantly more common in patients with CAD than in controls ($p < 0.01$ for all comparisons). At baseline, FMD, but not NTG, was significantly lower in patients with CAD compared to controls. Acute caffeine ingestion significantly increased FMD (patients with CAD 5.6 ± 5.0% vs 14.6 ± 5.0%, controls 8.4 ± 2.9% vs 18.6 ± 6.8%, $p < 0.001$ for all comparisons) but not NTG (patients with CAD 13.0 ± 5.2% vs 13.8 ± 6.1%, controls 12.9 ± 3.9% vs 13.9 ± 5.8%, p = NS for all comparisons) and significantly decreased high-sensitivity C-reactive protein (patients with CAD 2.6 ± 1.4 vs 1.4 ± 1.2 mg/L, controls

In conclusion, acute caffeine ingestion significantly improved endothelial function assessed by brachial artery FMD in subjects with and without CAD and was associated with lower plasma markers of inflammation.

(Am J Cardiol 2011;107:1255–1261)

Acute Caffeine ingestion and Endothelial Function

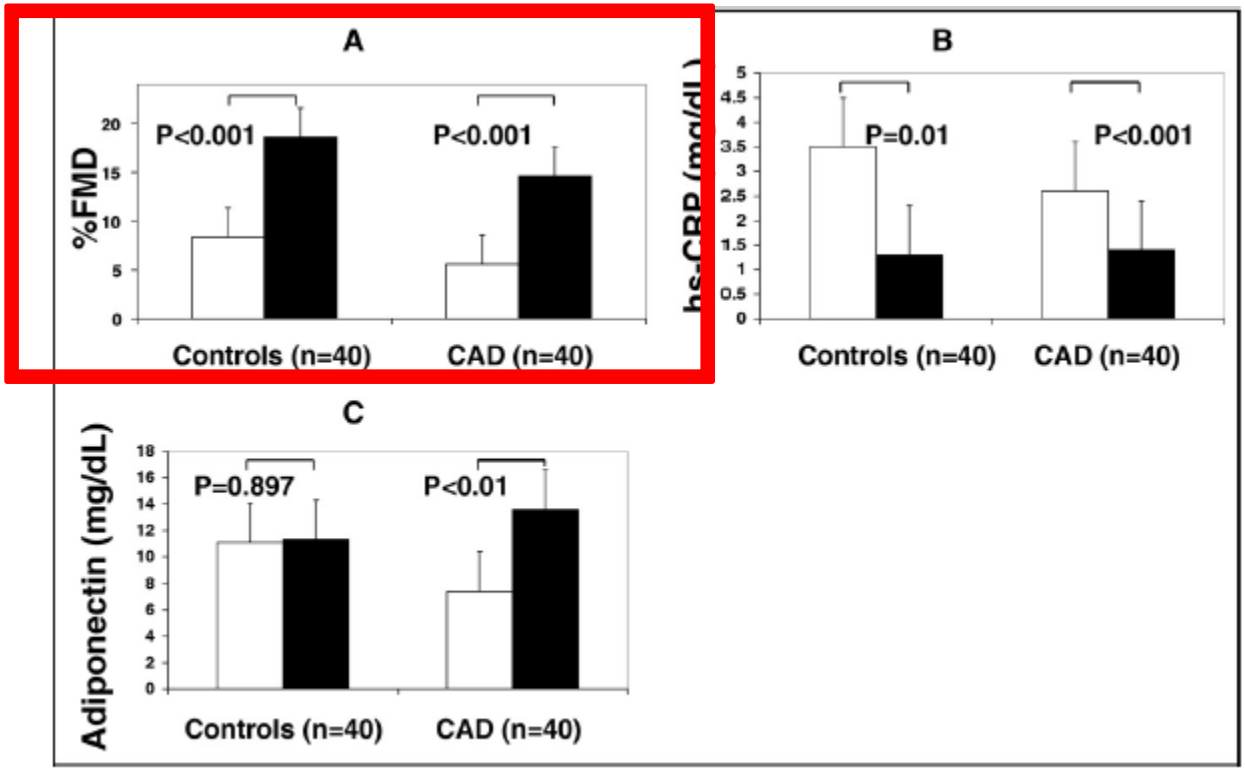


Figure 1. Bar graphs show effect of acute caffeine *(closed bars)* compared to placebo *(open bars)* ingestion on *(A)* percent flow-mediated dilation, *(B)* high-sensitivity C-reactive protein, and *(C)* adiponectin in subjects without coronary artery disease (controls, n = 40) and those with coronary artery disease (n = 40). Data are expressed as mean ± SD.

In conclusion, acute caffeine ingestion significantly improved endothelial function assessed by brachial artery FMD in subjects with and without CAD and was associated with lower plasma markers of inflammation. (Am J Cardiol 2011;107:1255–1261)

The effect of acute cafè latte ingestion on fasting serum lipid levels in healthy individuals

Zargar A et al. 2013, J Clin Lipidol 7:165–168

In this open-label study, the acute effect of a **12-oz (360 mL) cafè latte** (2% milk) on serum lipids after a 10-hour fast was studied in 34 females and 15 males.

Lipid parameters and glucose, mg/dL	Pre-latté mean ± SD (median)	Post-latté mean ± SD (median)	% Change mean ± SD	*P*-value
Total cholesterol	171.2 ± 28.8 (169.0)	173.1 ± 30.7 (169.0)	1.03 ± 3.8*	.054
LDL-C	96.7 ± 22.1 (96.5)	98.2 ± 24.4 (96.8)	1.8 ± 8.3*	.761
HDL-C	54.4 ± 12.7 (51.0)	56.4 ± 14.5 (54.0)	3.8 ± 10.5*	.015
TG	101.3 ± 75.2 (76.0)	93.2 ± 74.2 (75.0)	−6.1 ± 20.3†	.002
Non-HDL-C	116.9 ± 28.9 (113.0)	116.4 ± 31.1 (110.0)	−0.78 ± 6.2*	.61
Fasting blood glucose	87.2 ± 7.0 (89.0)	97.3 ± 12.9 (98.0)	11.8 ± 13.4*	<.001

HDL-C, high-density lipoprotein cholesterol; LDL-C, low-density lipoprotein cholesterol; SD, standard deviation, TG, triglycerides.
*Normality test (Shapiro-Wilk) passed, Paired *t*-test used.
†Normality test (Shapiro-Wilk) failed, Wilcoxon signed rank test used.

Bolus intake of 6 to 12 oz of coffee results in an about 4 % increase in HDL-cholesterol

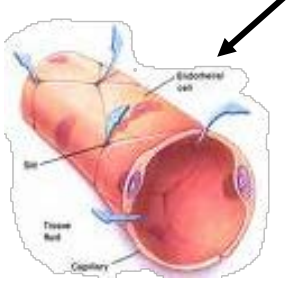
↓

Effect of long-term consumption ?

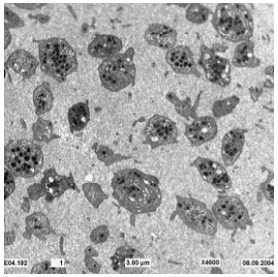
COFFEE AS A REMEDY?

Blood Pressure Reduction

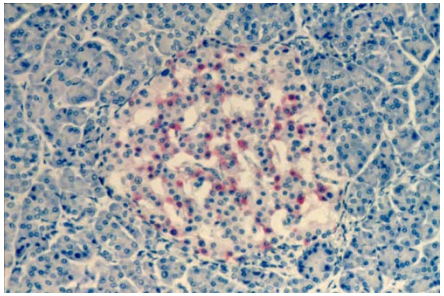
Other:
Anti-Inflammatory



Improved endothelial function



Reduced platelet reactivity



Improved insulin sensitivity

PLATELETS AGGREGATION AND COFFEE

Br J Nutr. 2008 Dec;100(6):1276-82. doi: 10.1017/S0007114508981459. Epub 2008 Apr 28.

Effect of coffee drinking on platelets: inhibition of aggregation and phenols incorporation.

Natella F[1], Nardini M, Belelli F, Pignatelli P, Di Santo S, Ghiselli A, Violi F, Scaccini C.

Author information

Abstract

Epidemiological studies indicate a J-shaped relationship linking coffee consumption and cardiovascular risk, suggesting that moderate coffee consumption can be beneficial. Platelet aggregation is of critical importance in thrombotic events, and platelets play a major role in the aetiology of several CVD. The aim of this study was to evaluate the effect of coffee drinking on platelet aggregation ex vivo, using caffeine as control. A crossover study was performed on ten healthy subjects. In two different sessions, subjects drank 200 ml coffee, containing 180 mg caffeine, or a capsule of caffeine (180 mg) with 200 ml water. Platelets were separated from plasma at baseline and 30 and 60 min after coffee drinking. Platelet aggregation was induced with three different agonists: collagen, arachidonic acid and ADP. Coffee drinking inhibited collagen ($P < 0.05$ from baseline at time 30 min) and arachidonic acid ($P < 0.05$ from baseline at time 60 min) induced platelet aggregation. Caffeine intake did not affect platelet aggregation induced by the three agonists. Coffee consumption induced a significant increase of platelet phenolic acids (likely present as glucuronate and sulphate derivatives), caffeic acid, the principal phenolic acid in coffee, raising from 0.3 (SEM 0.1) to 2.4 (SEM 0.6) ng/mg ($P < 0.01$). **Caffeine was not detectable in platelets. Coffee drinking decreases platelet aggregation, and induces a significant increase in phenolic acid platelet concentration. The antiplatelet effect of coffee is independent from caffeine and could be a result of the interaction of coffee phenolic acids with the intracellular signalling network leading to platelet aggregation.**

Coffee Consumption and Risk of Cardiovascular Events After Acute Myocardial Infarction

Results From the GISSI (Gruppo Italiano per lo Studio della Sopravvivenza nell'Infarto miocardico)-Prevenzione Trial

Maria Giuseppina Silletta, MSc; RosaMaria Marfisi, MS; Giacomo Levantesi, MD; Alessandro Boccanelli, MD; Carmelo Chieffo, MD; MariaGrazia Franzosi, MSc; Enrico Geraci, MD; Aldo Pietro Maggioni, MD; Gianluigi Nicolosi, MD; Carlo Schweiger, MD; Luigi Tavazzi, MD; Gianni Tognoni, MD; Roberto Marchioli, MD; on behalf of the GISSI-Prevenzione Investigators*

Background—The relation between coffee consumption and cardiovascular disease has been studied extensively, but results are still debated. In addition, little evidence is available on patients with established coronary heart disease.

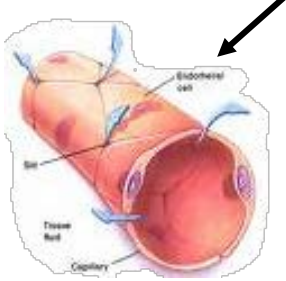
Methods and Results—Prospectively ascertained information among 11 231 Italian patients (9584 males and 1647 females) with recent (≤3 months) myocardial infarction enrolled in the GISSI (Gruppo Italiano per lo Studio della Sopravvivenza nell'Infarto miocardico)-Prevenzione trial was used. Usual dietary habits were assessed at baseline and updated at 0.5 and 1.5 years. Coffee consumption was categorized as never/almost never, <2 cups per day, 2 to 4 cups per day, and >4 cups per day. Medication use and fasting glucose were assessed at 0.5, 1, 1.5, 2.5, and 3.5 years. Risk was evaluated with Cox proportional hazards with time-varying covariates. The main outcome measure was the cumulative incidence of cardiovascular events (cardiovascular death, nonfatal myocardial infarction, and nonfatal stroke). A total of 1167 cardiovascular events occurred during 36 961 person-years of follow-up. After multivariable adjustment for potential confounders in the time-dependent analysis, the relative risk of cardiovascular events across categories of coffee consumption was 1.02 (95% CI 0.87 to 1.20) for <2 cups per day, 0.91 (95% CI 0.75 to 1.09) for 2 to 4 cups per day, and 0.88 (95% CI 0.64 to 1.20) for >4 cups per day compared with abstainers (*P* for trend=0.18). Ultimately, coffee consumption did not change the risk of coronary heart disease events, stroke, and sudden death.

Conclusions—No association between moderate coffee intake and cardiovascular events was observed in post–myocardial infarction patients. (*Circulation*. 2007;116:2944-2951.)

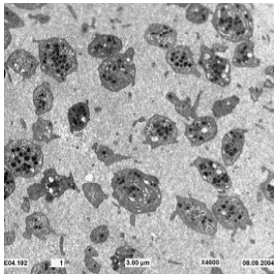
COFFEE AS A REMEDY?

Blood Pressure Reduction

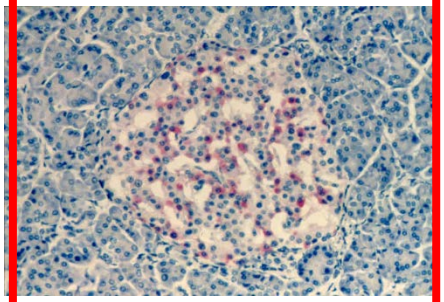
Other:
Anti-Inflammatory



Improved endothelial function



Reduced platelet reactivity



Improved insulin sensitivity

INSULIN RESISTANCE AND COFFEE

- **Coffee consumption and risk for type 2 diabetes mellitus.**

- Salazar-Martinez E[1], Willett WC, Ascherio A, Manson JE, Leitzmann MF, Stampfer MJ, Hu FB.
- **Author information**
- **Abstract**
- **BACKGROUND:**
- In small, short-term studies, acute administration of caffeine decreases insulin sensitivity and impairs glucose tolerance.
- **OBJECTIVE:**
- To examine the long-term relationship between consumption of coffee and other caffeinated beverages and incidence of type 2 diabetes mellitus.
- **DESIGN:**
- Prospective cohort study.
- **SETTING:**
- The Nurses' Health Study and Health Professionals' Follow-up Study.
- **PARTICIPANTS:**
- The authors followed 41 934 men from 1986 to 1998 and 84 276 women from 1980 to 1998. These participants did not have diabetes, cancer, or cardiovascular disease at baseline.
- **MEASUREMENTS:**
- Coffee consumption was assessed every 2 to 4 years through validated questionnaires.
- **RESULTS:**
- The authors documented 1333 new cases of type 2 diabetes in men and 4085 new cases in women. The authors found an inverse association between coffee intake and type 2 diabetes after adjustment for age, body mass index, and other risk factors. The multivariate relative risks for diabetes according to regular coffee consumption categories (0, <1, 1 to 3, 4 to 5, or > or =6 cups per day) in men were 1.00, 0.98, 0.93, 0.71, and 0.46 (95% CI, 0.26 to 0.82; P = 0.007 for trend), respectively. The corresponding multivariate relative risks in women were 1.00, 1.16, 0.99, 0.70, and 0.71 (CI, 0.56 to 0.89; P < 0.001 for trend), respectively. For decaffeinated coffee, the multivariate relative risks comparing persons who drank 4 cups or more per day with nondrinkers were 0.74 (CI, 0.48 to 1.12) for men and 0.85 (CI, 0.61 to 1.17) for women. Total caffeine intake from coffee and other sources was associated with a statistically significantly lower risk for diabetes in both men and women.

- **CONCLUSIONS:**
- These data suggest that long-term coffee consumption is associated with a statistically significantly lower risk for type 2 diabetes.

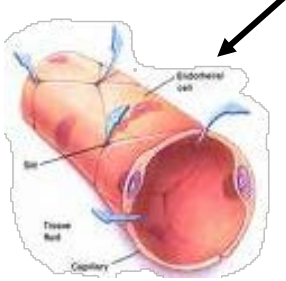
Ann Intern Med 2004 Jan6;140(1) 1-8

COFFEE AS A REMEDY?

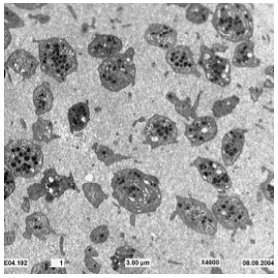
Blood Pressure Reduction

Other:
„Anti-Inflammatory“

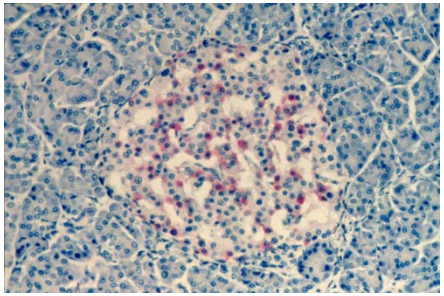
Anti Tumoral
Anti Endot.Disfunct.



Improved endothelial function

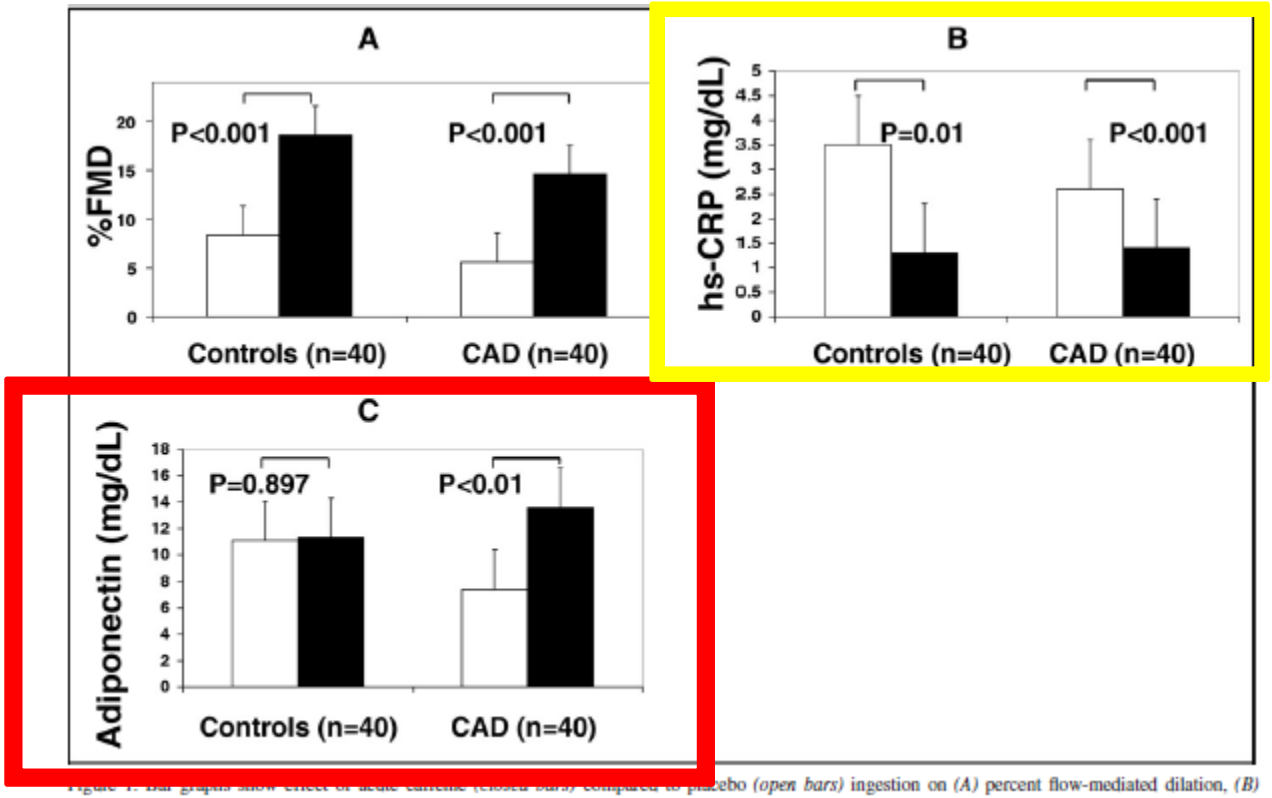


Reduced platelet reactivity



Improved insulin sensitivity

Acute Caffeine ingestion and Endothelial Function



ebo *(open bars)* ingestion on *(A)* percent flow-mediated dilation, *(B)* high-sensitivity C-reactive protein, and *(C)* adiponectin in subjects without coronary artery disease (controls, n = 40) and those with coronary artery disease (n = 40). Data are expressed as mean ± SD.

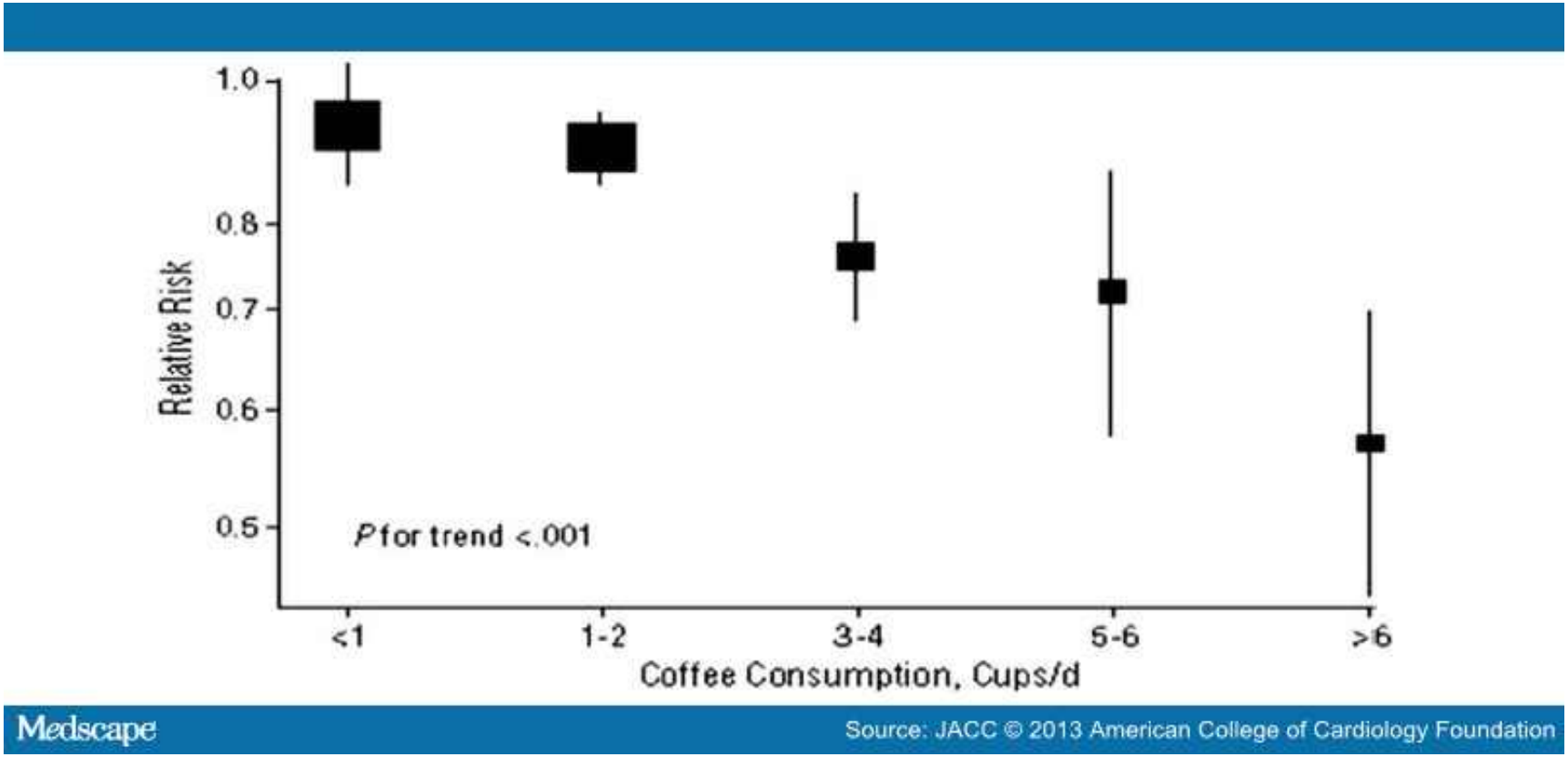
In conclusion, acute caffeine ingestion significantly improved endothelial function assessed by brachial artery FMD in subjects with and without CAD and was associated with lower plasma markers of inflammation. (Am J Cardiol 2011;107:1255–1261)

COFFEE AND MORTALITY

Effects of Habitual Coffee Consumption on Cardiometabolic Disease, Cardiovascular Health, and All-Cause Mortality

James H. O'Keefe, MD; Salman K. Bhatti, MD; Harshal R. Patil, MD; James J. DiNicolantonio, PHARMD; Sean C. Lucan, MD, MPH, MS; Carl J. Lavie, MD

Disclosures J Am Coll Cardiol. 2013;62(12):1043-1051.



Circulation

American Heart Association

Association of Coffee Consumption with Total and Cause-Specific Mortality in Three Large Prospective Cohorts

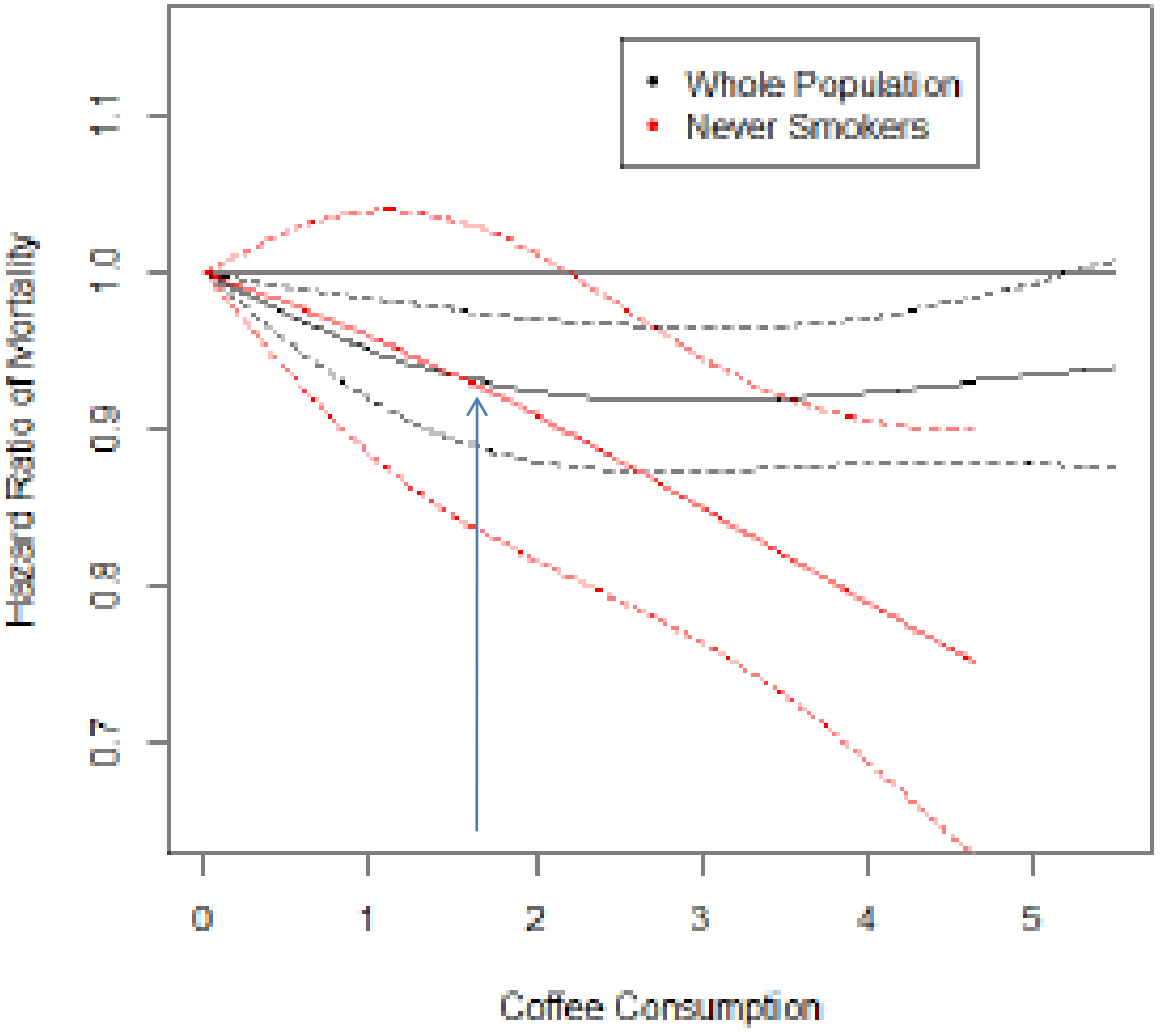
Ming Ding, Ambika Satija, Shilpa N. Bhupathiraju, Yang Hu, Qi Sun, Jiali Han, Esther Lopez-Garcia, Walter Willett, Rob M. van Dam and Frank B. Hu

Circulation. published online November 16, 2015;
Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2015 American Heart Association, Inc. All rights reserved.
Print ISSN: 0009-7322. Online ISSN: 1524-4539

Total Population : 208.501 Mean Age : 46,5

Methods and Results—We examined the associations of consumption of total, caffeinated, and decaffeinated coffee with risk of subsequent total and cause-specific mortality among 74,890 women in the Nurses' Health Study (NHS), 93,054 women in the NHS 2, and 40,557 men in the Health Professionals Follow-up Study. and up to 30 years of follow-up

Coffee Consumption and Mortality



Circulation. published online November 16, 2015;

(***Circulation*. 2014;129:643-659.**)

Annals of Internal Medicine

ORIGINAL RESEARCH

Association of Coffee Consumption With Total and Cause-Specific Mortality Among Nonwhite Populations

Song-Yi Park, PhD; Neal D. Freedman, PhD; Christopher A. Haiman, ScD; Loïc Le Marchand, MD, PhD; Lynne R. Wilkens, DrPH; and Veronica Wendy Setiawan, PhD

Background: Coffee consumption has been associated with reduced risk for death in prospective cohort studies; however, data in nonwhites are sparse.

Objective: To examine the association of coffee consumption with risk for total and cause-specific death.

Design: The MEC (Multiethnic Cohort), a prospective population-based cohort study established between 1993 and 1996.

Setting: Hawaii and Los Angeles, California.

Participants: 185 855 African Americans, Native Hawaiians, Japanese Americans, Latinos, and whites aged 45 to 75 years at recruitment.

Measurements: Outcomes were total and cause-specific mortality between 1993 and 2012. Coffee intake was assessed at baseline by means of a validated food-frequency questionnaire.

Results: 58 397 participants died during 3 195 484 person-years of follow-up (average follow-up, 16.2 years). Compared with drinking no coffee, coffee consumption was associated with lower total mortality after adjustment for smoking and other potential confounders (1 cup per day: hazard ratio [HR], 0.88 [95% CI, 0.85 to 0.91]; 2 to 3 cups per day: HR, 0.82 [CI, 0.79 to 0.86]; ≥4 cups per day: HR, 0.82 [CI, 0.78 to 0.87]; *P* for trend < 0.001). Trends were similar between caffeinated and decaffeinated coffee. Significant inverse associations were observed in 4 ethnic groups; the association in Native Hawaiians did not reach statistical significance. Inverse associations were also seen in never-smokers, younger participants (<55 years), and those who had not previously reported a chronic disease. Among examined end points, inverse associations were observed for deaths due to heart disease, cancer, respiratory disease, stroke, diabetes, and kidney disease.

Limitation: Unmeasured confounding and measurement error, although sensitivity analysis suggested that neither was likely to affect results.

Conclusion: Higher consumption of coffee was associated with lower risk for death in African Americans, Japanese Americans, Latinos, and whites.

Primary Funding Source: National Cancer Institute.

Ann Intern Med. doi:10.7326/M16-2472 **Annals.org**

For author affiliations, see end of text.

This article was published at Annals.org on 11 July 2017.

Annals of Internal Medicine ORIGINAL RESEARCH

Coffee Drinking and Mortality in 10 European Countries

A Multinational Cohort Study

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Background: The relationship between coffee consumption and mortality in diverse European populations with variable coffee preparation methods is unclear.

Objective: To examine whether coffee consumption is associated with all-cause and cause-specific mortality.

Design: Prospective cohort study.

Setting: 10 European countries.

Participants: 521 330 persons enrolled in EPIC (European Prospective Investigation into Cancer and Nutrition).

Measurements: Hazard ratios (HRs) and 95% CIs estimated using multivariable Cox proportional hazards models. The association of coffee consumption with serum biomarkers of liver function, inflammation, and metabolic health was evaluated in the EPIC Biomarkers subcohort (n = 14 800).

Results: During a mean follow-up of 16.4 years, 41 693 deaths occurred. Compared with nonconsumers, participants in the highest quartile of coffee consumption had statistically significantly lower all-cause mortality (men: HR, 0.88 [95% CI, 0.82 to 0.95]; P for trend < 0.001; women: HR, 0.93 [CI, 0.87 to 0.98]; P for trend = 0.009). Inverse associations were also observed for digestive disease mortality for men (HR, 0.41 [CI, 0.32 to 0.54]; P for trend < 0.001) and women (HR, 0.60 [CI, 0.46 to 0.78]; P for trend < 0.001). Among women, there was a statistically significant inverse association of coffee drinking with circulatory disease mortality (HR, 0.78 [CI, 0.68 to 0.90]; P for trend < 0.001) and cerebrovascular disease mortality (HR, 0.70 [CI, 0.55 to 0.90]; P for trend = 0.002) and a positive association with ovarian cancer mortality (HR, 1.31 [CI, 1.07 to 1.61]; P for trend = 0.015). In the EPIC Biomarkers subcohort, higher coffee consumption was associated with lower serum alkaline phosphatase; alanine aminotransferase; aspartate aminotransferase; γ-glutamyltransferase; and, in women, C-reactive protein, lipoprotein(a), and glycated hemoglobin levels.

Limitations: Reverse causality may have biased the findings; however, results did not differ after exclusion of participants who died within 8 years of baseline. Coffee-drinking habits were assessed only once.

Conclusion: Coffee drinking was associated with reduced risk for death from various causes. This relationship did not vary by country.

Primary Funding Source: European Commission Directorate-General for Health and Consumers and International Agency for Research on Cancer.

Ann Intern Med. doi:10.7326/M16-2945 Annals.org

For author affiliations, see end of text.

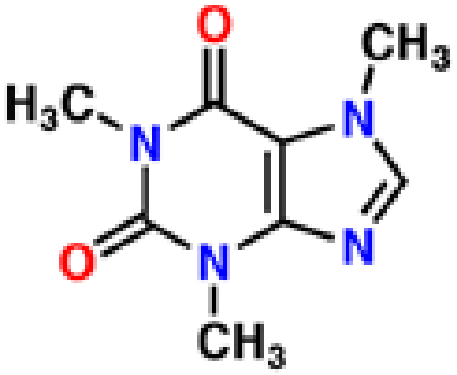
This article was published at Annals.org on 11 July 2017.

* Drs. Gunter and Murphy contributed equally to this work.

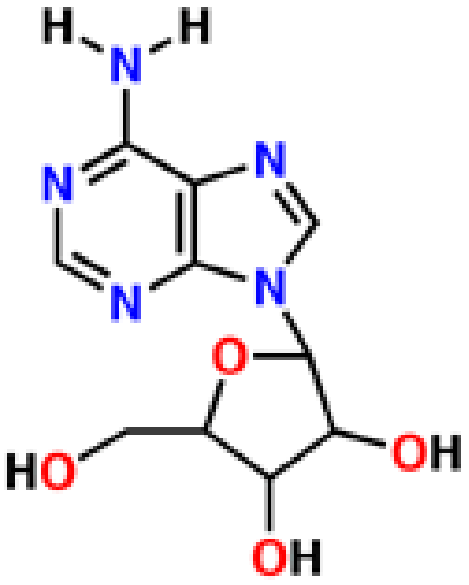
† Deceased.

What "is" coffee ?

COFFEE IN NOT JUST CAFFEINE

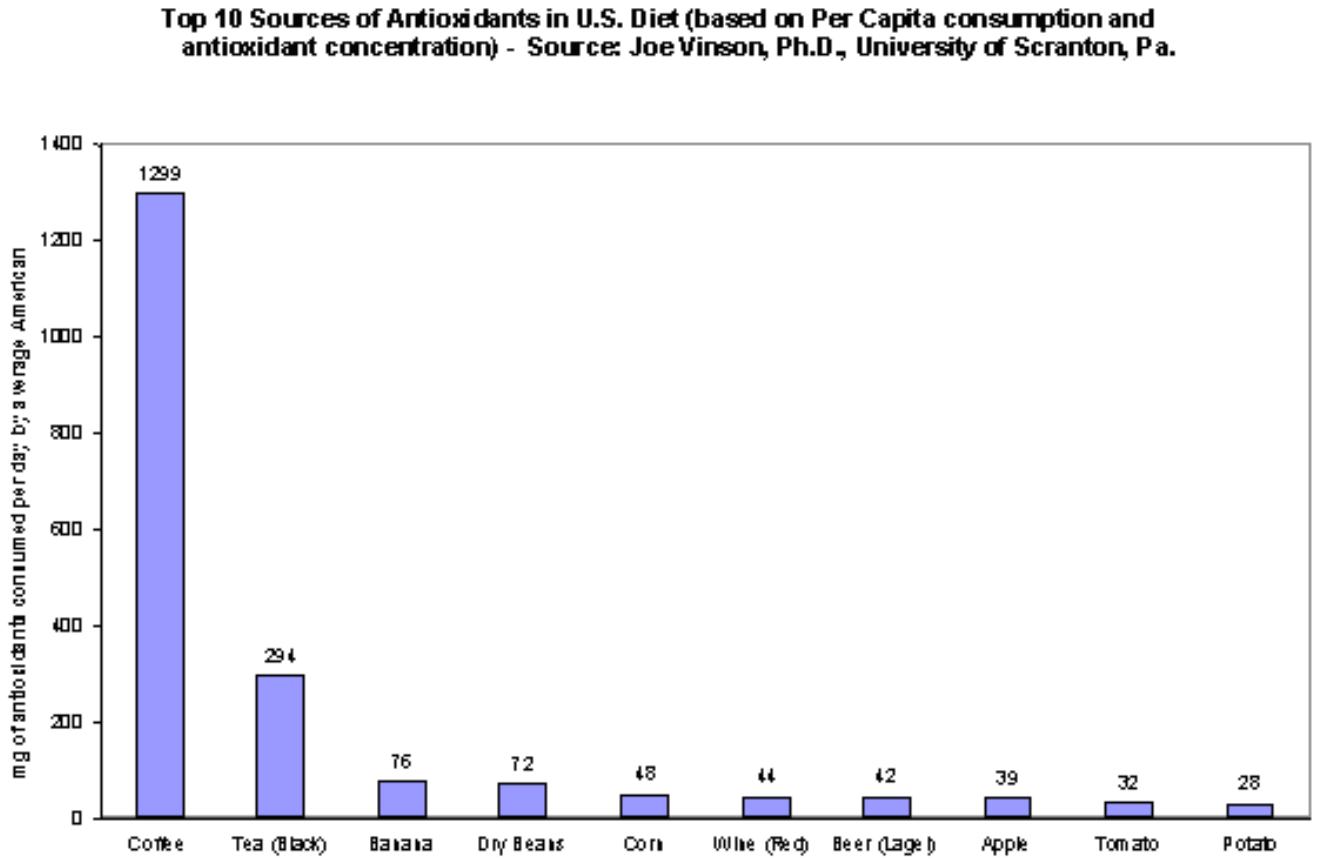


Caffeine

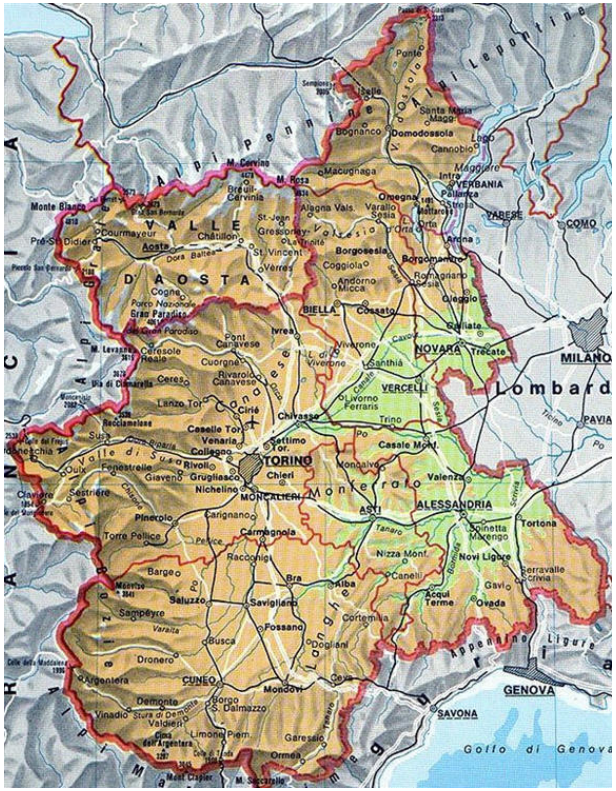


Adenosine

Coffee is the world's Biggest source of Antioxidants



COFFEE AND ALL CARIOVASCULAR RISK FACTORS IN PIEMONTE REGION



4 500.000 INHABITANTS

RISK FACTORS EVALUATED IN PIEMONTE

- **B M I**
- **PHYSICAL ACTIVITY (LOW)**
- **SMOKING**

  ARTERIAL PRESSURE
- **CHOLESTEROL**
- **DIABETES**
- **C.V.FAMILY HISTORY**
- **DAILY FOODS:**

  OILS(oliv,other)

  COFFEE - TEA

  WINE - SPIRITS

  MEAT - FISH

  FRUITS - VEGETABLES

  CHEESE – DAIRY

ANXIETY

INSOMNIA

SCHEDA DELLA SALUTE

A cura degli Amici del Cuore Piemonte onlus - Tel. 011 6335564 – Cell. 346 1314392 – amicidelcuore-to@hotmail.it

DATI ANAGRAFICI

COGNOME	NOME	TEL.	☐ CITTAD. ITALIANA ☐ CITTAD. STRANIERA

RILEVAZIONE DI BASE

ETA'	SESSO	PESO	ALTEZZA	CIRCONFERENZA	BMI
PRESSIONE ARTERIOSA		FREQUENZA CARDIACA		PREGRESSA STORIA CARDIACA ☐ NO ☐ SI	

CONDIZIONE FISICA

SINTOMI: ☐ NESSUNO ☐ FIATO CORTO ☐ DIFFICOLTA' MOTORIA ☐ ANSIA ☐ BATTICUORE ☐ DOLORI TORACICI ☐ SONNO IRREGOLARE ☐ CATTIVO UMORE

STORIA CARDIOLOGICA (ULTIMI 2 ANNI)

ECG ☐ NO ☐ SI _____ ☐ RICOVERI/INTERVENTI _____

TERAPIA IN CORSO:_____ NOTE_____

FATTORI DI RISCHIO PERSONALI

COLESTEROLO VAL. _____ ☐ NON NOTO GLICEMIA VAL. _____ ☐ NON NOTO TRIGLICERIDI VAL._____ ☐ NON NOTO

FUMO: ☐ NO ☐ SI N._____ EX FUMATORI: ETA' INIZIO_____ ETA' CESSAZIONE_____

FATTORI DI RISCHIO FAMILIARI

☐ NON CONOSCIUTI ☐INFARTO_____ ☐IPERTENSIONE_____ ☐ICTUS_____ ☐DIABETE_____

ALIMENTAZIONE

CONDIMENTO: OLIO DI OLIVA ☐ NO ☐ SI OLIO DI SEMI ☐ NO ☐ SI BURRO ☐ NO ☐ SI

CONSUMO GIORNALIERO DI:

VERDURA: ☐NO ☐ SI ☐ TANTO ☐ POCO FRUTTA: ☐ NO ☐ SI ☐ TANTO ☐ POCO

VINO: ☐ NO ☐ SI (BICCHIERI) ☐ 1 ☐ PIU' DI 1 BIRRA ☐ NO ☐ SI SUPER. ALCOLICI ☐ NO ☐ SI

CAFFÈ: ☐ NO ☐ SI ☐ NORMALE ☐ DECAFFEINATO TAZZINE AL GIORNO: ☐ 1-2 ☐ 3-4 ☐ ≥ 5

TIPOLOGIA DI PREPARAZIONE: ☐ MOKA ☐ CIALDA ☐ ESPRESSO ☐ ALTRO (SPECIFICARE) _____

CON AGGIUNTA DI: ☐ NIENTE ☐ ZUCCHERO ☐ DOLCIFICANTI ☐ ALTRO (SPECIFICARE)_____

TE' ☐ NO ☐ SI INFUSI, TISANE ☐ NO ☐ SI TAZZE ☐1 ☐PIU' DI 1 ZUCCHERO ☐ NO ☐ SI MIELE ☐ NO ☐ SI

CONSUMO SETTIMANALE DI:

CARNE: ☐ NO ☐SI ☐ ROSSA PASTI N._____ ☐ BIANCA PASTI N._____ PESCE: ☐ NO ☐ SI PASTI N. _____ FORMAGGI: ☐ NO ☐SI SALUMI: ☐ NO ☐SI

ATTIVITÀ FISICA **TIPO DI ATTIVITÀ**

☐ NO ☐ SALTUARIA ☐ REGOLARE ☐ CAMMINATA ☐ BICICLETTA ☐ PALESTRA ☐ NUOTO ☐ GIARDINAGGIO

SUGGERIMENTI DA CONSEGNARE AL MEDICO DI BASE PER UN APPROFONDIMENTO DI QUANTO E' EMERSO NEL CORSO DELLA VISITA:

_____

_____

Ai sensi della Legge 196/03 ART. 13 autorizzo i destinatari della presente scheda al trattamento dei miei dati personali nei soli limiti delle finalità sociali dell'associazione onlus ed autorizzo analogamente l'inserimento in forma anonima nella vostra banca dati elettronica.

DATA_____ORA_____ FIRMA _____

ANNI 2012-2016

Amici del cuore

PIEMONTE ONLUS
Associazione di volontariato per la
prevenzione delle malattie cardiovascolari

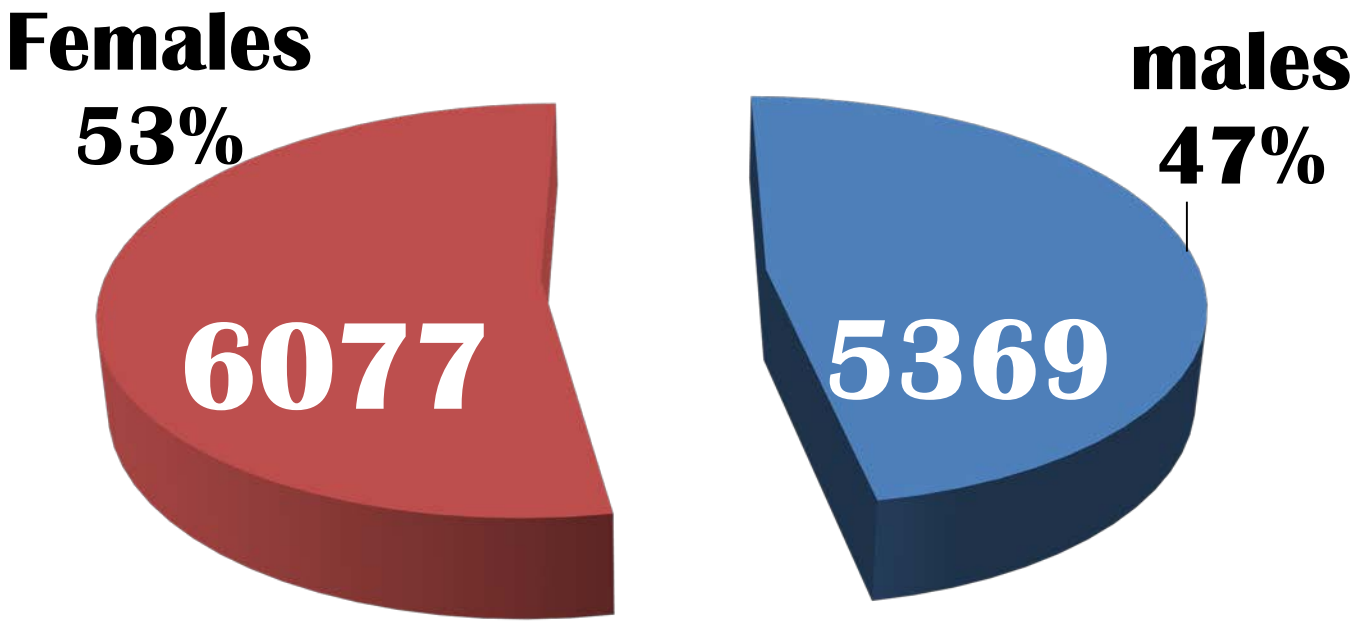
11.446 SCHEDE DELLA SALUTE

TEAM WORK……

Amici del Cuore©

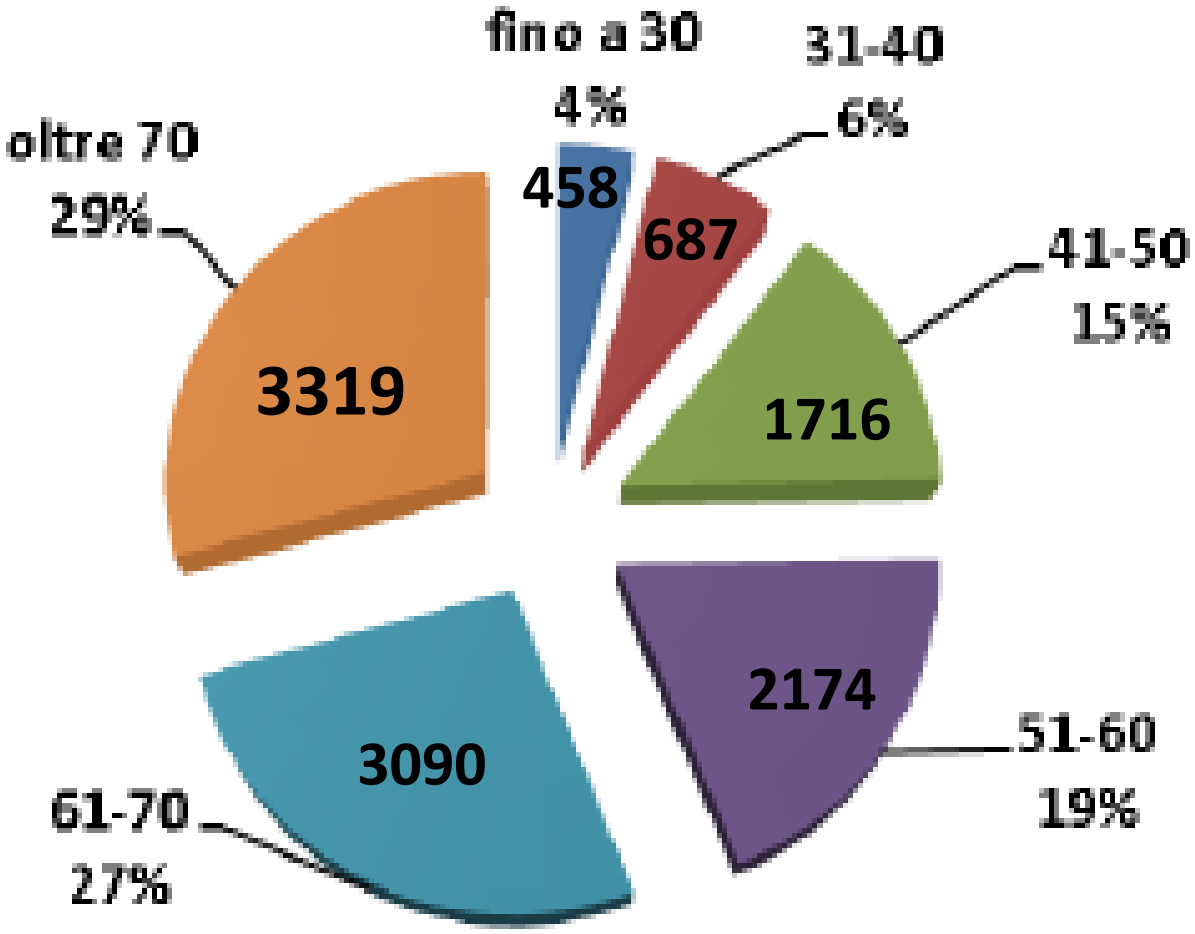
PIEMONTE ONLUS
Associazione di volontariato per la prevenzione delle malattie cardiovascolari

Our Population



Total : 11446 Healty People

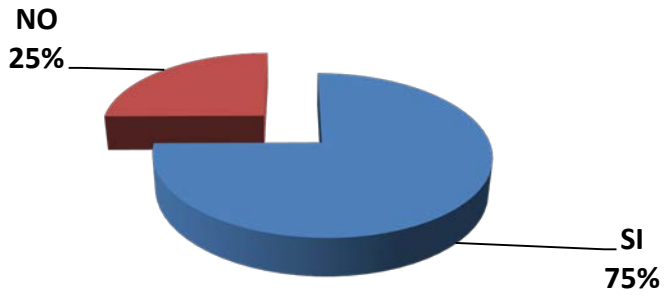
AGE DISTRIBUTION

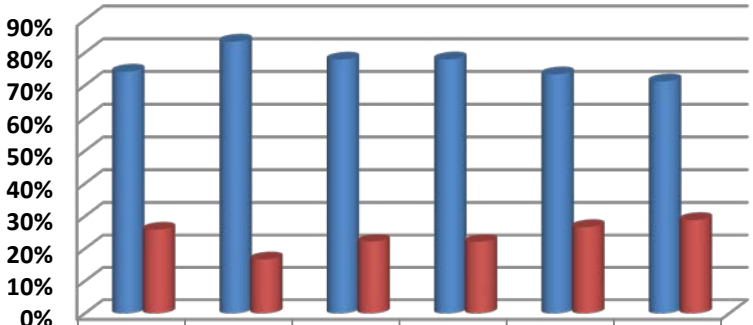



COFFEE

Coffee Drinking in Piemonte

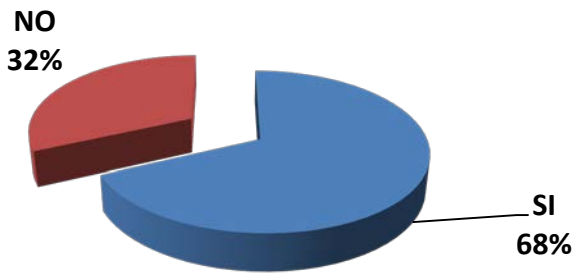
Males

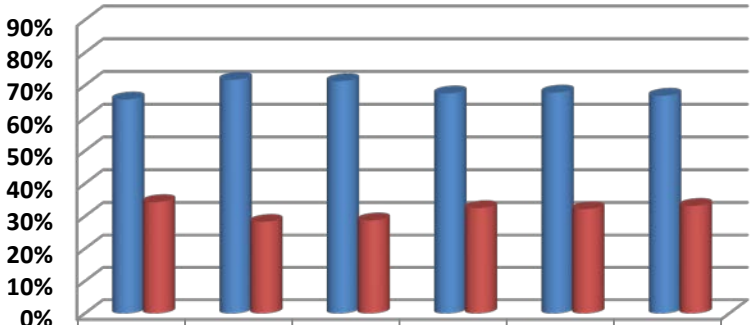




	fino a 30	31-40	41-50	51-60	61-70	oltre 70
SI	74%	83%	78%	78%	73%	71%
NO	26%	17%	22%	22%	27%	29%

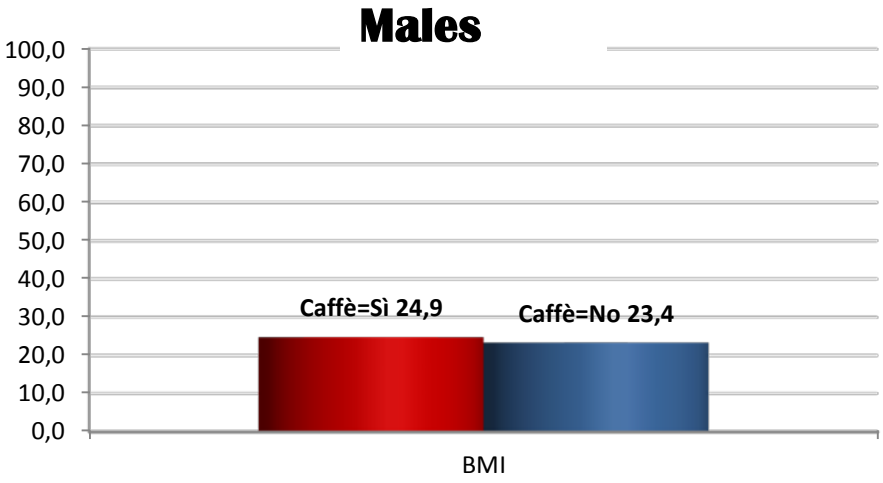
Females

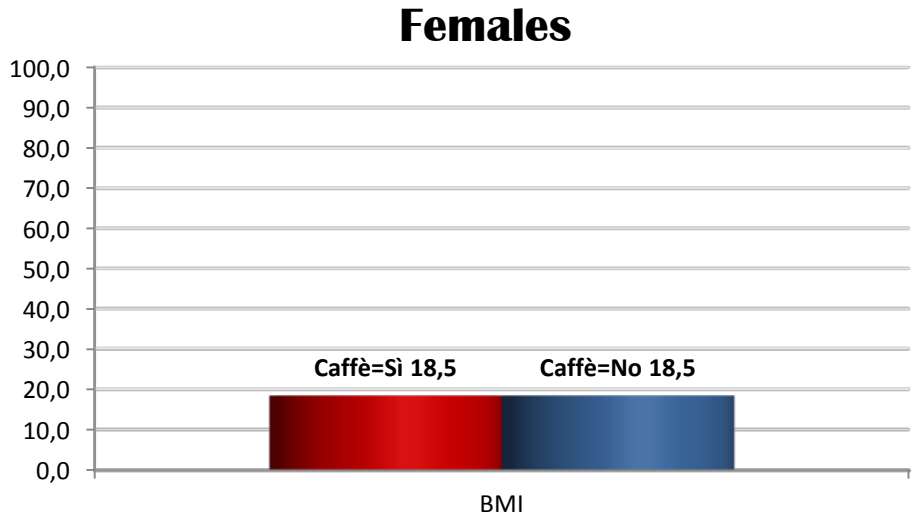


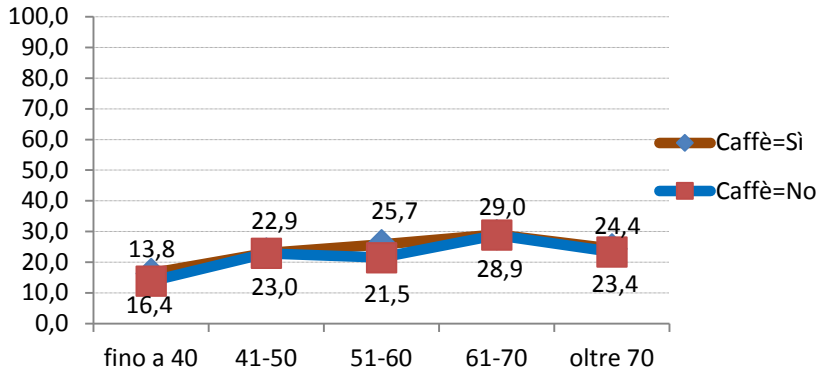


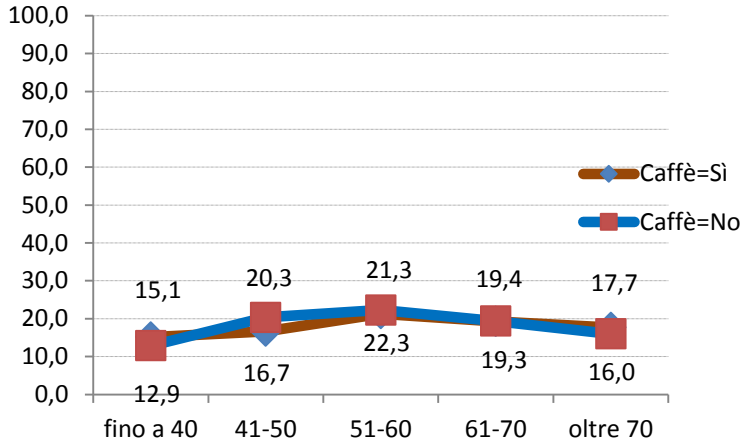
	fino a 30	31-40	41-50	51-60	61-70	oltre 70
SI	66%	72%	71%	68%	68%	67%
NO	34%	28%	29%	32%	32%	33%

COFFEE AND OBESITY

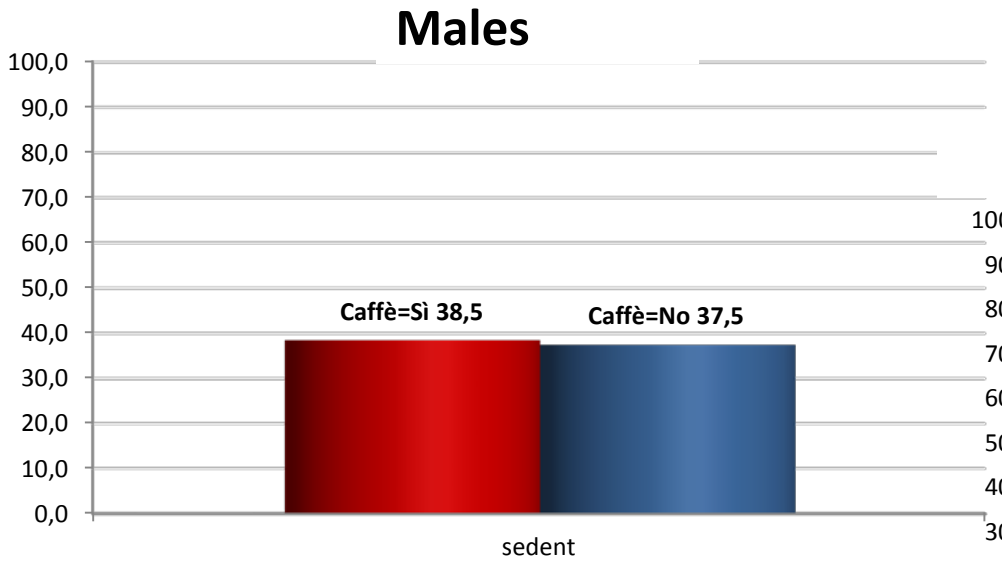


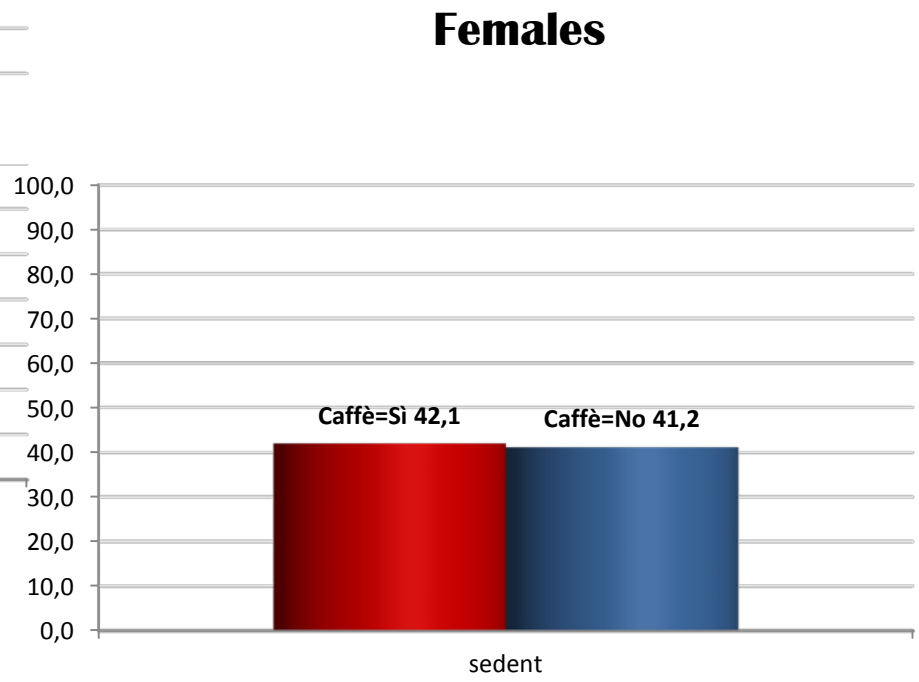




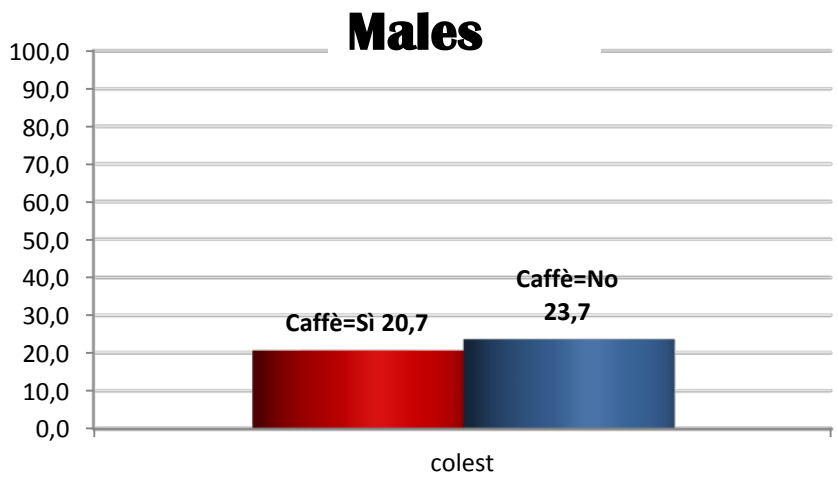


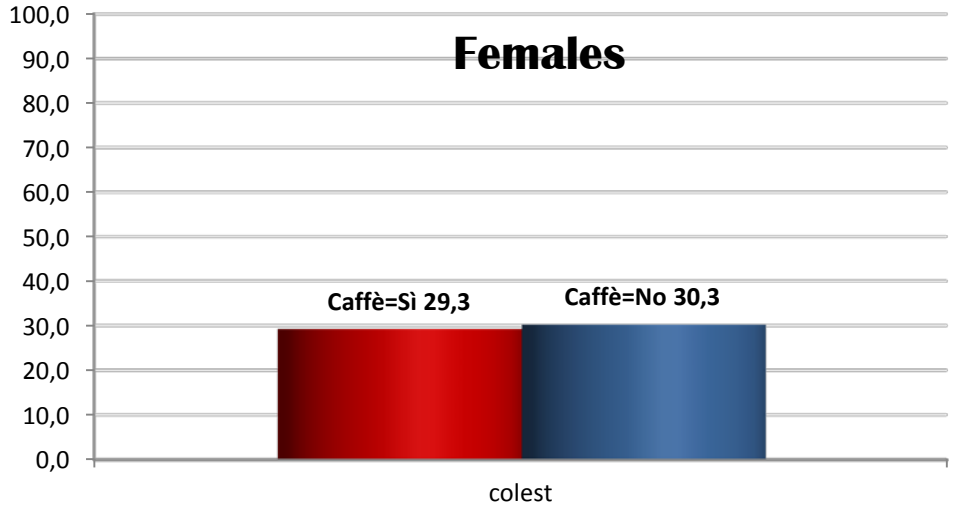
COFFEE AND LOW PHYSICAL A.

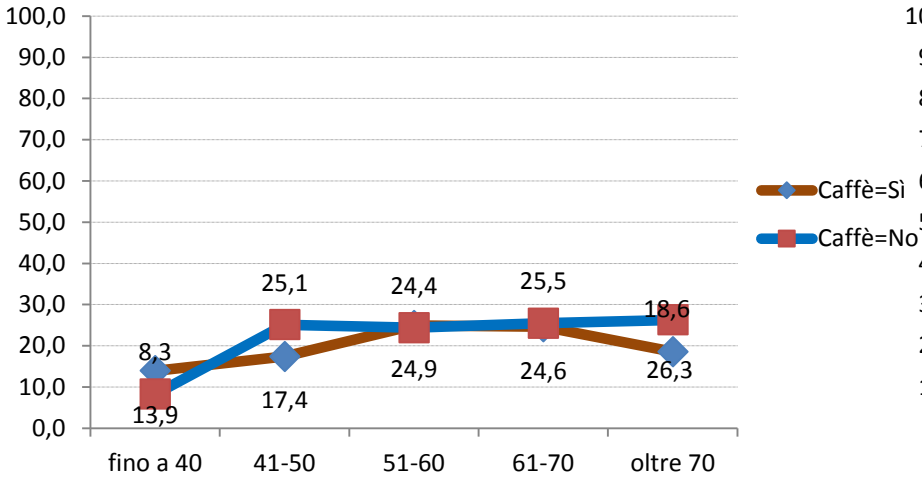


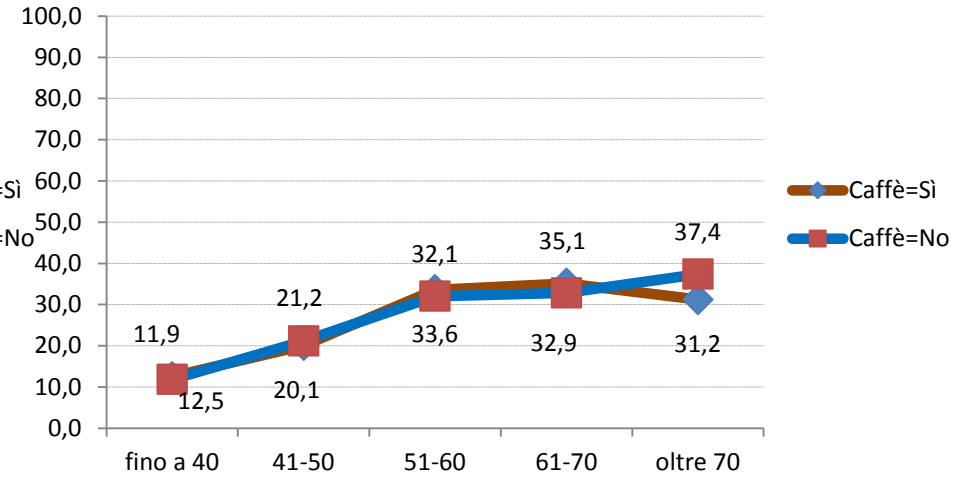


COFFEE AND CHOLESTEROL

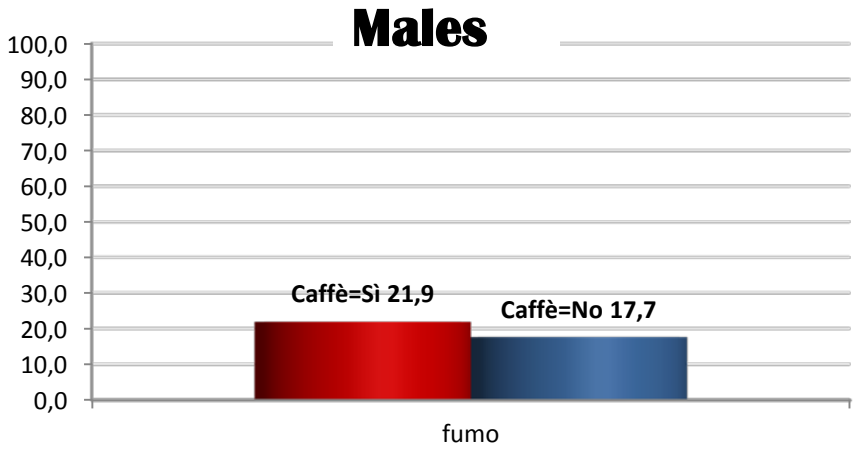


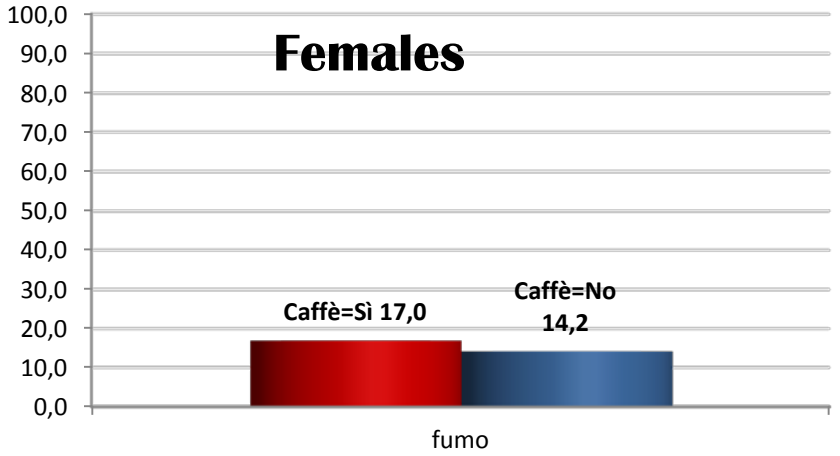


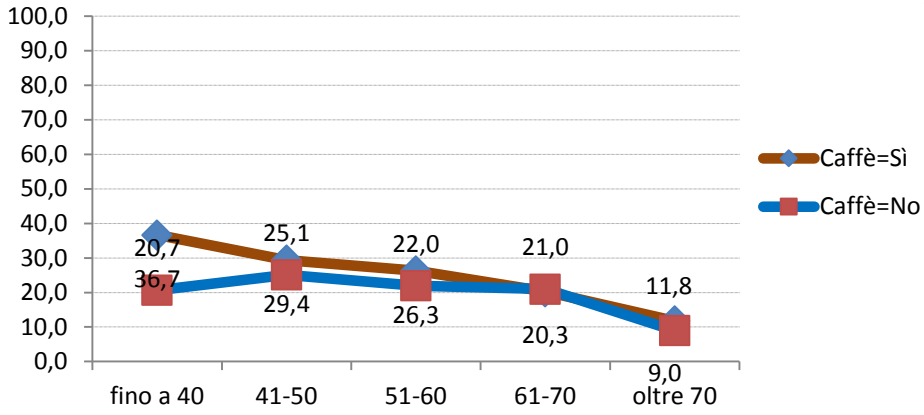


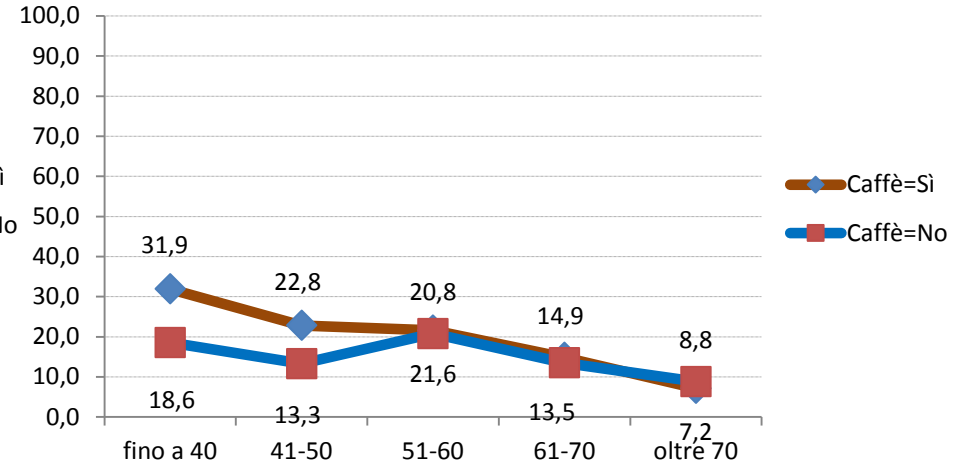


COFFEE AND SMOKING



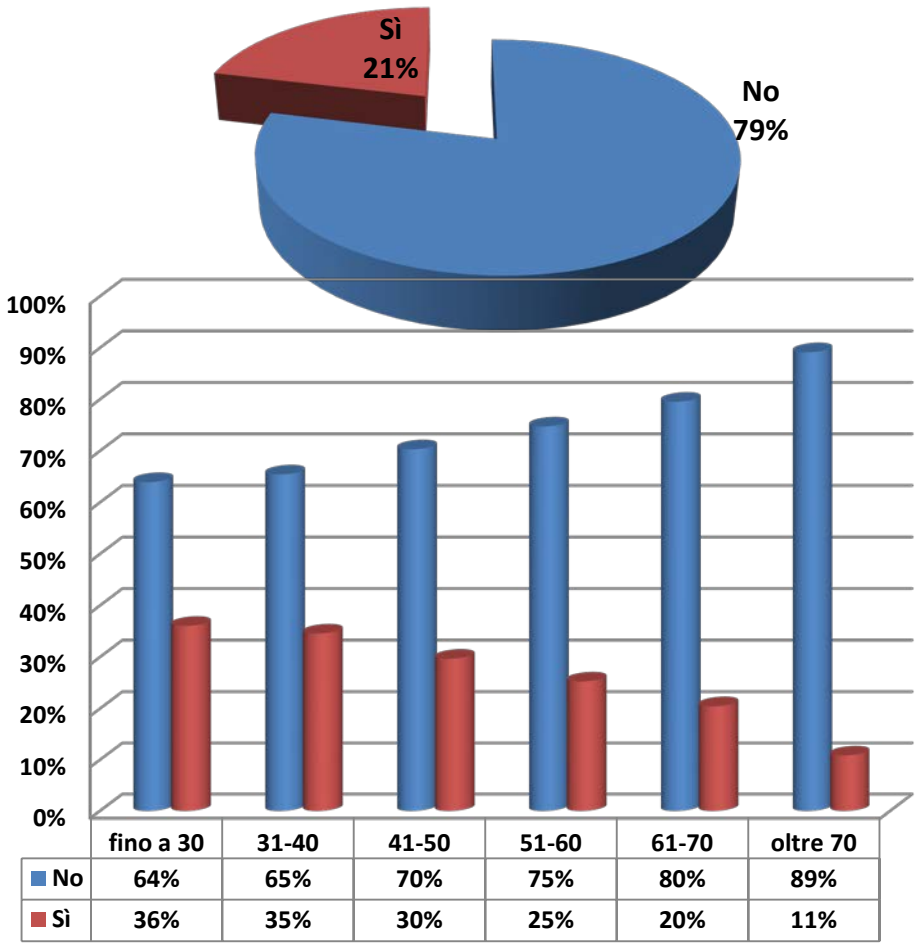






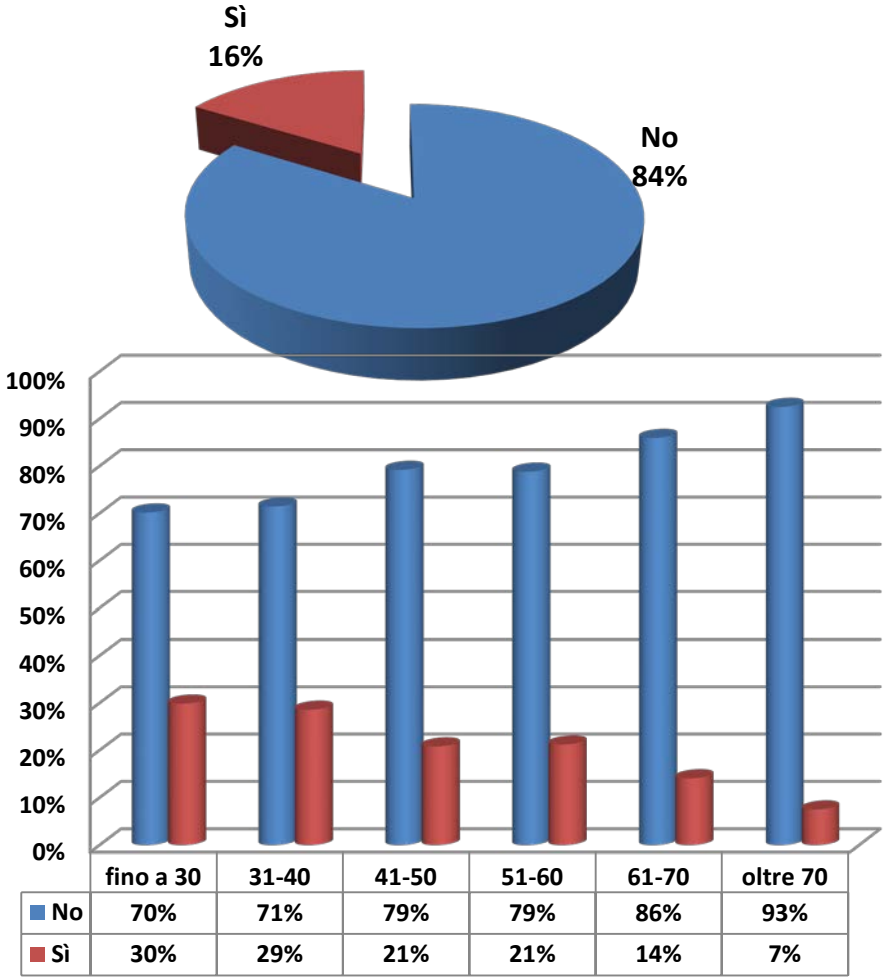
SMOKING IN PIEMONTE

Males



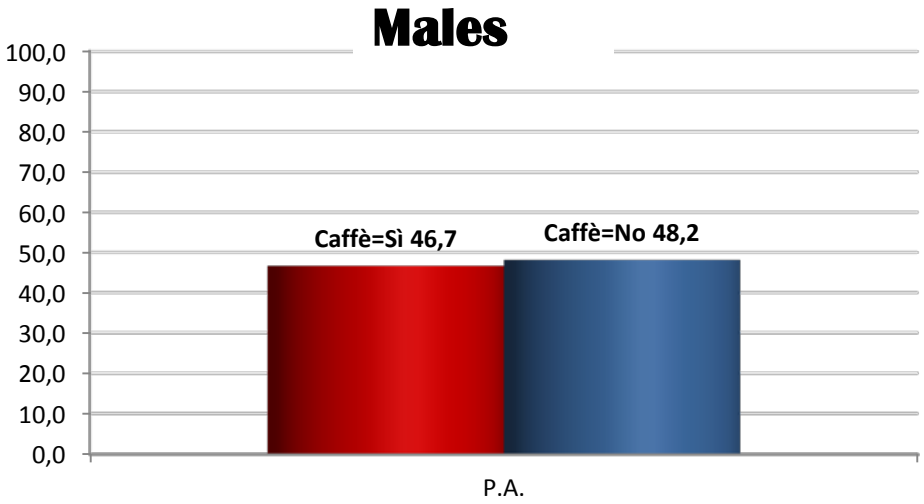
	fino a 30	31-40	41-50	51-60	61-70	oltre 70
No	64%	65%	70%	75%	80%	89%
Sì	36%	35%	30%	25%	20%	11%

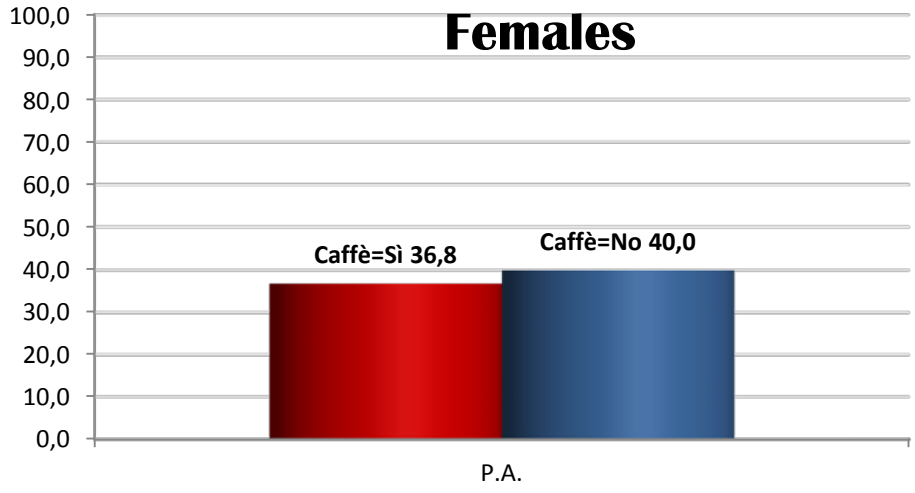
Females

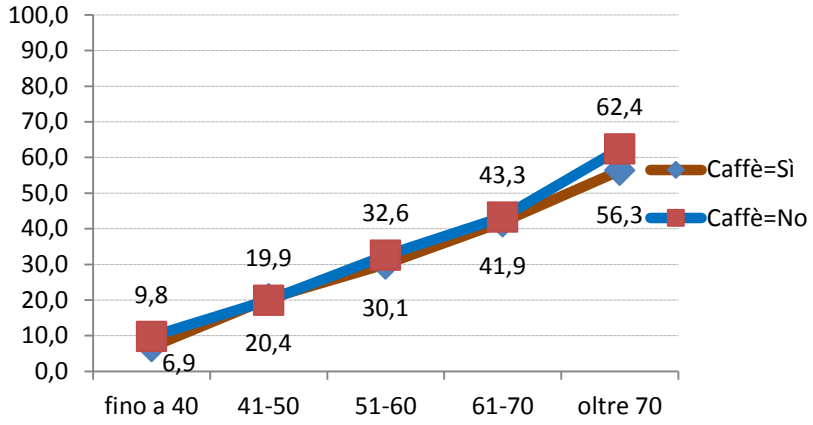


	fino a 30	31-40	41-50	51-60	61-70	oltre 70
No	70%	71%	79%	79%	86%	93%
Sì	30%	29%	21%	21%	14%	7%

COFFEE AND A.HYPERTENSION





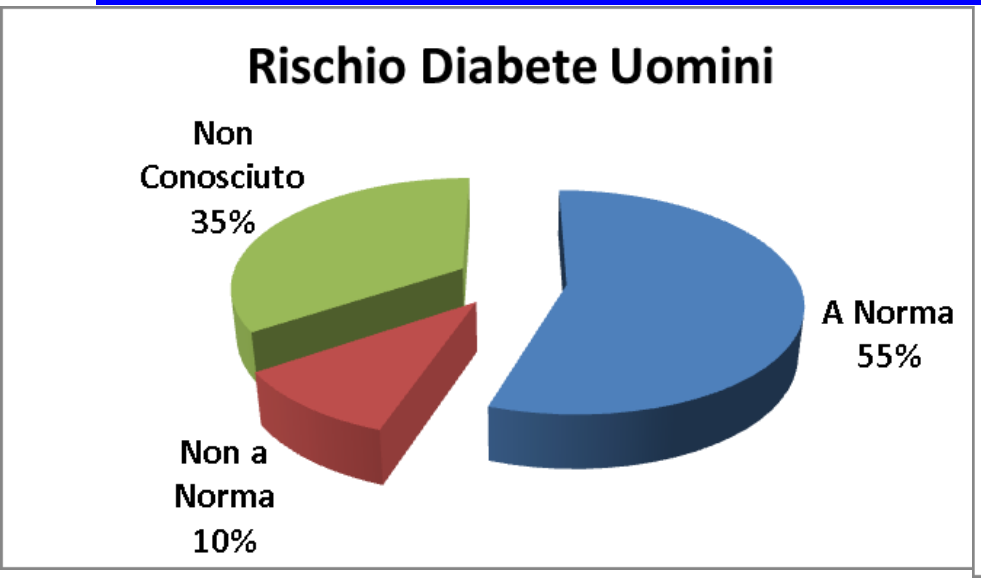


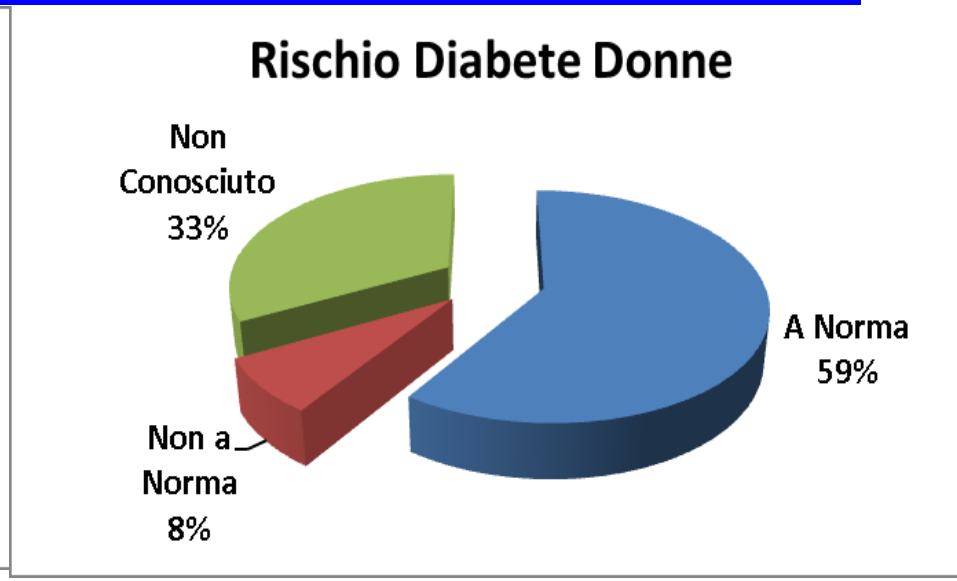
2016 Only

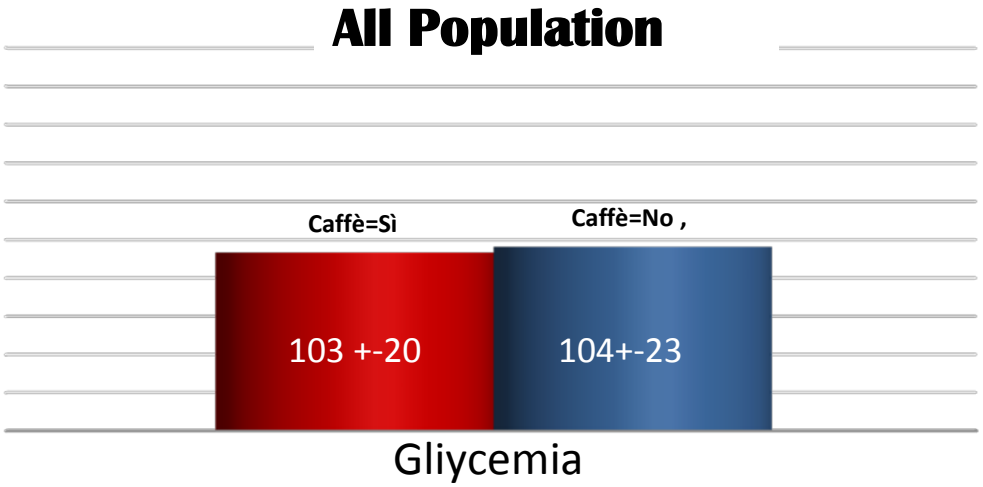
Total Population : 1071

	Caffè no	±	Caffè no (%)	Caffè yes	±	Caffè yes (%)	p
N umber	148		13,8	923		86,2	
Age	63,5	15		61,3	13,8		0,08
Female	77		52,0	523		56,7	0,34
Weight (Kg)	72,1	13,5		70	14,8		0,12
Height (m)	1,7	0,1		1,7	0,1		≥ 0,99
BMI (kg/m2)	25,4	3,7		25,5	5,3		≥ 0,99
Systolic Pressure (mm Hg)	147	23		134	20		< 0,0001
Diastolic Pressure (mm Hg)	82	12		78	11		< 0,0001
Waist Circumference	96	12		93	12		
Heart Rate	71	12		74	12		

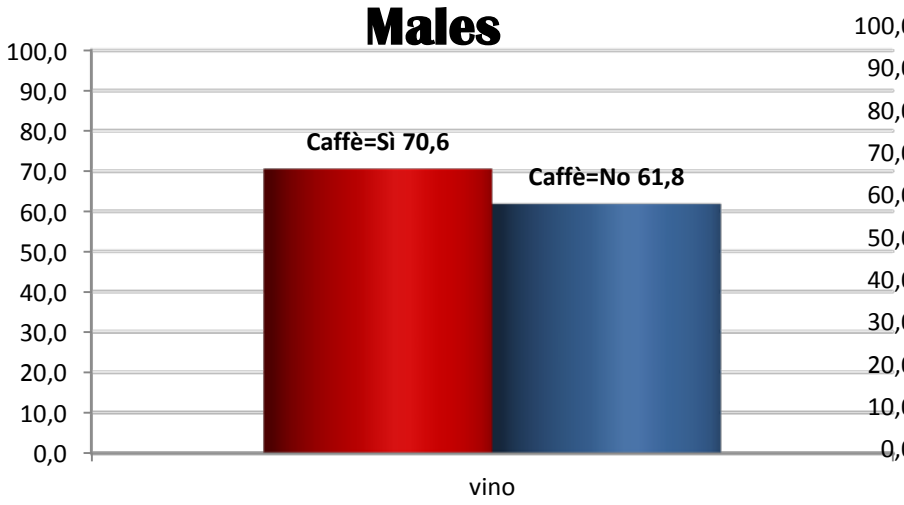
COFFEE AND GLYCEMIA

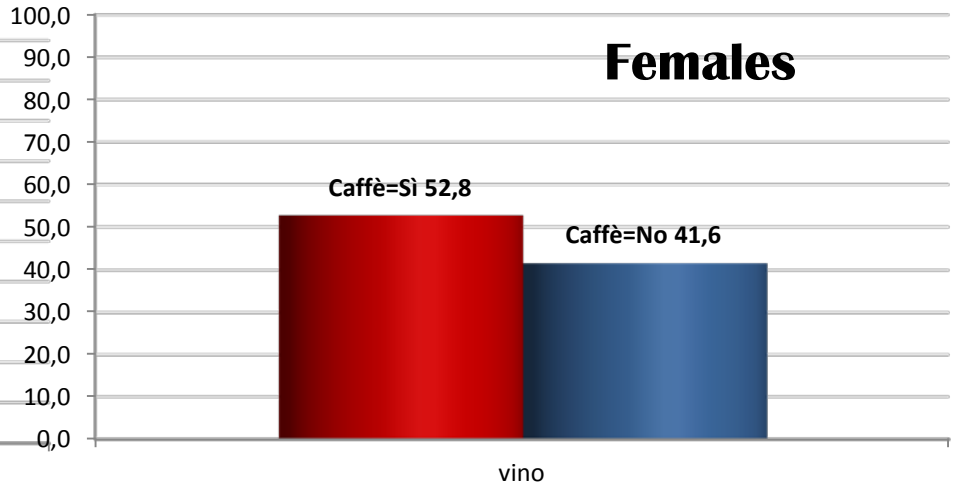




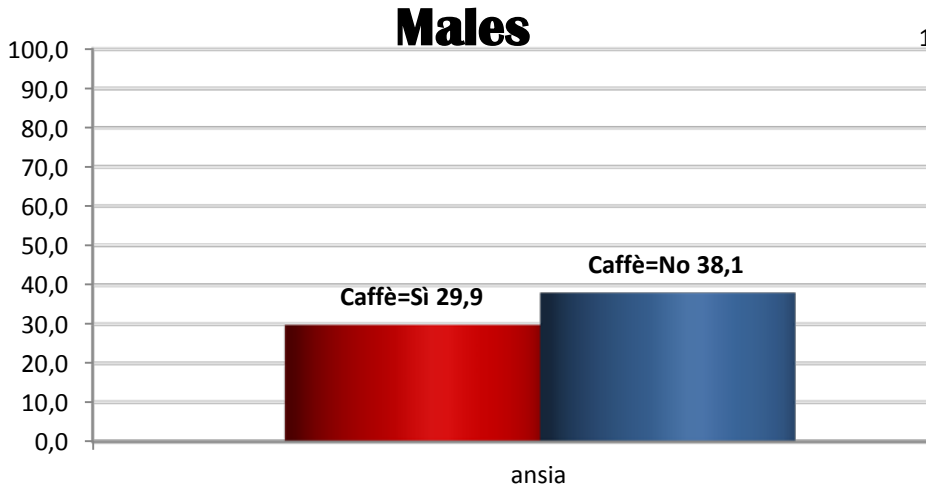


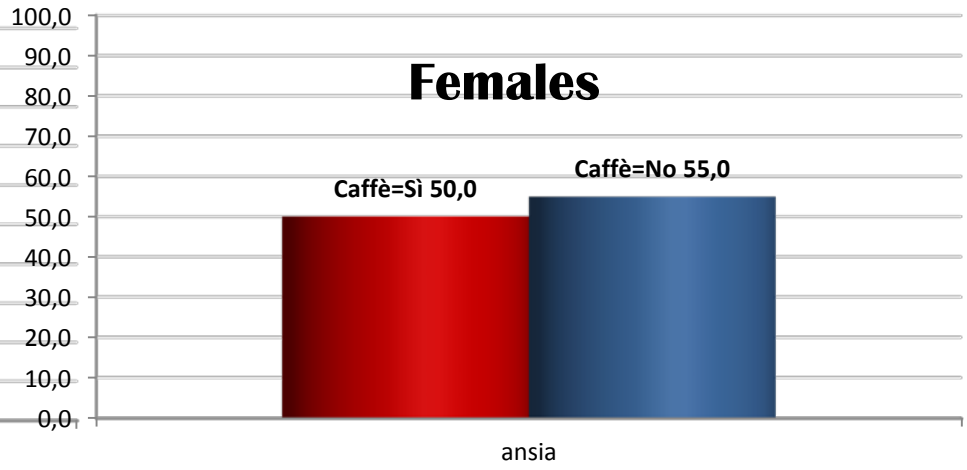
COFFEE AND WINE

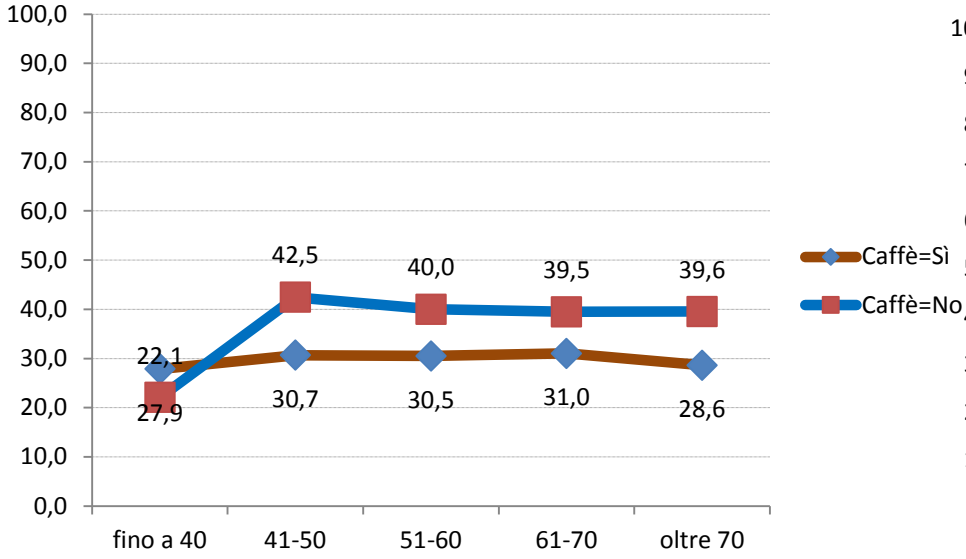


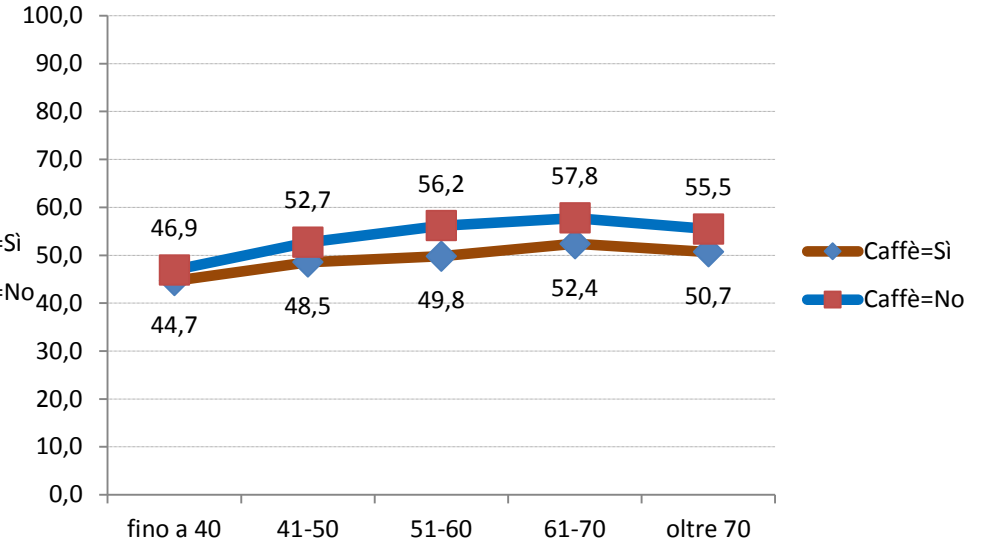


COFFEE AND ANXIETY

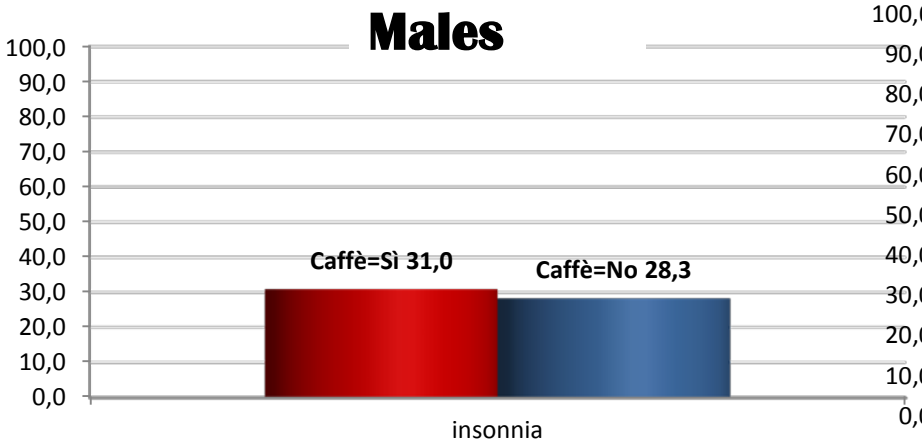


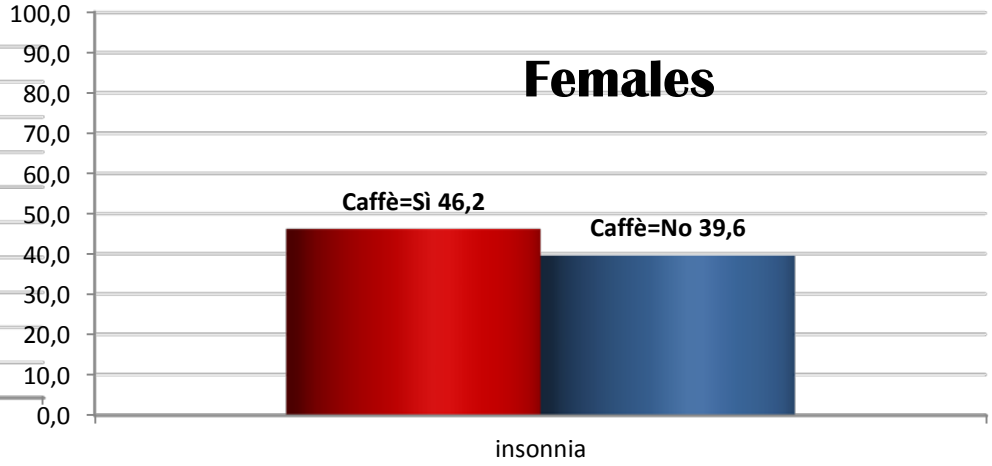


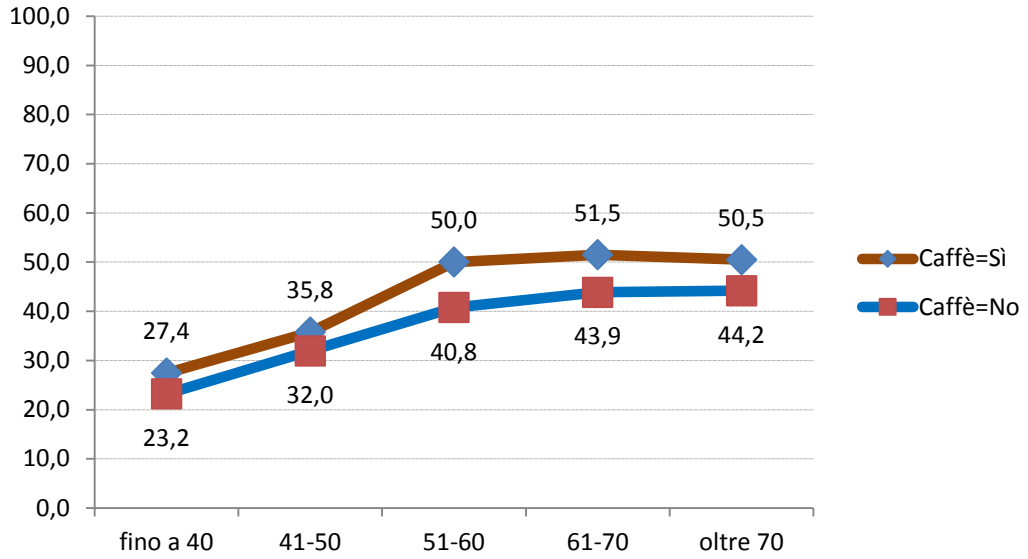




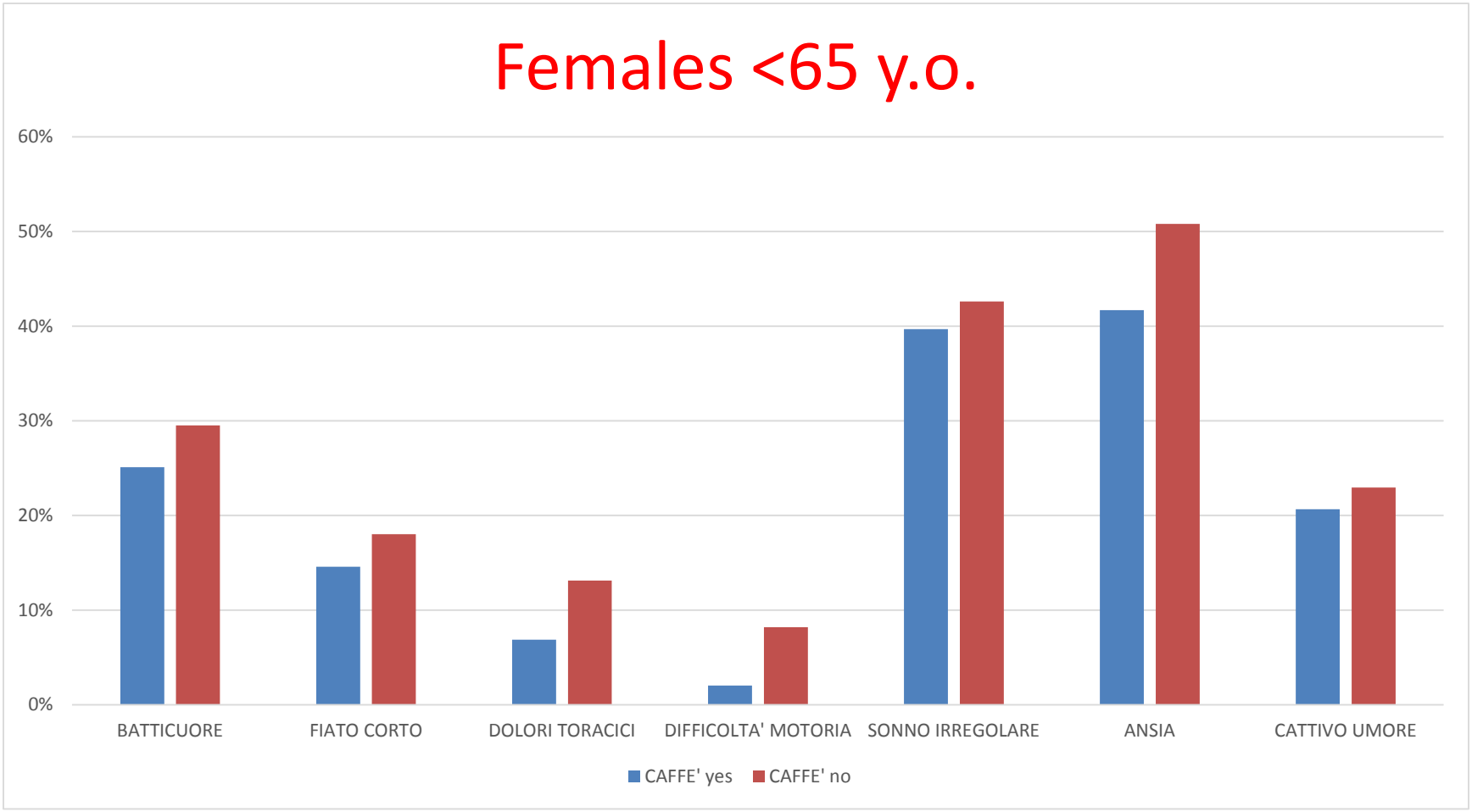
COFFEE AND SLEEPLESSNESS



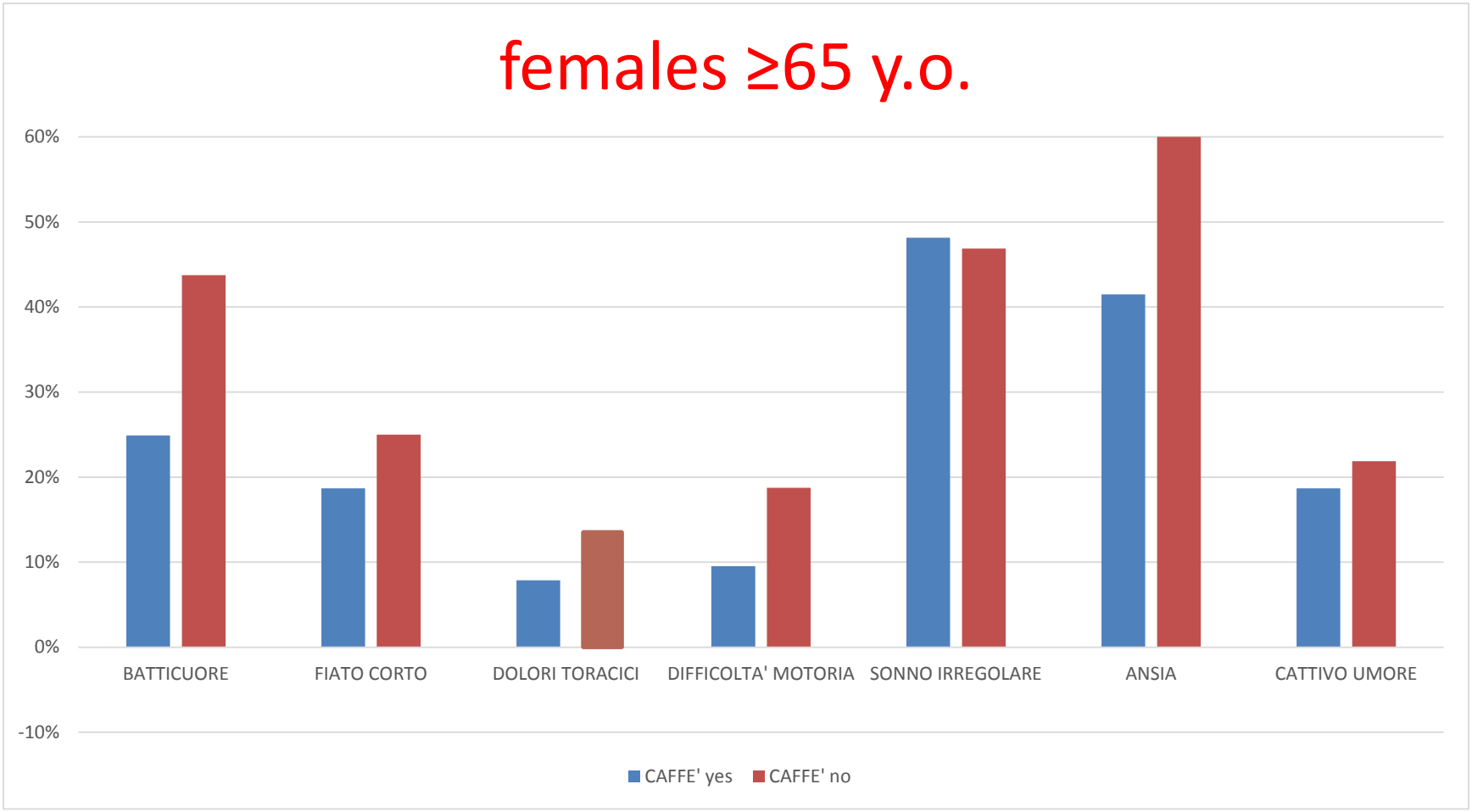




Coffee and Symptons



Coffee and Symptons



COFFEE IS THE HEALTH BEVERAGE

THE Health Beverage!!!

2016 Only

	Caffè no	±	Caffè no (%)	Caffè yes	±	Caffè yes (%)	p
N	148		13,8	923		86,2	
colesterolo	228	34		222	41		0,09
trigliceridi	135	74		139	74		0,54
glicemia	104	20		103	23		0,62
batticuore	27		18,2	181		19,6	0,79
fiato corto	36		24,3	133		14,4	0,03
dolori torace	15		10,1	72		7,8	0,42
difficoltà motoria	10		6,8	61		6,6	0,91
sonno irrregolare	60		40,5	350		37,9	0,60
ansia	39		26,4	333		36,1	0,03
cattivo umore	20		13,5	157		17,0	0,35

Totale : 1071

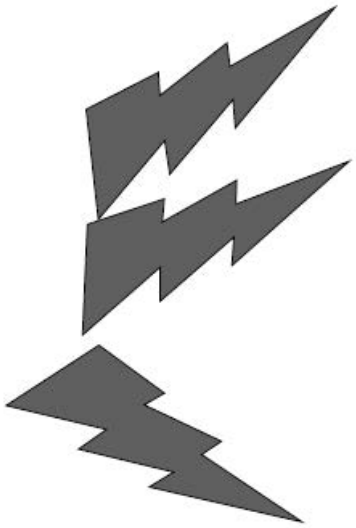
2016 Only

M1	MALE : 25-65
F1	FEMALE : 25-65
M2	MALE > 65
F2	FRMALE > 65

	M1	% M1	M2	% M2	F1	% F1	F2	% F2
N	201		196		296		227	
REGULAR	177	88,1	166	84,7	247	83,4	193	85,0
DECAF.	29	14,4	20	10,2	45	15,2	31	13,7
MOKA	124	61,7	130	66,3	172	58,1	139	61,2
CAPSULE	44	21,9	38	19,4	65	22,0	39	17,2
ESPRESSO	75	37,3	64	32,7	116	39,2	88	38,8
OTHERS	3	1,5	4	2,0	5	1,7	1	0,4
CUPS 1	118	58,7	106	54,1	171	57,8	139	61,2
CUPS 1-3	61	30,3	70	35,7	97	32,8	70	30,8
CUPS 3-5	21	10,4	17	8,7	18	6,1	13	5,7
NO SUGAR	45	22,4	39	19,9	65	22,0	56	24,7
WITHE SUGAR	127	63,2	124	63,3	179	60,5	133	58,6
BROWN SUGAR	13	6,5	16	8,2	17	5,7	18	7,9
LIGHT CALORIES	15	7,5	21	10,7	29	9,8	18	7,9

There is <u>exciting</u> news to share on disease reduction…

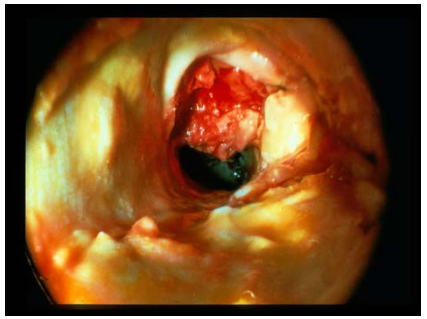
3-6 cups/day

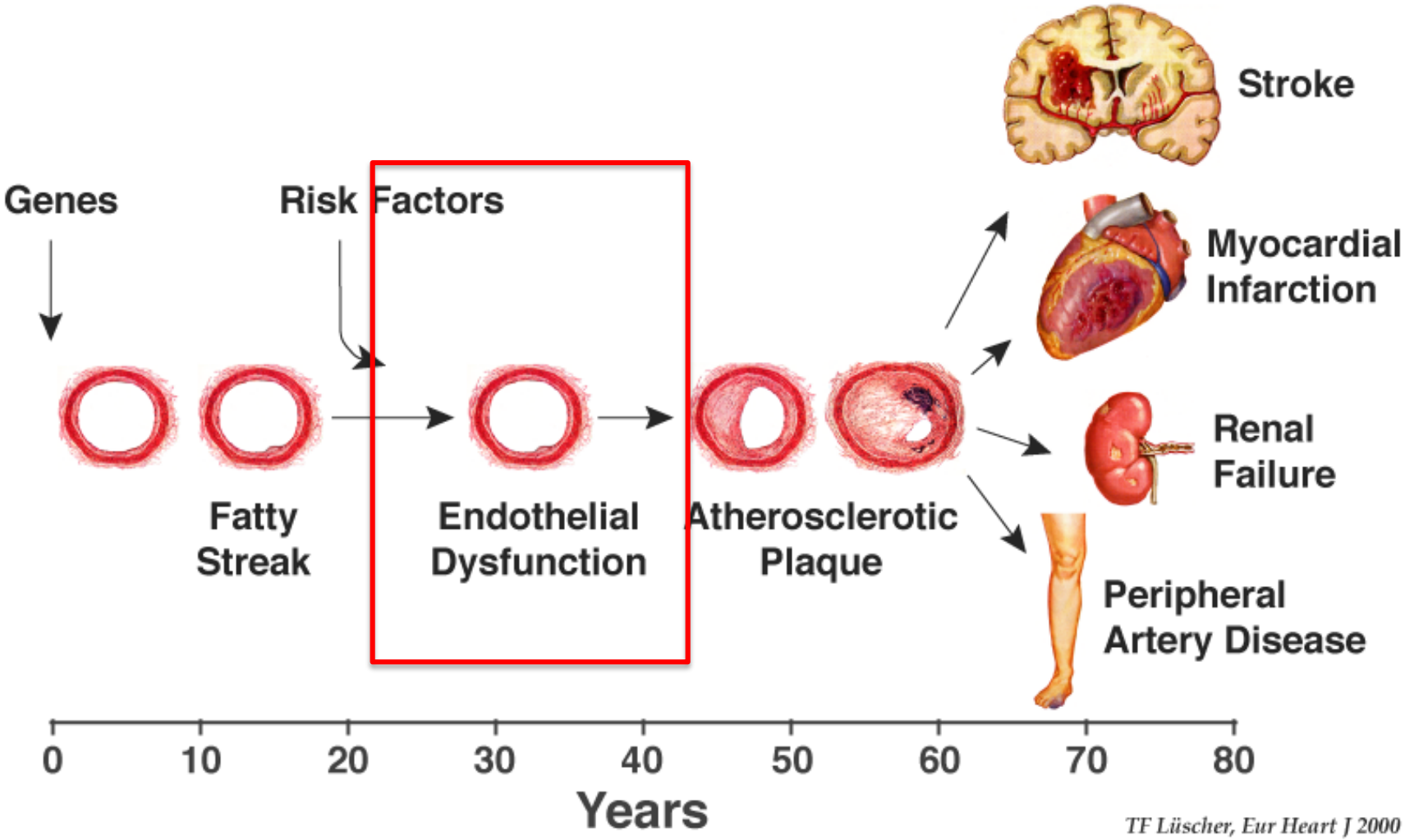


- Alzheimer's
- Parkinson's
- Type II Diabetes
- Cardiovascular
- Cancer
  - Liver
  - Breast
  - Endometrial
  - Esophageal
  - Colorectal
  - Skin

	Caffè no	±	Caffè no (%)	Caffè yes	±	Caffè yes (%)	p	ss
N	148		13,81886088	923		86,18113912		
età	63,5	15		61,3	13,8		0,08	
F	77		52,02702703	523		56,66305525	0,34	
peso (Kg)	72,1	13,5		70	14,8		0,12	
altezza (m)	1,7	0,1		1,7	0,1		≥ 0,99	
BMI (kg/m2)	25,4	3,7		25,5	5,3		≥ 0,99	
press. max (mm Hg)	147	23		134	20		< 0,0001	ss
press. Min (mm Hg)	82	12		78	11		< 0,0001	ss
circonf vita	96	12		93	12			
freq. Cardiaca	71	12		74	12			

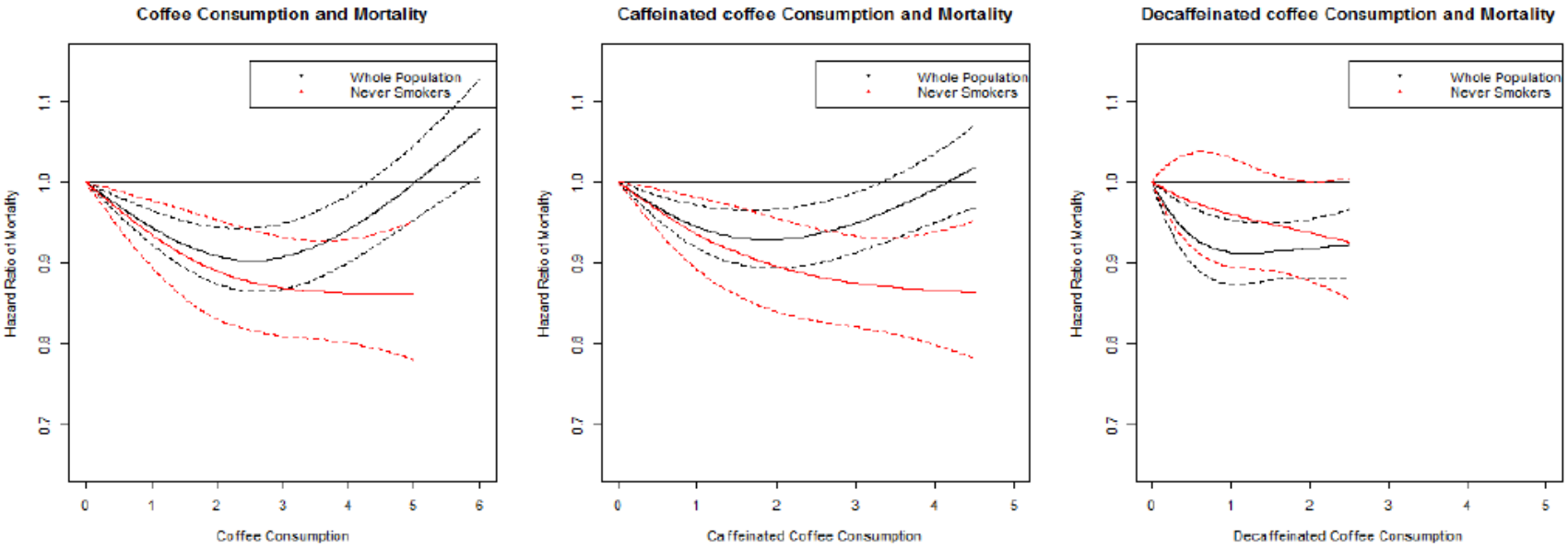
The Pathogenesis of Atherosclerosis – *Vascular function*





TF Lüscher, Eur Heart J 2000

Sensitivity analyses for the association between coffee consumption and total mortality in the overall population.



(*Circulation*. 2014;129:643-659.)

About …Coffee Properties

- **Are we looking for the right answers from the right persons ?**
- **ARTERIAL HYPERTENSION :**

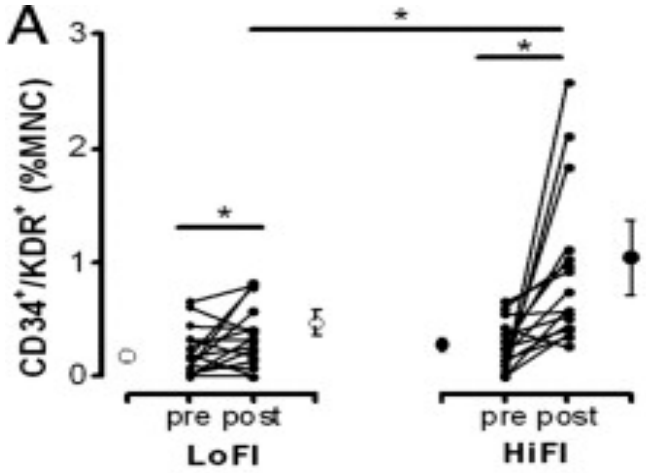
  Young people with a very severe disease
- **CORONARY ARTERY DISEASE:**

  People with a recent Myocardial Infarction associated to a large number of RISK FACTORS….after 3,5 years of F.U.

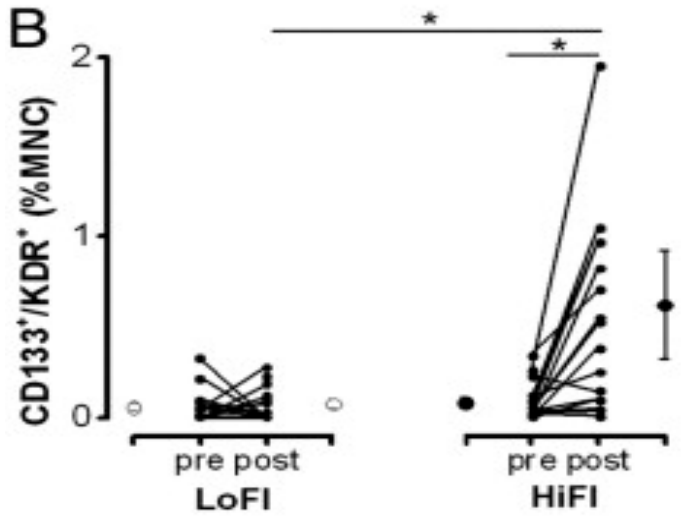
4 Major Questions

- 1) Does a non linear lelatioship exists between coffee consumption and risk of mortality ?
- 2) If a non linear association exists ,is it a truly effect of coffee? Or is a confounding effct of Smoking?
- 3) What are the associations of cooffe consumption with risks of cause specific of mortality?
- 4) Caffeinated and decaffeinated cooffe : do they have similar associations with the risk of mortality?

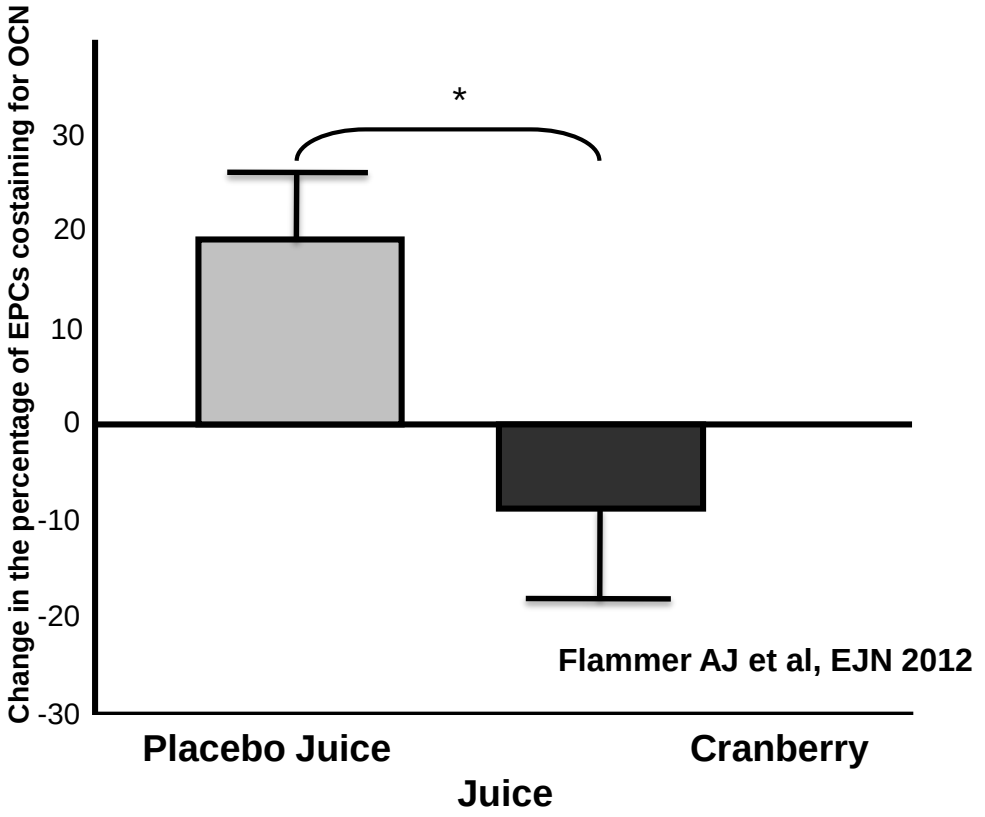
Mobilization of EPCs in Patients with CAD after high flavanol intake



Heiss C, et all, JACC 2010



Flavanol-rich drink (Cranberry juice) lowers the fraction of osteogenic progenitors



- Cranberry Juice (n=31), as compared to placebo (n=37), induced a decrease in the fraction of EPCs co-expressing OCN (-8.64 ±

Clinical evidence: Acute coffee Ingestion and its impact on plasma HDL-cholesterol

Cheung RJ, Gupta EK, Ito MK (2005) Ann Pharmacother 39:1209-13

In a randomized cross-over study, 26 men and 14 women consumed **6 oz (180 mL) of black coffee (visit 1) or coffee with nondairy creamer and sugar (visit 2).** Blood samples were taken within 30–60 min of coffee consumption.

Table 2. Lipid Levels at Baseline and After Black Coffee Consumption

Lipid Parameter	Baseline Level, mg/dL[a] (median)	Post-Coffee Level, mg/dL[a] (median)	p Value	Change from Baseline[a] (%)
TC	188.2 ± 38.1 (184)	191.3 ± 39.9 (183)	0.019	1.6 ± 3.9
LDL-C	113.7 ± 35.1 (113.5)	115.6 ± 36.6 (112)	0.096[b]	1.6 ± 5.0
HDL-C	43.2 ± 12.3 (44)	44.8 ± 12.9 (45.5)	<0.001	4.3 ± 7.3
Triglycerides	188.2 ± 293.8 (105.5)	176.3 ± 246.3 (110)	0.122[b]	–1.5 ± 9.8
Non–HDL-C	144.8 ± 39.3 (142.5)	146.7 ± 39.7 (140.5)	0.089[b]	1.5 ± 4.6

HDL-C = high-density lipoprotein cholesterol; LDL-C = low-density lipoprotein cholesterol; TC = total cholesterol.
[a]Mean ± SD.
[b]Wilcoxon signed-rank test performed.

Table 3. Lipid Levels at Baseline and After Consumption of Coffee with Creamer and Sugar

Lipid Parameter	Baseline Level, mg/dL[a] (median)	Post-Coffee Level, mg/dL[a] (median)	p Value	Change from Baseline[a] (%)
TC	186.6 ± 39.8 (181.5)	186.8 ± 39.1 (179.5)	0.872	0.2 ± 3.3
LDL-C	112.6 ± 34.4 (105.5)	113.8 ± 34.0 (107)	0.115[b]	1.5 ± 4.5
HDL-C	44.7 ± 12.4 (43.5)	45.4 ± 12.8 (43)	0.055[b]	1.5 ± 4.5
Triglycerides	145.6 ± 123.7 (101.5)	136.3 ± 107.1 (96)	0.014[b]	–2.5 ± 10.4
Non–HDL-C	141.9 ± 38.7 (135)	141.4 ± 37.9 (135.5)	0.596	–0.2 ± 3.7

The effect of acute cafè latte ingestion on fasting serum lipid levels in healthy individuals

Zargar A et al. 2013, J Clin Lipidol 7:165–168

In this open-label study, the acute effect of a **12-oz (360 mL) cafè latte** (2% milk) on serum lipids after a 10-hour fast was studied in 34 females and 15 males.

Lipid parameters and glucose, mg/dL	Pre-latté mean ± SD (median)	Post-latté mean ± SD (median)	% Change mean ± SD	*P*-value
Total cholesterol	171.2 ± 28.8 (169.0)	173.1 ± 30.7 (169.0)	1.03 ± 3.8*	.054
LDL-C	96.7 ± 22.1 (96.5)	98.2 ± 24.4 (96.8)	1.8 ± 8.3*	.761
HDL-C	54.4 ± 12.7 (51.0)	56.4 ± 14.5 (54.0)	3.8 ± 10.5*	.015
TG	101.3 ± 75.2 (76.0)	93.2 ± 74.2 (75.0)	−6.1 ± 20.3†	.002
Non-HDL-C	116.9 ± 28.9 (113.0)	116.4 ± 31.1 (110.0)	−0.78 ± 6.2*	.61
Fasting blood glucose	87.2 ± 7.0 (89.0)	97.3 ± 12.9 (98.0)	11.8 ± 13.4*	<.001

HDL-C, high-density lipoprotein cholesterol; LDL-C, low-density lipoprotein cholesterol; SD, standard deviation, TG, triglycerides.
*Normality test (Shapiro-Wilk) passed, Paired *t*-test used.
†Normality test (Shapiro-Wilk) failed, Wilcoxon signed rank test used.

Bolus intake of 6 to 12 oz of coffee results in an about 4 % increase in HDL-cholesterol

↓

Effect of long-term consumption ?

Annals of Internal Medicine

ORIGINAL RESEARCH

Association of Coffee Consumption With Total and Cause-Specific Mortality Among Nonwhite Populations

Song-Yi Park, PhD; Neal D. Freedman, PhD; Christopher A. Haiman, ScD; Loïc Le Marchand, MD, PhD; Lynne R. Wilkens, DrPH; and Veronica Wendy Setiawan, PhD

Background: Coffee consumption has been associated with reduced risk for death in prospective cohort studies; however, data in nonwhites are sparse.

Objective: To examine the association of coffee consumption with risk for total and cause-specific death.

Design: The MEC (Multiethnic Cohort), a prospective population-based cohort study established between 1993 and 1996.

Setting: Hawaii and Los Angeles, California.

Participants: 185 855 African Americans, Native Hawaiians, Japanese Americans, Latinos, and whites aged 45 to 75 years at recruitment.

Measurements: Outcomes were total and cause-specific mortality between 1993 and 2012. Coffee intake was assessed at baseline by means of a validated food-frequency questionnaire.

Results: 58 397 participants died during 3 195 484 person-years of follow-up (average follow-up, 16.2 years). Compared with drinking no coffee, coffee consumption was associated with lower total mortality after adjustment for smoking and other potential confounders (1 cup per day: hazard ratio [HR], 0.88 [95% CI, 0.85 to 0.91]; 2 to 3 cups per day: HR, 0.82 [CI, 0.79 to 0.86]; ≥4 cups per day: HR, 0.82 [CI, 0.78 to 0.87]; P for trend < 0.001). Trends were similar between caffeinated and decaffeinated coffee. Significant inverse associations were observed in 4 ethnic groups; the association in Native Hawaiians did not reach statistical significance. Inverse associations were also seen in never-smokers, younger participants (<55 years), and those who had not previously reported a chronic disease. Among examined end points, inverse associations were observed for deaths due to heart disease, cancer, respiratory disease, stroke, diabetes, and kidney disease.

Limitation: Unmeasured confounding and measurement error, although sensitivity analysis suggested that neither was likely to affect results.

Conclusion: Higher consumption of coffee was associated with lower risk for death in African Americans, Japanese Americans, Latinos, and whites.

Primary Funding Source: National Cancer Institute.

Ann Intern Med. doi:10.7326/M16-2472 **Annals.org**

For author affiliations, see end of text.

This article was published at Annals.org on 11 July 2017.

Annals of Internal Medicine ORIGINAL RESEARCH

Coffee Drinking and Mortality in 10 European Countries

A Multinational Cohort Study

Marc J. Gunter, PhD*; Neil Murphy, PhD*; Amanda J. Cross, PhD; Laure Dossus, PhD; Laureen Dartois, PhD; Guy Fagherazzi, PhD; Rudolf Kaaks, PhD; Tilman Kühn, PhD; Heiner Boeing, PhD; Krasimira Aleksandrova, PhD; Anne Tjønneland, MD, PhD; Anja Olsen, PhD; Kim Overvad, MD, PhD; Sofus Christian Larsen, PhD; Maria Luisa Redondo Cornejo, PhD; Antonio Agudo, PhD; Maria José Sánchez Pérez, MD, PhD; Jone M. Altzibar, PhD; Carmen Navarro, MD, PhD; Eva Ardanaz, MD, PhD; Kay-Tee Khaw, MB BChir; Adam Butterworth, PhD; Kathryn E. Bradbury, PhD; Antonia Trichopoulou, MD, PhD; Pagona Lagiou, MD, PhD; Dimitrios Trichopoulos, MD, PhD†; Domenico Palli, MD; Sara Grioni, BSc; Paolo Vineis, MD, MPH; Salvatore Panico, MD, MSc; Rosario Tumino, MD; Bas Bueno-de-Mesquita, MD, PhD; Peter Siersema, MD, PhD; Max Loenders, PhD; Joline W.J. Beulens, PhD; Cuno U. Uiterwaal, MD, PhD; Peter Wallström, MD, PhD; Lena Maria Nilsson, PhD; Rikard Landberg, PhD; Elisabete Weiderpass, MD, PhD; Guri Skeie, PhD; Tonje Braaten, PhD; Paul Brennan, PhD; Idlir Licaj, PhD; David C. Muller, PhD; Rashmi Sinha, PhD; Nick Wareham, PhD, MBBS; and Elio Riboli, MD, ScM

Background: The relationship between coffee consumption and mortality in diverse European populations with variable coffee preparation methods is unclear.

Objective: To examine whether coffee consumption is associated with all-cause and cause-specific mortality.

Design: Prospective cohort study.

Setting: 10 European countries.

Participants: 521 330 persons enrolled in EPIC (European Prospective Investigation into Cancer and Nutrition).

Measurements: Hazard ratios (HRs) and 95% CIs estimated using multivariable Cox proportional hazards models. The association of coffee consumption with serum biomarkers of liver function, inflammation, and metabolic health was evaluated in the EPIC Biomarkers subcohort (n = 14 800).

Results: During a mean follow-up of 16.4 years, 41 693 deaths occurred. Compared with nonconsumers, participants in the highest quartile of coffee consumption had statistically significantly lower all-cause mortality (men: HR, 0.88 [95% CI, 0.82 to 0.95]; P for trend < 0.001; women: HR, 0.93 [CI, 0.87 to 0.98]; P for trend = 0.009). Inverse associations were also observed for digestive disease mortality for men (HR, 0.41 [CI, 0.32 to 0.54]; P for trend < 0.001) and women (HR, 0.60 [CI, 0.46 to 0.78]; P for trend < 0.001). Among women, there was a statistically significant inverse association of coffee drinking with circulatory disease mortality (HR, 0.78 [CI, 0.68 to 0.90]; P for trend < 0.001) and cerebrovascular disease mortality (HR, 0.70 [CI, 0.55 to 0.90]; P for trend = 0.002) and a positive association with ovarian cancer mortality (HR, 1.31 [CI, 1.07 to 1.61]; P for trend = 0.015). In the EPIC Biomarkers subcohort, higher coffee consumption was associated with lower serum alkaline phosphatase; alanine aminotransferase; aspartate aminotransferase; γ-glutamyltransferase; and, in women, C-reactive protein, lipoprotein(a), and glycated hemoglobin levels.

Limitations: Reverse causality may have biased the findings; however, results did not differ after exclusion of participants who died within 8 years of baseline. Coffee-drinking habits were assessed only once.

Conclusion: Coffee drinking was associated with reduced risk for death from various causes. This relationship did not vary by country.

Primary Funding Source: European Commission Directorate-General for Health and Consumers and International Agency for Research on Cancer.

Ann Intern Med. doi:10.7326/M16-2945 Annals.org

For author affiliations, see end of text.

This article was published at Annals.org on 11 July 2017.

* Drs. Gunter and Murphy contributed equally to this work.

† Deceased.

In Summary……

In summary, our results suggest that higher levels of coffee drinking are associated with lower risk for death from various causes, specifically digestive and circulatory diseases. The consistency of the results of this European study versus those from other cohort studies around the world, as well as biomarker data indicating that coffee drinkers have a more favorable liver function and inflammatory biomarker profile than non-coffee drinkers or those with low consumption, support the hypothesis that coffee may confer health benefits. Because coffee consumption is so widespread and intakes are modifiable, its potentially beneficial clinical implications should be carefully considered.

In summary, higher coffee consumption was associated with lower risk for all-cause death and death from heart disease, cancer, respiratory disease, stroke, diabetes, and kidney disease. Inverse associations were found in African Americans, Japanese Americans, Latinos, and whites; never-smokers, former smokers, and current smokers; those with preexisting heart disease or cancer; and healthy participants. Our findings support the recent dietary guidelines from the U.S. Department of Agriculture (33), which indicate that moderate coffee consumption can be integrated into a healthy diet and lifestyle, by confirming an inverse association with mortality and suggesting that association's generalizability to different racial/ethnic groups.

Co Co Tea 2017

Fourth International Congress on

Cocoa Coffee and Tea

Turin, Italy
25–28 June 2017

COFFEE DRINKING AND CARDIOVASCULAR RISK IN PIEMONTE REGION

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