2019 INTER-AFRICAN COFFEE ORGANISATION ANNUAL MEETINGS
7TH AFRICAN COFFEE SYMPOSIUM
NAIROBI - KENYA
COFFEE CONSUMPTION, AND CARDIOVASCULAR AND DISEASES

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The history of coffee goes at least as far back as the 10th century.

2.25 billion cups of coffee are consumed each day worldwide.

2\textsuperscript{nd} most consumed drink in the world after water.
• High consumption of coffee in the world → substantial effect on public health (?)

• Interest of researchers and clinicians

• More than 20,000 publications to date !!.
« Coffee » in PUBMED

September 2019: 14 900 results

November 2019: 15 170 results
« Coffee » in PUBMED
Bioactive Components in Coffee

Coffee and cardiovascular diseases
Bioactive Components in Coffee
Bioactive Components in Coffee

• Coffee: complex mixture of over 1000 bioactive compounds –
• Biochemistry of coffee has been documented extensively.

• Profile of compounds depends on coffee variety, roasting, and processing.
• Key active compounds:
  caffeine,
  chlorogenic acids
  diterpenes (cafestol and kahweol).
« Coffee »: a chemical metamorphosis

Unroasted green bean
Type of bean (Arabica versus Robusta)

Degree of roasting, preparation method, brew type.

Influence on the biochemical composition of the cup.

Individual’s genotype and gut microbiome: determine the bioavailability and type of coffee metabolites
Bioactive Components in Coffee

Coffee and cardiovascular diseases
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Ding M, Bhupathiraju SN, Satija A, van Dam RM, Hu FB. Long-Term Coffee Consumption and Risk of Cardiovascular Disease A Systematic Review and a Dose-Response Meta-Analysis of Prospective Cohort Studies. Circulation. 2014;129:643-659
Coffee and blood pressure

- $y = 158.53$
- $R^2 = 0$
- $y = -0.3382x + 108.1$
- $R^2 = 0.2323$

Pression artérielle systolique: $y = 158.53$
Pression artérielle diastolique: $y = -0.3382x + 108.1$
Linéaire (Pression artérielle systolique): $R^2 = 0$
Linéaire (Pression artérielle diastolique): $R^2 = 0.2323$
Coffee and blood pressure

“Low-quality evidence **did not show any statistically significant effect of coffee consumption on BP or the risk of hypertension.**

Given the quality of the currently available evidence, **no recommendation can be made for or against coffee consumption**
Coffee and palpitations

Coffe

↑ catecholamines release

TACHYCARDIA

Antagonism of adenosin
Coffee consumption and type 2 diabetes

Figure 3—Dose-response analysis of the association between coffee consumption and risk of type 2 diabetes. For the overall association between coffee consumption and risk of diabetes, $P < 0.001$; for the goodness of fit of the model, $P = 0.14$; and for the likelihood ratio test compared with the nested linear model, $P < 0.001$. 

Coffee and cardiovascular diseases
Filtered coffee or unfiltered coffee?

Unfiltered coffee increase blood lipids levels, filtered coffee do not.
Coffee and cardiovascular diseases

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Coffee and cardiovascular diseases

Caffeinated versus decaffeinated coffee?

- Dependant of available date
- Slight difference for cardiovascular diseases
- No difference for type 2 Diabetes
TAKE HOME MESSAGES