



Dietary intake of caffeine

**EFSA STAKEHOLDERS MEETING
ON THE SAFETY OF CAFFEINE
Brussels, 5 March 2015**

www.efsa.europa.eu

DIETARY INTAKE ASSESSMENT



Occurrence
levels

Food
Terminology

Food
consumption

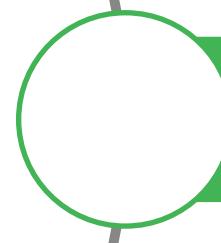
Intake
Assessment



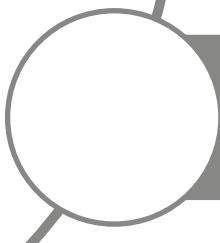
SUMMARY



Caffeine levels in food and beverages



Food consumption data in EFSA



Caffeine intake results



CAFFEINE LEVELS IN FOOD AND BEVERAGES

Caffeine sources:

- Chocolate,
- Coffee,
- Tea,
- Cola beverages (caffeinated), and
- Energy drinks



Caffeine concentration levels were retrieved from:

- peer-review scientific papers,
- national reports, and
- web sites.



Products in which chocolate occurs as a minor constituent, e.g. "chocolate biscuits", were not considered due to the relatively low and highly variable caffeine levels.





CAFFEINE LEVELS IN FOOD AND BEVERAGES

Fitt E., Pell D. and Cole D., 2013. Assessing caffeine intake in the United Kingdom diet. *Food Chemistry*, 140, 421-426.

This paper reports information on caffeine levels from:

- 400 samples prepared at home, in workplaces or purchased in retail settings of:
 - teas (e.g. loose leaves, bags, vending machines, and instant tea), and
 - coffees (e.g. filter coffee, vending machines, espresso, and instant coffee)
- 162 samples from another UK survey (MAFF, 1998).
- websites of manufacturers for different products and brands



COFFEE



Caffeine levels (mg/L or mg/kg)

	Used in the opinion	Minimum retrieved	Maximum retrieved
Coffee drink	445	320	690
Instant coffee, ready to drink	445	300	690
Cappuccino	272	250	315
Espresso coffee	1,340	713	1,897
Decaffeinated and imitates	21	21	29





CHOCOLATE

Caffeine levels (mg/L or mg/kg)



	Used in the opinion	Minimum retrieved	Maximum retrieved
Dark chocolate	525	340	690
Chocolate bar	111	111	180
Milk chocolate		150	183
Chocolate snacks	168	150	180
Cocoa beverage		15	168

Products	Cocoa beverage equivalent per g of product
Cocoa beverage, Hot chocolate and Cocoa drink	1 grams
Cocoa powder or Cocoa mass	60 grams
Cocoa beverage-preparation, powder	15 grams



TEA, COLA BEVERAGES AND ENERGY DRINKS

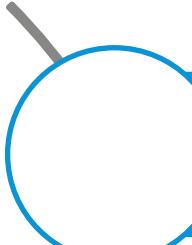
Caffeine levels (mg/L or mg/kg)

	Used in the opinion	Minimum retrieved	Maximum retrieved
Black tea	220		
Green tea	151	100	320
Tea (unspecified)	165		
Tea, decaffeinated	25		25
Cola beverages (caffeinated)	108	79	130
Energy drinks	320	150	335





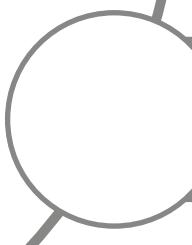
SUMMARY



Caffeine levels in food and beverages



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Caffeine intake results

COMPREHENSIVE CONSUMPTION DATA

The EFSA Comprehensive European food consumption database contains data:

- 24-hour recall or dietary record method
- data collected at individual level
- most recent data within each country
- random sample at national level
 - different age classes, from infants to elderly
 - special population groups



The screenshot shows the EFSA website with a navigation bar at the top. The main content area is titled 'The EFSA Comprehensive European Food Consumption Database'. It features a blue sidebar with links to 'Advisory Forum & scientific cooperation', 'Animal health & welfare', 'Biological hazards', 'Biological monitoring', 'Contaminants', 'Evidence Management', 'About us', and 'Topics A-Z'. The main text area describes the database as a source of information on food consumption across the European Union, mentioning its role in risk assessment and its relevance for other fields of EFSA's work. It also links to 'Guidance for the use of the EFSA Comprehensive European Food Consumption Database' and notes the use of 'FoodEx' for categorising foods.



MAGNITUDE OF THE DATABASE

Number of	1 st release	2 nd release
Dietary surveys	32	49
Member States	22	23
Subjects	66,492	93,570
Different foods	63,495	125,531
Different FoodEx1 codes	1,504	1,573
Different FoodEx2 codes	-	1,787
Consumption records	6,309,489	10,426,602



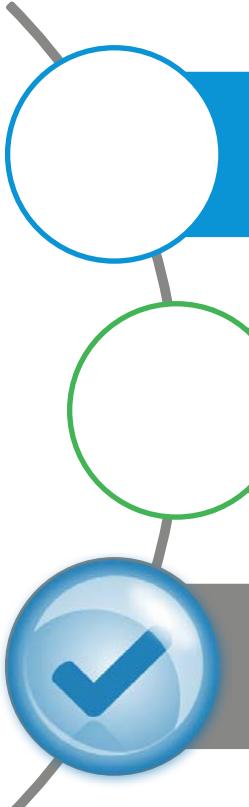
AGE CLASSES

Age class	Age range (years)	Number of surveys *	Number of countries*
Infants	0 – 1	6	6
Toddlers	1 – 3	11 (10)	11 (9)
Children	3 - 10	19 (17)	19 (14)
Adolescents	10 - 18	19 (16)	19 (13)
Adults	18 - 65	22 (16)	22 (15)
Elderly	65 - 75	15 (13)	15 (12)
Very elderly	> 75	13 (11)	13 (11)
Special population group		2 (2)	2 (2)

* In parentheses only surveys with more than one day per subject



SUMMARY

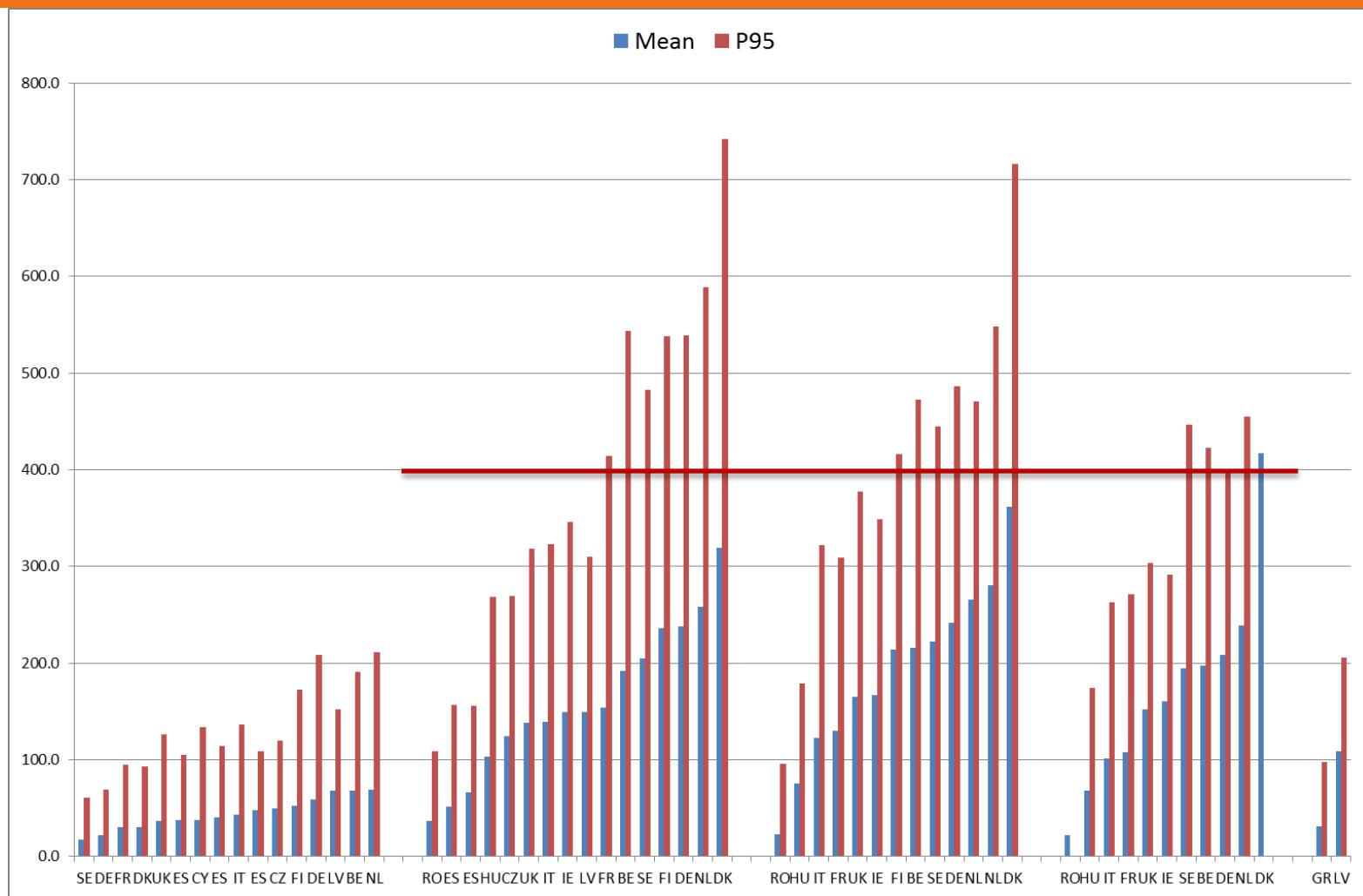


Caffeine levels in food and beverages

Food consumption data in EFSA

Caffeine intake results

ADULTS – INTAKE PER DAY



Adolescents

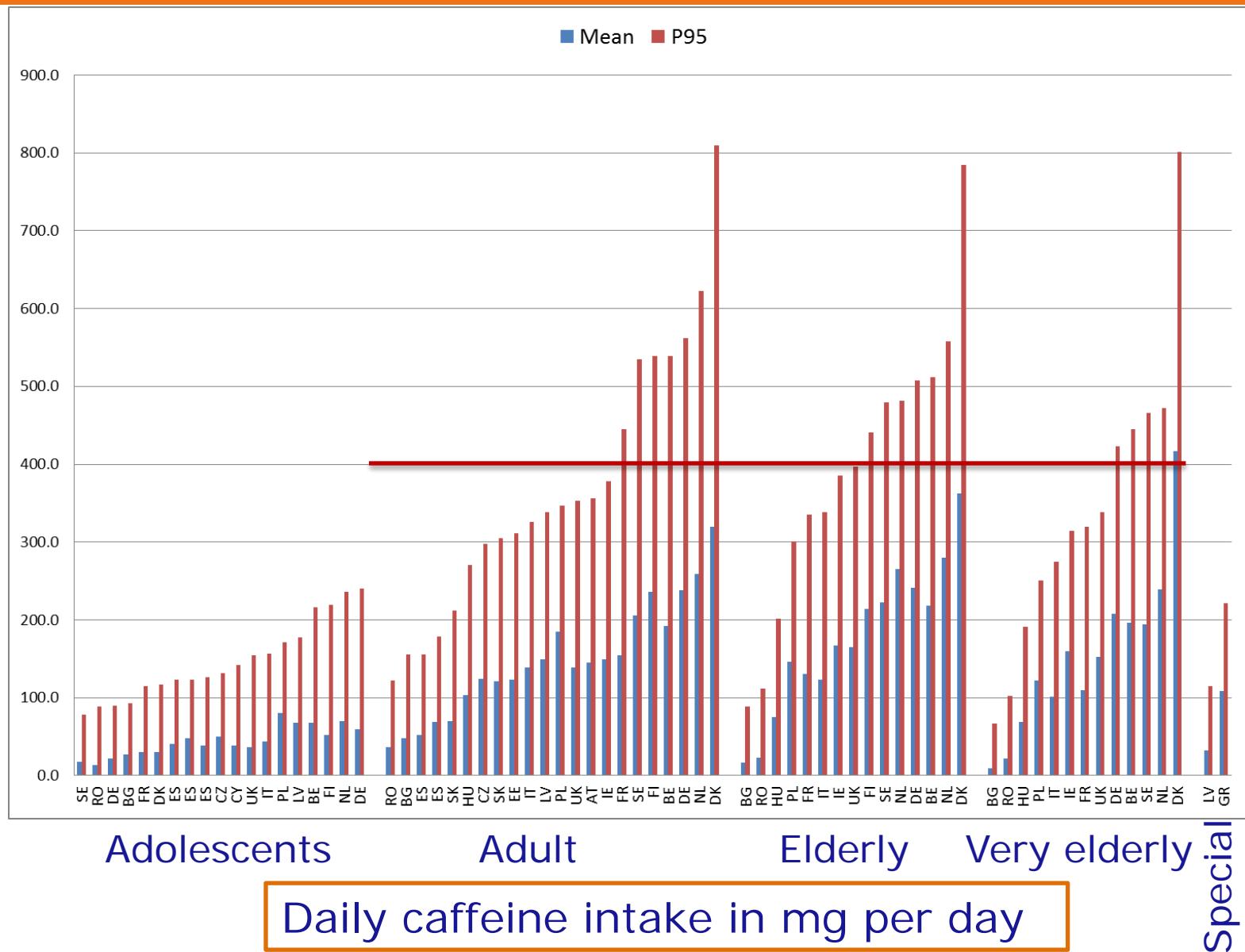
Adult

Elderly

Very elderly

Daily caffeine intake in mg per day

ADULTS – INTAKE ON A SINGLE DAY

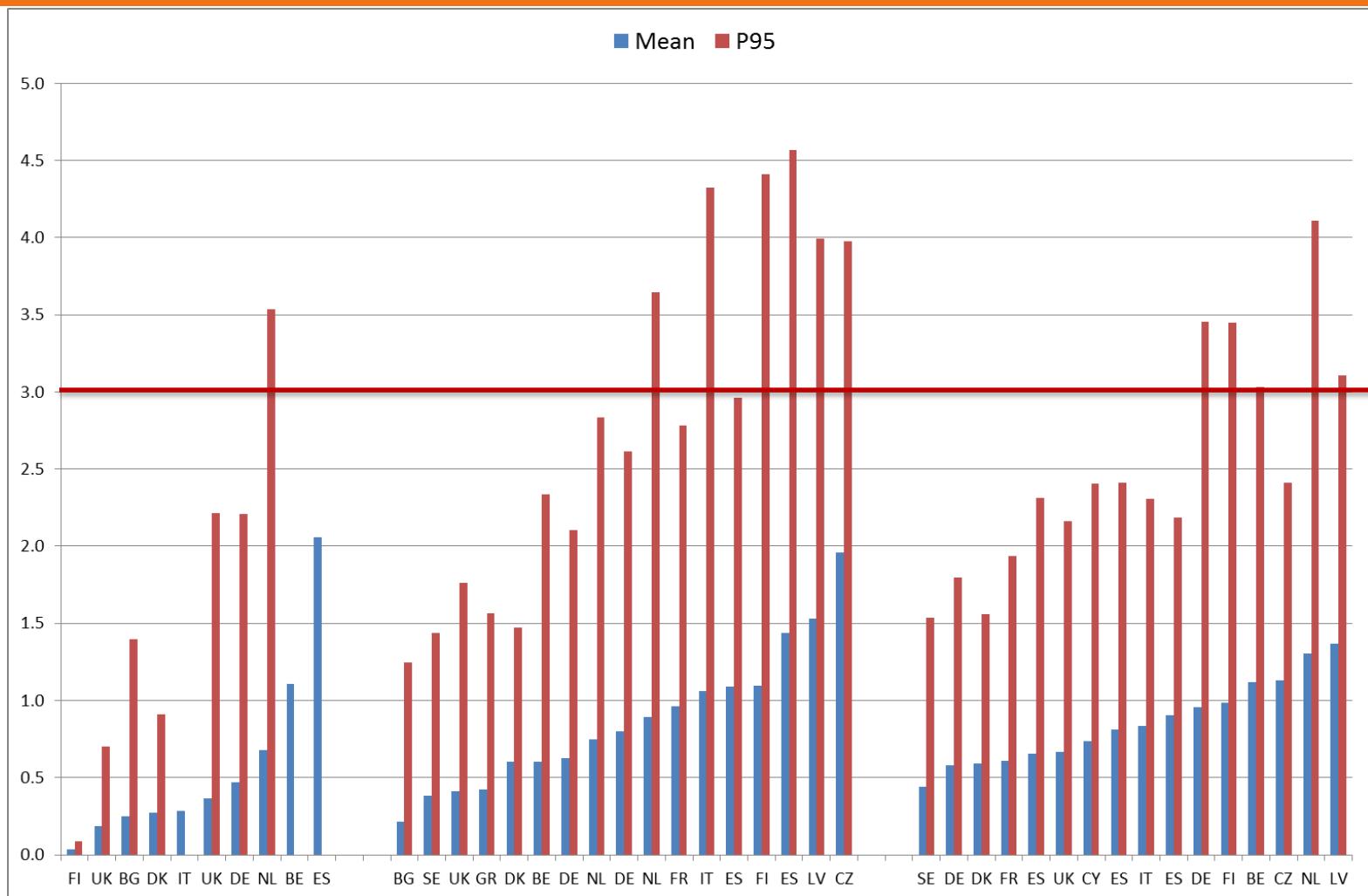


ADULTS - SOURCES

Special
Very
elderly
Elderly
Adults



CHILDREN – INTAKE PER KG BODY WEIGHT PER DAY

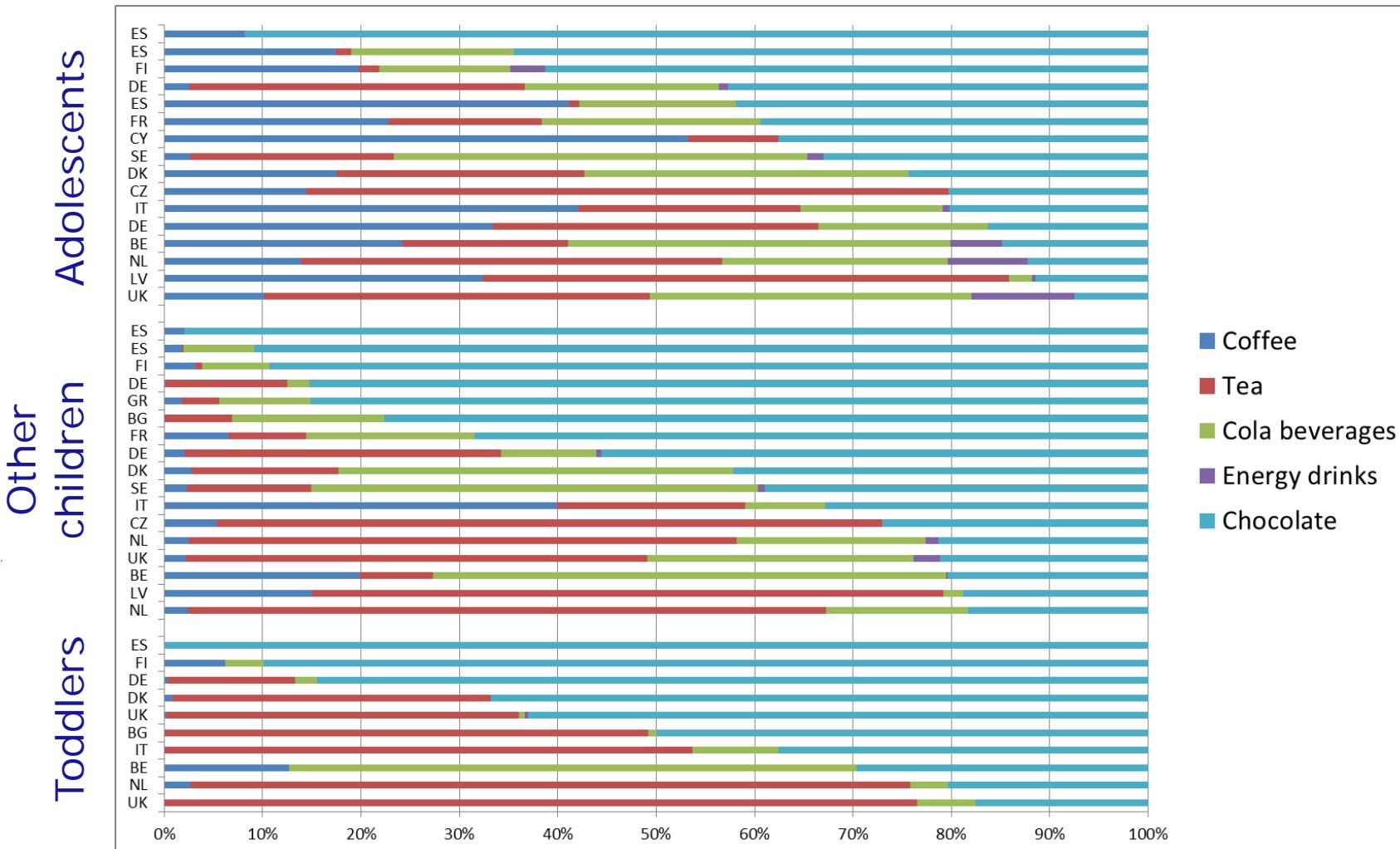


Toddlers

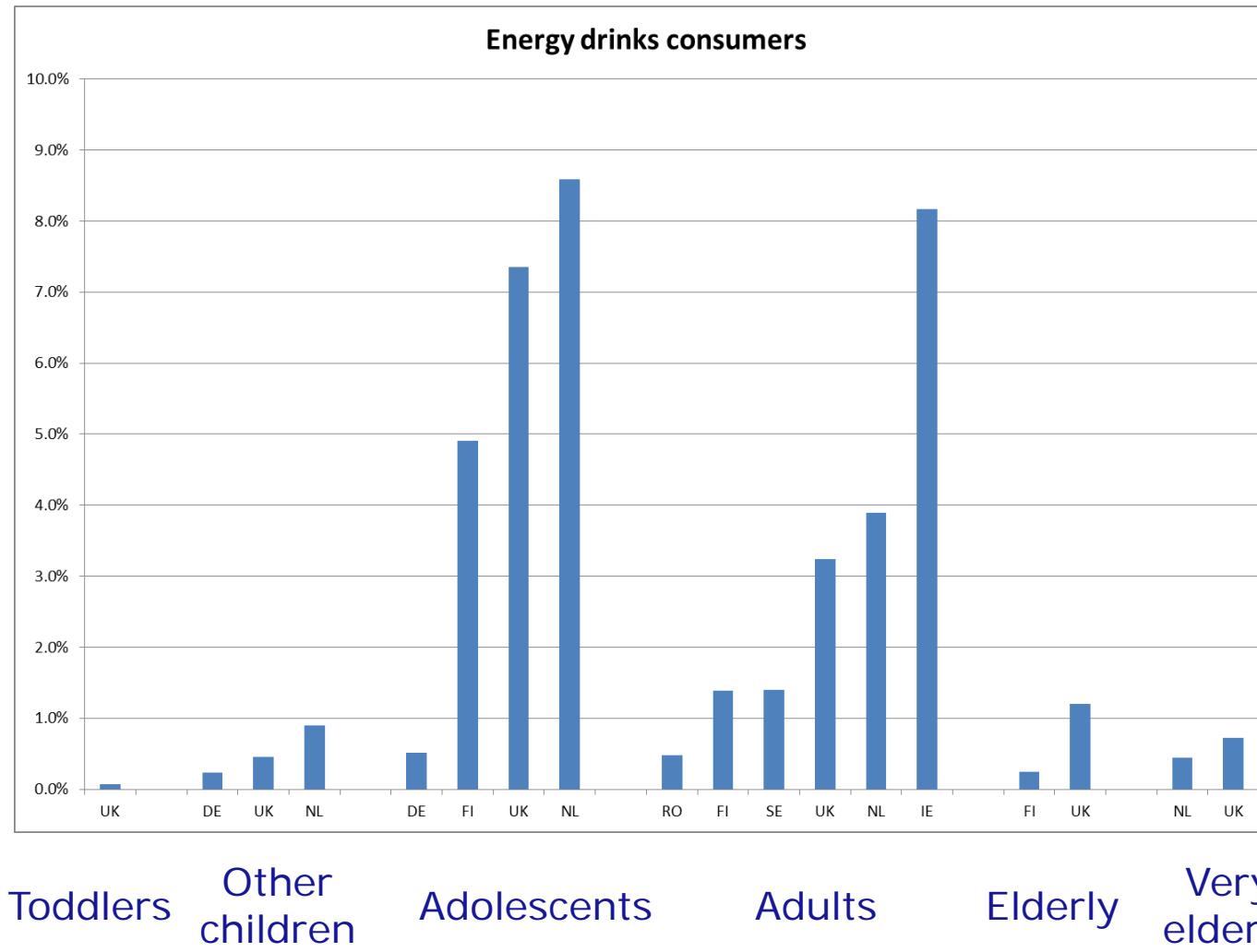
Other children

Adolescents

Daily caffeine intake in mg/kg body weight per day


 CHILDREN - SOURCES


ENERGY DRINK CONSUMERS



Based on the surveys coded in FoodEx2 in the EFSA Comprehensive European food consumption database.



A vertical decorative strip on the left side of the slide features a collage of images related to food and agriculture. It includes a black and white cow, a tray of brown eggs, a landscape with rolling green hills and a river, a close-up of purple grapes, and a basket of red strawberries. Below the collage, a dotted line of five-pointed stars descends from the top right towards the bottom left.

DIETARY INTAKES OF CAFFEINE

OPEN FOR DISCUSSION