NSW poisons Information Centre
the children's hospital at Westmead

[redacted]

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Food Standards Australia & New Zealand
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RE: SUBMISSION on Caffeine review proposal P1056

The NSW Poisons Information Centre (NSWPIC) provides emergency phone advice on the risk assessment and management of poisoning and suspected poisonings to health professionals and members of the public. NSWPIC provides a near full time service to callers from NSW, ACT and TAS while working with other state services to provide a joint after-hours service. This results in NSWPIC taking approximately 120,000 calls each year, half the calls made nationally to the 131126 number.

Calls to the NSWPIC in 2022 regarding exposures to caffeine, energy drinks and bodybuilding/weightloss products

Calls by formulation of caffeine containing product and relation of symptoms reported by the caller

Count of calls	Initial symptoms						
Caffeine content/formulation	Asymptomatic	Not Known if Related	Related Symptomatic	Symptoms Unknown	Unrelated Symptomatic	(blank)	Grand Total
coffee/tea	21	3	9				33
energy drink	19	5	30		2		56
FSSF	16	8	37	1			62
Other liquid			1				1
medication	12	5	32		1	1	51
powder			5				5
unk		3	4	1	1		9
(blank)							
Grand Total	68	24	117	2	4	1	217

*some bodybuilding and weight loss products do not contain caffeine

Calls to NSWPIC in 2022 by formulation of caffeine containing product and exposure type

Count of calls	Formulation of Caffeine							
Exposure type	coffee/tea	energy drink	FSSF	liquid	medication	powder	unk	Grand Total
Accidental	24	23	18		3		1	69
Adverse reaction	1	4	12					17
deliberate-self poisoning	2	12	4		38	1	1	58
Intentional: other	6	6	19	1	6	3	3	44
recreational		9	4		2			15
Therapeutic Error		1	5		1	1	1	9
Unknown					1		2	3
Workplace		1						1
(blank)							1	1
Grand Total	33	56	62	1	51	5	9	217

1. Do you consider there are risks to consumers from caffeine in the current market environment, under the current regulations? Please provide any evidence or relevant examples in detail to assist FSANZ in its assessment.

The NSWPIC believes there are still risks to consumers in the current market and regulatory environment. We receive many calls regarding over exposure to caffeine, often from young people or their parents/carers who were unaware the products they have used could cause the effects they experienced. Young people are using more than recommended or combining with other caffeine without realising the risk. Examples include the 17yr old male who had been using a prework out 4 times per week and used “a bit extra” today, resulting in vomiting, a heart rate of>140BPM requiring management in hospital, or the 18year old female who had a double shot of coffee in the morning, then used a new prework out supplement and soon after was shaking, agitated, anxious, and nauseous. In 2022 there were 166 calls to the NSWPIC regarding exposures to products containing caffeine (excluding medications), with more than half of these patients having symptoms consistent with caffeine toxicity. This includes all exposure types as caffeine containing products pose a risk of poisoning not just with appropriate therapeutic use and accidental paediatric exposure, but also intentional excessive use, recreational use, and deliberate self-poisonings.

The call numbers show an increase on previous years, with 79 in the first 6 months of 2022 and 87 in the second half of the year. This continues the increasing trend of exposures shown in previous reports using NSWPIC data.

Formulated supplementary sports foods (FSSF) are the most common exposure with more than half having symptoms at the time of the call. While energy drink exposure is still common, the exposure type is mostly accidental, and the level of intentional misuse or recreational use is less than for FSSF.

The number of calls and high proportion of symptomatic cases following FSSF and energy drink exposures contrast with exposures to caffeine in tea and coffee which has a lower incidence of symptomatic cases. Severity of these cases is similar to information on case severity which has been previously supplied using NSW PIC data. This shows an ongoing risk associated with use of caffeine in FSSF and energy drinks in the community, and information provided during the call often shows a lack of understanding about maximum or recommended doses which impacts people's ability to self-regulate caffeine use with these products compared with naturally occurring caffeine foods and beverages.

Concentrate caffeine powder is still being used, and the NSWPIC received 5 calls in 2022 regarding exposures to caffeine powder. One of these was a deliberate self-poisoning, 3 were exposures where it was used as a pre work out supplement which resulted in significant symptoms, but we have no outcome information. One call was an error in which the patient mistakenly consumed a teaspoon of the powder for another substance resulting in cardiac arrythmia (requiring hospital admission for monitoring and electrolyte replacement).

2. Do you have any thoughts on FSANZ's preferred option that if caffeine is prohibited to be added to all foods apart from cola-type drinks, FCBs and FSSF, that a premarket assessment is then required to add caffeine to any other food? If not, are there other approaches that would better address the problem?

The proposed change and preferred option of FSANZ, that caffeine is prohibited to be added to all foods apart from cola-type drinks, formulated caffeinated beverages (FCB) and FSSF & that a premarket assessment is then required to add caffeine to any other food, has merit in the reduction of overall risk of caffeine exposure in the community, but does not address the risk of severe acute life-threatening caffeine toxicity from concentrated products.

Prohibiting the addition of caffeine to other food products without a premarket assessment is excellent. We hope this will minimise new sources of caffeine inadvertently adding to the overall daily caffeine load and increased risk of stacking and acute toxicity as we often see calls with people using multiple products containing caffeine. Limiting the daily dose of caffeine in FSSF and improvement in labelling will help inform users of the caffeine content, but not reduce access to large amounts of caffeine or concentrated products. Improved labelling of FSSF to list the amount of caffeine per dose would be helpful not only in education but will also assist poisons centre staff in making an accurate risk assessment in cases of exposure, provided the dosages and amount of caffeine are clearly listed in mg, gm or mL of actual product. If the nutritional information is to be listed as per dosage reconstituted with fluid, it needs to also specify the weight of FSSF powder added to a specific volume to reconstitute the dose. Warning statements for FSSF should be the same as for formulated caffeinated beverages and include warning not only to avoid in children under 15 years and in pregnancy, but also while lactating and for those sensitive to caffeine.

Given the high proportion of intentional and recreational misuse that already exists in cases of FSSF caffeine toxicity, we would question the ability of improved labelling and dosage recommendation to impact the behaviour of misuse.

Removal of the amendment to prohibit the retail sale of a food in which caffeine is present in a concentration of 1% or more of the food if that food is a liquid and 5% or more of the food if that food is a solid or semi-solid food, is potentially dangerous. The proposed changes and preferred option of FSANZ does not prevent concentrated caffeine products from being sold freely as a food supplement, and poses serious risk of acute life-threatening caffeine toxicity, particularly with accidental paediatric exposures and deliberate self-poisoning. Concentrated supplements could comply with the proposed

legislation provided they have instructions and labelling which recommend no more than 200mg caffeine per day. There needs to be consideration of a concentration limit also being applied to coffee, tea and other foods with naturally occurring caffeine. There is evidence of concentrated coffee products causing toxicity. A 25mL bottle of coffee concentrate product labelled as containing 12 shots was ingested by each of 2 individuals, both of whom developed symptoms consistent with caffeine toxicity. If each "shot" contains equivalent to the FSANZ suggested 80-95mg caffeine, this would equate to 960-1140mg per bottle, or 3.8-4-5% w/v caffeine. Such a product would not be available to purchase under current regulations if it were not a coffee product.

The NSWPIC supports FSANZs preferred option of proposed regulatory changes as well as non-regulatory changes ONLY with the retention of the prohibition of sale of products containing caffeine in concentrations of >1% in liquid preparations and >5% in solid and semi-solid products.

Some limitations of our data include that the information is a single point in time, we do not collect outcome data. Subsequently a patient may be asymptomatic at the time of the call, particularly if calling immediately after an exposure, but we do not know if they later developed symptoms.