

Energy drinks

Do they really give you wings?

Introduction

In recent years, an increase in consumption of energy drinks containing caffeine has led to concern by teachers and parents of the possible effects of caffeine on children. They are afraid that caffeine will make their children behave in ways that are unusual or harmful for them.

This fact sheet provides information on caffeinated energy drinks and their effects.

What are energy drinks?

Energy drinks are drinks designed to increase stamina and improve physical performance. Some energy drinks are designed especially for elite athletes, but most are produced and marketed for the general community.

What are their main ingredients?

The main ingredients in energy drinks are caffeine, taurine and glucuronolactone. Some new drinks on the market also contain opium poppy seed extract or ephedrine.

Taurine

Taurine is an amino acid that occurs naturally in the body. Amino acids help to build protein. They are also believed to detoxify and cleanse the body of harmful substances. In times of stress and high physical activity, the body can lose small amounts of taurine. Some people use energy drinks to try to replace or build up their body's level of taurine.

Glucuronolactone

Glucuronolactone also occurs naturally in the body. It is a natural metabolite and carbohydrate formed when glucose breaks down, and is believed

to be helpful in ridding the body of harmful substances and providing an instant energy boost.

Caffeine

Caffeine is a stimulant which acts on the central nervous system to speed up the messages to and from the brain so that the person feels more aware and active. See our **Fact Sheet 2.10 Caffeine** for more information on its effects.

What are the health effects of energy drinks?

Not enough is currently known about energy drinks and their effect on health and well-being. The producers of energy drinks make many claims about the health effects of their products. They say that their products can increase physical endurance, improve reaction time, boost mental

The caffeine content of some popular energy drinks and soft drinks

Beverage (250mL)	Caffeine content
Impulse	88 mg
Red Bull	80 mg
Naughty Boy	80mg
'V'	78 mg
Coca-Cola	48.75 mg
Diet Coke	48 mg
Diet Coke Caffeine-Free	2 mg
Pepsi	40 mg
Diet Pepsi	44 mg
Pepsi Max	44 mg

alertness and concentration, increase overall well-being, stimulate metabolism, improve stamina and help eliminate waste from the body. The drinks are marketed as healthy, fun and youthful, and many children, young people and adults are taken in by the excitement created around them, believing these claims to be true. However, the evidence shows that it may be wise to be cautious in our consumption of energy drinks.

Caffeine, taurine and glucuronolactone occur naturally in the body, but the fact that they are present in much higher doses in energy drinks may be cause for concern. Scientists say that caffeine can have an effect on the growing brain and that it may cause a decline in the body's immune system. For now, health authorities have determined that energy drinks are generally safe for consumption, with some cautions.

Who should avoid energy drinks?

Children

The Australian Consumers' Association advises that while energy drinks may be scientifically safe, young people especially need to be aware of their contents. Research shows that children and young people who consume energy drinks may suffer sleep problems, bed-wetting and anxiety. Children who consume two or more cans of energy drinks a day may become irritable and anxious.

When thinking about whether or not to allow your child to consume energy drinks, it is useful to consider the following factors:

- *Would you be comfortable with your child drinking a cup of strong coffee?* Most energy drinks contain around the same amount of caffeine as a strong cup of coffee, and nearly twice as much as in a cola drink.
- *Are you concerned about your child's sugar intake?* Some energy drinks, such as Red Bull, contain high amounts of sugar (equal to around 5 teaspoons per 250 ml can).
- *Will the drink enhance your child's well-being, or is it potentially harmful?* There is little (if any) evidence of nutritional value in most energy drinks. Some energy drinks are said to include natural vitamins and minerals, but these can be easily obtained from simple foods such as fresh fruit and vegetables.
- *How old is your child?* Very little is known about the health effects of caffeine, so it is best

to avoid giving children under age 10 products containing caffeine, especially energy drinks. Older children and young people should be careful, too. The human brain continues to grow up to about age 16 (some say age 21). We know that caffeine can affect a growing brain, but we don't as yet know how.

Pregnant women

Women who are pregnant are advised to avoid energy drinks (especially during the first three months of pregnancy), as high amounts of caffeine can increase the risk of miscarriage, difficult birth and delivery of low-weight babies.

People who drink alcohol

The effects of combining energy drinks with alcohol are not yet fully understood, but there have been serious concerns about such 'cocktails' for some time. There have been reports of young people dying, possibly as a result of mixing of alcohol and energy drinks.

Active sportspeople

Unlike sports drinks such as Gatorade that replenish minerals and water lost during exercise, energy drinks with caffeine can cause dehydration. The combination of dehydration and exercise can be dangerous.

Following negative reports about their effects, many countries are warning people not to consume energy drinks after a heavy workout. Some countries ban the sale of energy drinks.

Others

- people with heart disease
- caffeine-sensitive people

Manufacturers' labels advise all consumers not to exceed 2–5 cans per day. Others advise to keep them out of the reach of children. But labels can be confusing—often people think they must have the maximum amount to get the benefits they are after.

The verdict on energy drinks

Evidence is beginning to emerge that energy drinks may be harmful to some members of our community. It may be best to avoid giving these drinks to children under age 10. With older children and young people, watch closely the amount of energy drinks they consume as well as any effects on their mood or behaviour. If you are unsure or would like further advice, consult your doctor or other health professional.