



WEEKLY EPIDEMIOLOGICAL REPORT

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Ministry of Health, Nutrition & Indigenous Medicine

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Soft drinks – How harmful they could be

Fifty years ago, the average serving size for a soft drink was a six-ounce bottle. Today, soft drinks are sold in twenty-ounce bottles and are consumed in much larger quantities courtesy of the large size of soda fountain drinks available at most stores and restaurants. This increase in consumption of soft drinks is not a surprise because soft drink manufacturers have spent billions of dollars in advertising to attract more consumers and to increase the consumption of their products. Scientific studies have shown how as few as one or two soft drinks a day can increase one's risk for numerous health problems. Some of these health problems are obesity, diabetes, tooth decay, osteoporosis, nutritional deficiencies, heart disease, and many neurological disorders.

It is generally understood that soft drinks, even though they contain many calories, have a little nutritional benefit and are known as "empty calories". Most of the calories in soft drinks are from refined sugars, and there are no other nutritionally beneficial components in soft drinks. According to the available data, sugar-sweetened soft drinks contribute 7.1% of total energy intake and represent the largest single food source of calories in the US diet. Coincidentally or not, the rise of obesity and type 2 diabetes in the United States parallels the increase in sugar-sweetened soft drink consumption. Several studies have found an association between sugar-sweetened beverages and the incidence of obesity in children. In one study,

the odds ratio of becoming obese increased 1.6 times for each additional sugar-sweetened drink consumed every day. Increased diet soda consumption was negatively associated with childhood obesity. One 12-oz can of sugar-sweetened soda contains 150 kcal and 40 to 50 g of sugar. If these calories are added to a typical diet with no offsetting reduction in other caloric sources, 1 can of soda per day leads to a 15-lb (6.75-kg) weight gain in 1 year. A better mechanism for weight gain could not have developed than introducing a liquid carbohydrate with calories that are not fully compensated for by increasing satiety. Liquid calories are a relatively new addition to the human diet—perhaps the human satiety circuit has not yet adapted to register these calories for what they are.

A common problem that is associated with the consumption of a large number of soft drinks is the increased acid levels throughout the body. All soft drinks are very acidic, but dark colas are much more acidic. Many doctors believe that there is a correlation between acids increasing and the risk of disease. This is manifested in an especially painful way when one gets gastronomic distress (GI). Gastronomic distress is characterized by increased stomach acid levels. Gastronomic distress causes inflammation of the stomach and erosion of the stomach lining. This is characterized as a painful stomachache. These symptoms are caused by caffeine and acids found in soft drinks such as acetic, fumaric, gluconic and phosphoric acids. The combina-

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tion and strength of these acids are so strong that when a drain is clogged a plumber will often use a soft drink, or if a car battery is corroding one can use a soft drink to dissolve the corrosion. The stomach maintains a very delicate acid-alkaline balance that can be set out of balance by the consumption of a large number of soft drinks, which create a constant acid state. Prolonged increased acid levels will cause erosion of the gastric lining, which is very painful and disrupts proper digestion. Also, the phosphorous that is found in the fizz and bubbles emitted from soft drinks fights with hydrochloric acid in the stomach and causes the stomach to be ineffective. When the stomach can't digest food, the person will have indigestion, gassiness, or bloating. The carbon dioxide that is emitted in the fizz is consumed when a person takes a soft drink. Carbon dioxide is a waste product that humans excrete and can be harmful when digested. Sodas also kill the Intestine's beneficial bacteria, causing constipation. Amidst all this scientific evidence, still many people assume that drinking sodas with and after food are helpful for digestion. It is also the main drink served at banquets and special occasions, and this reflects badly on health.

A very serious effect of soft drinks on people's health is the correlation between soft drink consumption and the increased risk of bone fractures and osteoporosis. The large amounts of sugar, bubbles caused by carbon dioxide, and phosphoric acid that are found in soft drinks remove nutritious minerals from bones allowing the bones to become weak and increasing the risk of them breaking. This is done by the phosphoric acid disrupting the calcium-phosphorous ratio, which dissolves calcium from the bones. Many people consume soft drinks instead of necessary beverages like milk, consequently, their bodies are not receiving enough nutrients, especially calcium. This deficiency in calcium intake and increased consumption of soft drinks is a greater problem for women than for men.

Most carbonated beverages contain caffeine, which is considered to be a mild drug and can have harmful effects, especially on children. Caffeine is a drug that acts as a stimulant for the central nervous system. Large amounts of caffeine consumption can cause diseases and disorders such as insomnia, nervousness, anxiety, irritability, and deviations from the normal heart rate. Caffeine is an addictive substance, which causes consumers to need more caffeine. A major concern about caffeine is that it increases the excretion of calcium in urine, which increases the risk for osteoporosis in heavy caffeine consumers. Some preliminary studies show that caffeine increases the risk of birth defects.

If children drink caffeine-based beverages their metabolism does not break it down as in adults, and so they will have problems sleeping. Other than that, better to avoid giving fizzy soft drinks to children because their stomachs are not fully separated from their oesophagus and the carbon dioxide will cause regurgitation or vomiting.

Many soft drinks contain caramel colouring to allow them to have a dark appearance. The chemical polyethylene glycol is used to achieve this dark colour. Glycol is used in antifreeze. Scientists are concerned that this caramel colouring may be a carcinogen. Dental cavities are often associated with a carbonated beverage. This association is important because the amount of sugars consumed is important in forming caries. The bacteria attached to teeth produce high amounts of acid from sugars and other types of acid. Studies showed that drinking 3 cans of soda increases tooth decay by 62% while consuming one can increases decay by 3% among children.

Carbonated beverages are very popular and are used often by people around the world. The important thing to remember is that overconsumption of soft drinks should be avoided because of their numerous harmful effects such as obesity, osteoporosis, nutritional deficiencies, and tooth decay. It is important to be aware of the harmful effects of such deleterious beverages. The real challenge we are facing today in this regard is the huge liberal advertising campaign carried out by these multinational companies involved in the soft drink industry, especially in developing countries. By various means, they trap our young ones with various attractive advertisements and billboards. Wrong values, status symbols, fashion smartness and the robustness of youth are some of the misleading notions put across these advertisements. Think twice before you drink fizzy drinks, the popular colas, or any other soft drinks because you gulp down carbon dioxide and refined sugars.

Compiled by

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4. That cool soda could be doing more harm than good for You. GULF NEWS, August 26, 2007.

Table 1: Selected notifiable diseases reported by Medical Officers of Health 14th - 20th Aug 2021 (34th Week)

RDHS	Dengue Fever		Dysentery		Encephaliti		Enteric Fever		Food Poi-		Leptospirosis		Typhus		Viral Hep-		Human		Chickenpox		Meningitis		Leishmania-		WRCD	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**
Colombo	48	3309	0	10	0	1	0	4	0	3	0	138	0	1	0	2	0	2	0	22	1	9	0	1	46	100
Gampaha	24	1709	0	1	0	4	0	1	0	0	1	160	0	5	0	4	0	5	0	19	0	12	0	12	22	75
Kalutara	10	942	0	11	0	2	1	3	0	0	0	378	0	3	0	1	0	1	0	66	0	16	0	0	34	100
Kandy	13	513	0	18	0	1	0	2	0	2	0	99	0	29	0	1	0	0	0	30	0	14	0	21	58	100
Matale	4	151	0	12	0	4	0	0	0	0	0	64	0	5	0	1	0	0	0	12	0	5	2	176	52	100
NuwaraEliya	1	37	0	11	0	2	0	2	0	0	0	45	1	35	0	4	0	0	0	24	0	7	0	1	27	100
Galle	4	265	0	5	0	1	0	5	0	5	4	517	0	23	0	2	0	0	1	45	2	27	0	1	39	100
Hambantota	5	265	0	9	0	2	0	2	0	4	1	204	1	56	0	7	0	0	2	43	0	30	3	354	71	100
Matara	4	393	0	3	0	1	0	1	0	0	3	196	1	16	0	2	0	0	0	47	0	10	3	208	43	100
Jaffna	1	123	0	36	0	3	0	14	0	27	0	16	0	438	0	0	1	4	1	27	0	3	0	2	22	88
Kilinochchi	0	23	0	23	0	0	0	2	0	10	0	53	2	75	0	0	0	0	0	10	0	0	0	1	51	100
Mannar	1	25	0	2	0	0	0	4	0	0	0	26	0	2	0	0	0	0	0	3	1	16	0	1	39	100
Vavuniya	0	35	0	2	0	1	0	1	0	1	0	23	0	2	0	1	0	0	0	6	0	1	0	1	39	100
Mullaitivu	0	5	0	3	0	0	0	0	0	1	3	32	0	8	0	0	0	0	0	9	0	6	0	0	22	100
Batticaloa	6	2993	0	27	0	3	0	2	0	16	0	39	0	0	0	1	0	0	0	12	0	22	0	0	46	100
Ampara	1	34	0	7	0	0	0	1	0	7	1	49	0	1	0	2	0	0	0	37	0	11	0	8	60	100
Trincomalee	0	121	0	0	0	0	0	0	0	2	0	4	0	0	0	2	0	0	0	16	0	2	0	0	27	100
Kurunegala	5	864	0	18	0	4	0	0	0	3	2	236	0	25	0	3	0	2	0	41	0	77	0	278	38	100
Puttalam	3	282	0	2	0	1	0	0	0	0	1	22	0	15	0	1	0	1	0	16	0	32	0	9	41	98
Anuradhapur	1	178	0	10	0	0	0	1	0	3	0	218	0	23	0	4	0	0	0	29	0	31	1	182	25	91
Polonnaruwa	0	62	0	3	0	0	0	3	0	8	1	105	0	3	0	3	0	0	1	26	0	2	18	333	39	100
Badulla	9	189	0	9	0	0	0	1	0	0	10	269	1	39	2	30	0	0	0	32	0	14	0	16	43	100
Monaragala	6	101	0	6	0	0	0	3	0	5	4	307	1	28	2	67	0	0	0	24	0	49	1	27	51	100
Ratnapura	12	411	1	26	0	6	0	0	0	5	5	600	0	18	0	8	0	1	0	44	2	66	5	92	35	95
Kegalle	3	356	0	4	0	11	0	0	0	2	1	218	0	11	0	1	0	0	0	79	0	24	0	14	40	100
Kalmune	0	267	0	11	0	2	0	1	0	1	0	16	0	1	0	2	0	2	0	14	1	9	0	2	45	100
SRILANKA	16	13653	1	269	0	49	1	53	0	105	37	4034	7	862	4	14	1	18	5	733	7	495	33	1740	41	97

Source: Weekly Returns of Communicable Diseases (esurveillance.epid.gov.lk). T=Timeliness refers to returns received on or before 20th Aug, 2021 Total number of reporting units 361 Number of reporting units data provided for the current week: 351 C**-Completeness 41

Table 2: Vaccine-Preventable Diseases & AFP

14th – 20th Aug 2021 (34th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2021	Number of cases during same week in 2020	Total number of cases to date in 2021	Total number of cases to date in 2020	Difference between the number of cases to date in 2021 & 2020
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	01	01	00	00	00	00	00	00	00	02	03	38	29	31 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Mumps	00	00	00	00	00	01	00	00	00	01	03	57	122	- 53.2 %
Measles	00	00	00	00	00	00	00	00	00	00	01	11	37	- 70.2 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Tetanus	00	00	00	00	00	00	00	00	00	00	00	02	03	-33.33%
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	00	03	31	- 90.3 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	00	05	-100%
Tuberculosis	47	04	00	04	02	05	00	10	14	86	140	3429	4024	-14.7 %

Key to Table 1 & 2

Provinces: W: Western, C: Central, S: Southern, N: North, E: East, NC: North Central, NW: North Western, U: Uva, Sab: Sabaragamuwa.
RDHS Divisions: CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matale, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.

Data Sources:
Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,
Special Surveillance: AFP* (Acute Flaccid Paralysis), Japanese Encephalitis
CRS** =Congenital Rubella Syndrome
NA = Not Available

Number of Malaria Cases Up to End of August 2021,

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All are Imported!!!

Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to chepid@sltnet.lk. **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

ON STATE SERVICE

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