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Iron Deficiency Anaemia

Anaemia is a condition affecting around a third of the world's population. It is a major public health problem worldwide present in low-, middle-, and high-income countries. Iron deficiency is the most common cause of anaemia. In fact, roughly half of the anaemia cases globally are Iron Deficiency Anaemia (IDA) cases.

Editorial note:

Anaemia is a condition characterized by low blood hemoglobin concentration. When the capacity of the blood to carry oxygen to the tissues decreases and becomes insufficient to meet the human body's needs, symptoms such as fatigue, shortness of breath, dizziness, and pale skin arise. IDA is due to insufficient iron, a micronutrient needed to produce hemoglobin. The main risk factors for IDA are: pregnancy, blood loss, certain infections, an inability to absorb iron, and lack or iron in diet. Inflammatory bowel diseases, cancer, chronic kidney diseases, and chronic heart failure, are some of the chronic diseases that are associated with IDA. It has been estimated that 90000 deaths in all age groups and among both sexes are attributed to IDA (*WHO Global Health Estimates 2014*).

Anaemia is considered a moderate to severe public health problem in at least 141 countries (*WHO Global Prevalence of Anaemia 2011*). According to the WHO report on Worldwide Prevalence of Anaemia 1993-2005: globally, 1.62 billion people are affected by anaemia. The lowest prevalence is among men (12.7%), while the highest is in preschool-age children (47.4%). However, the population group with the highest number of individuals affected is non-pregnant women of reproductive age. In fact, the number of non-pregnant women worldwide suffering from anaemia was estimated to be 464 million in 2000 and the estimate increased to 578 million in 2016 (*WHO Global Health Observatory (GHO) data repository, 2017*).

Prevalence of anaemia varies between regions. The WHO report on Global Prevalence of Anaemia in 2011 points out that South-East Asian, Eastern Mediterranean and African Regions had the highest prevalence of anaemia. In countries of the Easter Mediterranean Region, anaemia persists as a widespread public health problem. Nevertheless, prevalence figures vary between countries of the region from:

Table 1: Estimates of blood hemoglobin (Hb) concentration in Lebanon (*WHO, The Global Prevalence Of Anaemia in 2011*)

Children aged 6–59 months		Non-pregnant women aged 15–49 years		Pregnant women aged 15–49 years	
Mean blood Hb concentration (g/L)	118	Mean blood Hb concentration (g/L)	127	Mean blood Hb concentration (g/L)	118
% of children with blood Hb concentration <110g/L	24	% of non-pregnant women with blood Hb concentration <120g/L	28	% of pregnant women with blood Hb concentration <110g/L	27
% of children with blood Hb concentration <70g/L	0.2	% of non-pregnant women with blood Hb concentration <80g/L	0.7	% of pregnant women with blood Hb concentration <70g/L	0.2

- 17% to over 70% among preschool children
- 14% to 42% among adolescents
- 11% to over 40% among women of childbearing age

(Bagchi, 2004)

The WHO report on Global Prevalence of Anaemia in 2011 estimates that in Lebanon:

- 24% of children aged 6 months to 5 years are anemic and 0.2% are severely anemic
- 28% of non-pregnant women aged 15 to 49 are anemic and 0.7% are severely anemic
- 27% of pregnant women are anemic and 0.2% are severely anemic

(*Table 1*)

In 2015, a survey implemented by WHO in the Bekaa region in Lebanon showed that in a sample consisting of 578 Syrian and Lebanese non-pregnant women, 36% had anemia (29.2% of the Lebanese vs 44% of the Syrian women) and 5% had severe anemia. IDA was found in 23.2% of the women in the sample and in 65.3% of the anemic women.

In order to prevent negative health consequences of anaemia among women, the MOPH in Lebanon implemented many interventions. In 2015 the MOPH updated the national Reproductive Health Service Delivery Guidelines and trained healthcare providers working at Primary Healthcare Centers (PHCs) on the revised guidelines. As per these guidelines, physicians now request blood tests from pregnant women to check for anaemia. Upon prescription, iron supplements are provided for pregnant and lactating women for free at the PHCs.

According to "*Nutritional Anaemias: Tools for effective prevention and control*" (WHO, 2017); the most effective programmes to prevent anaemia are comprehensive and involve a wide range of sectors and actors. It is important to combine both nutrition-specific and nutrition-sensitive interventions. A situation analysis that considers numerous factors (magnitude, prevalence and distribution of anaemia, related nutrient deficiencies, and food consumption levels) is needed to determine the right mix of strategies for each country.

Notifiable Diseases in Lebanon [Cumulative n° of cases among all Residents (among Syrians)]
as of 8 July 2019

Disease	2018	2019	May	June
Vaccine Preventable Diseases				
Polio	0 (0)	0 (0)	0 (0)	0(0)
AFP	88 (33)	47 (10)	5 (0)	5 (2)
Measles	952 (156)	1154 (140)	202 (54)	38 (3)
Mumps	121 (41)	64 (14)	11 (2)	10 (1)
Pertussis	64 (26)	31 (13)	7 (3)	4 (1)
Rabies	3 (1)	0 (0)	0 (0)	0 (0)
Rubella	11 (4)	14 (7)	0 (0)	0 (0)
Tetanus	2 (1)	0 (0)	0 (0)	0 (0)
Viral Hep. B	253 (28)	134 (15)	28 (2)	25 (3)
Water/Food Borne Diseases				
Brucellosis	242 (26)	94 (12)	16 (0)	26 (5)
Cholera	0 (0)	0 (0)	0 (0)	0(0)
Hydatid cyst	8 (2)	19 (1)	2 (0)	6 (0)
Typhoid fever	237 (4)	118 (1)	21 (0)	18 (0)
Viral Hep. A	899 (152)	204 (49)	28 (4)	16 (3)
Other Diseases				
Meningitis	420 (82)	204 (36)	30 (7)	42 (6)
Viral Hep. C	103 (7)	40 (4)	6 (0)	3 (0)