

Iodine facts

Approximately 2 million babies are born with iodine deficiency every year in Pakistan.

Iodine deficiency can lead to a loss up to 15 IQ points.

The chief storehouse of iodine in the body is the thyroid gland.

Iodine deficiency is entirely preventable.

Besides sea fish, iodine is also found in asparagus, garlic, beans, mushrooms, sesame seeds, spinach.

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The true wealth of nations

Lack of iodine speck cripples our future

By Dr Shahana Jan Durrani



Adam Smith got it wrong! In his famous book, *The Wealth of Nations*, he concludes that free market economy is the primary catalyst for generating wealth for any nation, material wealth. However, money is an illusion which can easily be squandered if not managed intelligently. Consider the famous saying "A fool and his money are soon parted". Corporate history records innumerable instances where companies have sunk to anonymity due to the follies of the offspring's of the founder. Today, the world is wiser; there is a consensus that true wealth of a nation is its children, the future generations.

Alarmingly in Pakistan we are destroying our wealth simply by ignoring the importance of a simple small chemical molecule, iodine, also referred to as a "trace element" or "micronutrient". Iodine deficiency is a leading cause of brain damage (mental impairment) in the world primarily impacting the brain of the developing fetus and young children in the first few years of life. The effect, while not

immediately discernable, can result in mental impairment to the extent of 15 basic points of IQ. Below average performance at home, school and at work consequently results in lowering the productivity of an entire generation.

Iodine deficiency can lead to mental retardation in infants and children whose mothers were iodine deficient during pregnancy. As we can see from the IDD problem pyramid only 10% children are born with impaired mental development since birth known as cretinism while 90% of them remain unnoticed or undiagnosed with poor control of body movements, hearing problems, a low IQ and a greater incidence of Attention Deficit Hyperactivity Disorder (ADHD). Once the damage is done, then its irreversible!

Unfortunately, Pakistan is rated 6th amongst countries where iodine deficiency is a serious public health problem. This is nothing to be proud of. More than 60% of the population is at risk due to unavailability of something

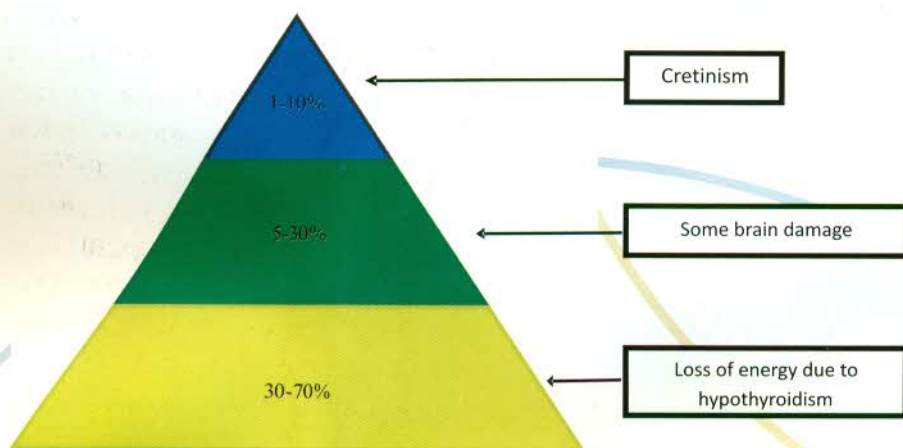
as simple as iodized salt. Research has identified that only 17% of our country's population uses iodized salt which is lower than Bangladesh and Nepal. Other countries in the region like India, Bangladesh, Iran, Sri Lanka and China have already enacted IDD legislation for mandatory iodization of salt. In Pakistan we continue to struggle with IDD legislation which in itself is criminal. How will we answer to our present and future generations?

Notwithstanding the above, the key factor for Pakistan being at the bottom of the list in the region is low awareness of high priority of salt iodization. Why else would the legislation stumble in the corridors of power every time? It is illogical to attach any other cause to feet dragging in relation to a universally accepted truth like iodized salt. The development sector has to continue to fight this battle against all odds. We often ignore our peril that iodine is as crucial to child's development as

milk.

We are short of time. Every day that passes is hurting our future generations. If our beloved Pakistan is to emerge as a tiger in

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the next few decades we need to focus on our primary asset, our human resource, and our children. There is an urgent need for all stakeholders including the Government, the donors, the development sector, the civil society to join forces for creating awareness and to make iodized salt a reality.

Dr. Arif Azad
Executive Coordinator

Editorial

Iodine deficiency disorders- from well known goitre to mental impairment- are returning with a vengeance shown up in decreased uptake of only 17 percent as compared to neighbouring countries like Afghanistan, India and Bangladesh. This is pretty alarming situation for Pakistan. Instead of focussing on bringing in a legislation which makes the cheapest public health intervention mandatory to prevent our children falling prey to whole host of diseases, the bill is stuck up in files of official apathy. Despite efforts of Health Ministry official and civil society public health groups, there is a distinct lack of progress on the issue of legislation. With iodine uptake dipping against the onrush of meeting target of universal iodization in the coming year, it is urgent that efforts be doubled to push forward legislative agenda on iodized salt legislation. Here there is an important role for media, civil society and health professionals to play in raising awareness, and advocating for speeding up legislative process which sees early introduction of mandatory iodized salt use in the country. Together, by working in close concert, the goal of iodized salt legislation can be achieved sooner than previously thought. This cost afflictive public health intervention would be the best news at a time of great economic uncertainty when health goals are being downgraded in the aftermath of budgetary cuts brought on floods recovery costs.

Monster of IDD's knows no boundaries

By Dr Sarfaraz Ali

It is a misunderstanding in Pakistan that iodine deficiency disorders (IDDs) is a problem of hilly areas only. In fact IDD's have been found widespread in Northern Areas or Swat because first studies were mainly carry out in mountainous areas of Pakistan. Most of the big cities, towns and remote areas have not so far been extensively investigated for the magnitude of iodine deficiency disorders.

A few studies were conducted only in some of plain cities

the level of iodine intake in different areas.

Large populations living in systems of subsistence agriculture are especially at risk of iodine deficiencies as they live in an environment where soil is deprived of iodine. The deficiency in soil leads to iodine deficiency in all forms of plant life and cereals grown in the soil. Hence the gravity of problem could not elicit appropriate attention from the concerned authorities.

The myths and misconceptions

only 114 women (34 percent) were taking iodised salt. Similarly a study in Faisalabad was carried out where only six percent of pregnant women were taking iodised salt.

So it is essential to stimulate the demand for, and supply of iodised salt. The private sector salt processors should be convinced to invest their funds to make programmes of iodisation effective and sustainable.

Legislations should be placed with monitoring and full enforcement in all provinces. Most of salt processors, especially small scale producers, lack equipment, technical know how and means for purchasing KIO₃ and recovering the cost from the consumers due to their market size.

(The author is a former Senior Scientific Officer at the National Institute of Health, Islamabad. He also worked as a microbiologist in a cancer institute abroad).



"A study conducted in Lahore found 85 percent of neonates iodine deficient"

including Lahore, which is second largest city of Pakistan with the population of more than five million people. A study conducted in the provincial capital of Punjab in 1994 found that 81 percent of neonates were deficient in iodine.⁽¹⁾

The use of iodised salt is the only remedy to IDD's scourge. The consumption of iodised salt in Pakistan received good response initially, but declined shortly because of many factors. Among them the most important factor was the lack of data to determine

spread about iodized salt make unproven linkage to infertility.

Decline in the use of salt was

authenticated by a survey conducted in a hospital in Lahore where out of 336 outpatient women, mostly pregnant,



(1) (Unicef brochure 1995 and IDD newsletter 1996.

By Rubina Bhatti

Strengthening of alliances on USI-IDDs

Follow-up meetings with partners of Large Consumer Alliance, Civil Society Alliance and the media were held with the objective to share updates and renew the commitments made by partners on the promotion of USI. A follow-up meeting was held with the media on October 22, 2010. It was chaired by Mrs Belum Hasnain, chairperson NA Standing Committee on Information & Broadcasting. Senator Dr Saeeda Iqbal, a member of Senate Standing Committee on Education, was the guest of honour. Belum promised to get a resolution on the use of iodised salt passed.



Another follow-up meeting with large consumers and the media was presided over by Tausif Zaman, senior vice president of the Islamabad Chamber of Commerce and Industries on 1st of October.

Walk for a Cause

The Walk for a Cause was successfully organised by the TN in collaboration with alliance partners on 7th of December 2010. It held from the National Press Club Islamabad to F/6 Markaz, and back to the National Press Club Islamabad, concluding with a joint press conference of alliance partners. Over 120 participants of UNICEF, WFP, NW, GAIN, SUNGI, RASTI, BEHBUD, BATOOL Welfare, SUNLTANA Foundation School & College, NRSP, PLAN, and Sir Syed School & College joined to make the walk a successful event.

The speakers at the joint press conference - Dr Arif Azad, Sheeba Afghani, Dr Shahid Awan, Mr Ghulam Abbas, Faiz Rasool Chaudhry, Gulnaz Sheikh and others - highlighted the need for political will to address the critical public health issue of IDD's. They also emphasised that the strong political will shown at the 1990 Children Summit is certain to be diluted among policy and decision makers unless they are reminded of their commitment and kept informed about the progress, or lack of it, in the flight against IDD's. Therefore, sustained strong advocacy campaign on USI by the media and the civil society is vital to keep this public health issue alive on legislative agenda, ultimately getting law passed on USI.



Global IDD's Day Celebrations

Banner display with alliances partners

Two hundred banners carrying 10 different messages were designed, printed and displayed at main crossings, public places, hospitals and markets in Islamabad and Rawalpindi.

Two partners of large consumers alliance i.e Edhi Foundation and Nan Bai Association took special interest in displaying 30 banners on Edhi ambulances and 25 banners on tandoors. Banners was displayed at following areas:

- | | | | | | |
|-------------|------------------|-------------------|---------------|----------------|---------------|
| 7th avenue | Jinnah avenue | Supper Market F-6 | F-10, Markaz | BBH-Rawalpindi | CDA Hospital |
| 9th avenue | Kashmir Highway | G-9, Markaz | Zero point | MH | PIMS |
| 10th avenue | Jinnah Super F-7 | F-8, Markaz | Melody market | Poly Clinic | Peshawar Road |



Information, education and communication material

Global IDD's Day activities were planned and conducted to create mass awareness nationwide, especially through the media. IEC material was developed, printed and disseminated to alliance partners, hospitals and markets. As many as 1500 posters for general public and 500 posters for shops, 2000 brochures, 50 salt testing kits provided by the Micronutrient Initiative and 20 copies of IDD documentary were disseminated.



Public service messages on FM Radio

Public service messages on IDD's, importance of iodised salt intake and the crucial need for IDD's control legislation to be in place were produced and aired nationwide by Radio FM 100 from 23rd to 29th of Oct 2010.

Radio FM 100 is a popular radio station, having a large number of listeners in all major cities of Pakistan, including Islamabad/Rawalpindi, Lahore, Peshawar, and Faisalabad.



Tv talk show

A talk show on USI-IDD's was produced by ATV, a private TV channel having a large base of viewers all over Pakistan, to air news and views in connection with Global IDD's Day observed on 23rd of October. The panelists were Dr Arif Azad, TheNetwork for Consumer Protection executive coordinator, Sheeba Afghani, UNICEF chief communication officer, and Dr Khwaja Masuod Ahmed, an official of the Micro Nutrient Initiative.



Inordinate delay in legislation on iodised salt

Mohammad Awais

Unfortunately Pakistan is ranked 6th in the countries where iodine deficiency is a major health risk, but the Cabinet Division has put on the backburners the legislation on the availability of only iodised salt in the market on the pretext that any step to this effect can create a sugar crisis-like situation in the country.

Perhaps, our Health Ministry and other authorities concerned have forgot that about two decades ago Pakistan with other courtiers had pledged at the 1990 World Summit for Children to eliminate iodine deficiencies by 2000, considering iodine deficiency disorders (IDDs) is the world's most prevalent, yet easily preventable cause of brain damage and other health problems.

Tremendous progress was shown by various countries in salt

iodisation. China is one of the most phenomenal success stories of the 1990s with iodisation rates rising from 39 percent to 95 percent in a span of 10 years. Jordan increased coverage from five percent to nearly 90 percent and even in Bangladesh salt iodisation has increased from 20 to 70 percent.

Astonishing fact is that Pakistan rests at the bottom with 17 percent iodised salt consumption, despite being 6th top country where iodine deficiency is the major health problem. Sluggishness of the Health Ministry and other authorities to take concrete measures to uproot IDDs is beyond anybody's imagination.













The draft bill to ensure the availability of only iodised salt in market was turned down on apparently baseless excuse that

any such effort would create a sugar-like crisis, ignoring the fact that any such move could increase price of salt by 20 paisa per kg.

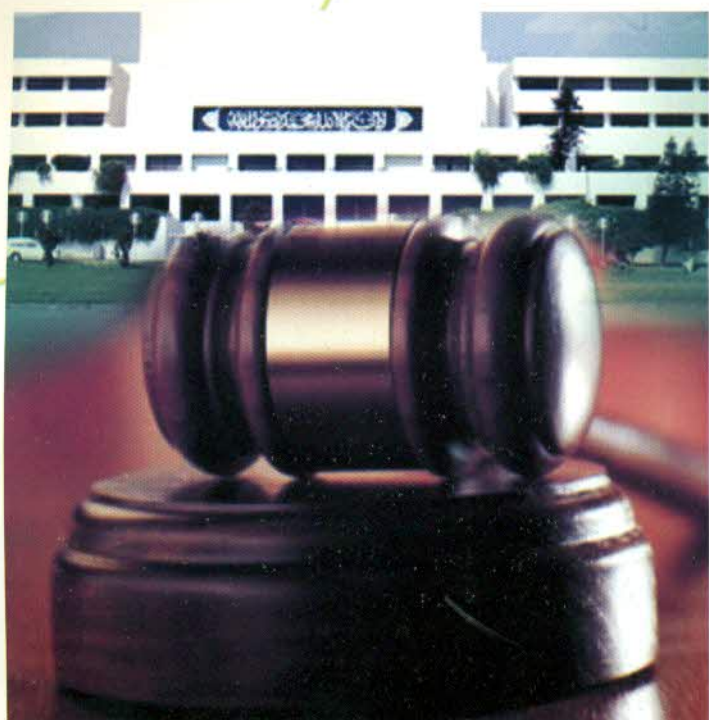
The United Nations bodies and civil society organisations are making tremendous efforts to create awareness

about the use of iodised salt, but the USI target in Pakistan can only be achieved through active participation of the government. World Food Programme (WFP) in collaboration with the Health Ministry and Micronutrient Initiative is working in 53 districts of Pakistan including 16 districts of the Punjab province. In the first

The table given below elaborates iodised salt consumption in various countries (%):

	Pakistan	17
	India	70
	Nepal	93
	China	83
	Nigeria	98
	Jordan	95
	Kenya	100
	Zimbabwe	80
	Indonesia	62
	Brazil	95
	Iran	94
	Bangladesh	78

phase, 29 northern districts have been covered due to which the use of iodised salt at household level has increased from 17 percent to 60 percent in 2009. But these efforts cannot produce desired results, unless a law is made to ensure that every pack of salt available in the market is iodized.



Pregnancy most vulnerable time for iodine deficiency

By Professor Col Dr Muhammad Ashraf Chaudhry

The most vulnerable time for iodine deficiency is during pregnancy, lactation and childhood, and these population groups unfortunately show signs of potential iodine deficiency the worldwide.

Iodine deficiency afflicts more than 50 percent pregnant women and their offspring. An estimated 2.1 million Pakistani babies are born each year with intellectual impairment caused by iodine deficiency. Globally, an estimated 20 million infants are born each

its sole function in humans is to serve as building block for the synthesis of thyroid hormones in the thyroid gland located in the neck.

From time of conception until very late in pregnancy, foetus is almost entirely dependent upon the mother for its supply of thyroid hormones. Only in very last weeks of gestation, just before birth, foetal thyroid gland is able to function well enough to make its own thyroid hormones.

To provide the extra thyroid

receives enough thyroid hormone for its growth and maturation, it will suffer irreversible damage.

Severe iodine deficiency in the mother has been associated with miscarriages, stillbirth, preterm delivery, and congenital abnormalities in their babies. Children of mothers with iodine deficiency during pregnancy can have mental retardation and problems with growth, hearing and speech. In the more severe form, an under active thyroid can result in cretinism (a syndrome characterised by permanent brain damage, mental retardation, deaf mutism, spasticity, and short stature. Even mild iodine deficiency may be associated with low intelligence in children.

Treatment before conception or in early pregnancy is essential to prevent irreversible brain damage. Breast milk contains more iodine than formula milk and premature babies who are formula-fed may be at risk of deficiency. All pregnant and breastfeeding women should take iodine supplements. Unfortunately, these pleas have fallen mostly on deaf ears in government health bureaucracies, even within the medical and nursing profession.

(The author is Head of Community Medicine CMH Lahore Medical College)



year at risk of brain damage from iodine deficiency. Iodine deficiency is the single most common cause of preventable brain damage. At least 30,000 stillbirths take place in Pakistan each year and 120,000 babies are born ascretins.

In Pakistan, 36.5 percent mothers of children under 5 are severely iodine deficient. Iodine is a "trace element" or "micronutrient" and

hormones to maintain pregnancy and supply the developing baby, the maternal thyroid gland has to increase its production of thyroid hormone by at least 50 percent percent. At no other time in life is the thyroid gland is challenged like this. If the mother does not get enough iodine in her diet, she will fail to meet the challenge.

Unless the developing brain of the foetus and the newborn child

Iodine must for developing kids' intellect

Intake of iodine is a must for developing the full intellectual potential of children, a new study has revealed. Otago University (O-U) researchers have shown that iodine supplementation to correct the mild deficiency common in children improves their performance in cognitive tests. Fish and seafood are rich

sources of iodine. Principal Investigator and O-U nutritionist Sheila Skeaff says that while moderate to severe deficiency of iodine sometimes has disastrous effects on children's brain development, it had previously been thought that mild deficiency had no significant cognitive consequences.

Senegal: women salt producers lead iodine drive

Iodine deficiency is a major problem in Senegal where it causes birth defects in children and goitre in adults. Women salt producers are leading the charge against this form of malnutrition with the help of a WFP programme that helps them to enrich the salt they harvest with iodine and trains them as business leaders.

Ukraine losing its intellectual potential by failing to iodise salt

Procrastination in implementing universal salt iodisation is depleting Ukraine's intellectual potential and 'degrading society' concluded speakers at a September 23 seminar in Kiev held in conjunction with the 4th National Congress on Bioethics, reports. Representing the nation's different regions,

Ukrainian scientists confirmed in their reports that a serious iodine deficiency exists in the country which inevitably entails degradation of the society. The international medicine recognizes that a continuous iodine deficiency leads to a loss of 10-15 IQ points, mental retardation or even infantile hypothyroidism, as

well as to an increase in morbidity and a decrease in work capacity. Such way, today the Ukrainian society is losing its intellectual, professional and educational potential. Scientists already record absence of children with better IQ and an increase in the number of children with low IQ in the regions with evident IDD.

Spanish study confirms

iodised salt value to pregnant women

Spanish researchers have confirmed that adding iodine supplements during pregnancy, and consuming iodised salt can ensure iodine sufficiency during the critical development months of foetal development, according to a report in the October 18 issue of *Thyroid*. The researchers found that iodised salt alone was insufficient to raise the average intake of expectant mothers in a region with borderline iodine deficiency to the recommended level of 150 micrograms/daily.

50 percent Indian kids suffer from iodine deficiency

As many as 50 percent of children born in India every year suffer from iodine deficiency, leading to various ailments and disorders - brain damage being one of them, experts said Thursday at a health workshop here. The workshop highlighted a review study by a team of

researchers from the Indian Coalition for Control of Iodine Deficiency Disorders (ICCIDD) and the All India Institute of Medical Sciences (AIIMS). "13 million out of 26 million children born in India every year are unprotected against iodine deficiency disorders such as brain damage, and have severely depleted levels of productivity," said Chandrakant S Pandav, ICCIDD regional coordinator, South Asia.

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"Iodine Deficiency is so easy to prevent that it is a crime to let a single child be born mentally handicapped for that reason"

(Mr. Henry Labouisse, UNICEF Executive Director, 1978)



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