



## The Essentiality of Insulin in India and Bordering Nations: A Thing of Concern as per Recent WHO Database

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Received: December 28, 2018; Published: January 31, 2019

Diabetes mellitus and need for insulin therapy is increasing at a tremendous pace. This fact is true for India and its bordering Nations if not in whole South East Asia (<https://www.who.int/bulletin/volumes/95/8/17-020817.pdf>). It is important to know that whether insulin is recognized as essential medicine or not in the parts of the world where diabetes is endemic. It is in this context we have observed that as per information provided in WHO data-

base insulin is recognized as an essential medication in the respective Nations (Table 1). However, we have observed that there is a model essential drug list of WHO where insulin is expectedly recognized as an essential drug. We feel without a reason that requires documentation in the essential drug list for public as well as expert scrutiny no nation should ordinarily deviate from such model list in letter and spirit.

	Insulin	Reference
Model list	40 IU/mL in 10-mL vial; 100IU/mL in 10-mL vial (injection) (intermediate acting insulin) 40IU/mL in 10-mL vial; 100IU/mL in 10-mL vial (injection) (as compound insulin zinc suspension or isophane insulin)	[1]
India	(injection) 40 IU/mL (intermediate acting [NPH] insulin) (injection) 40 IU/mL (Premix insulin) 30:70 (injection) (Regular: NPH)	[2]
Bangladesh	(injection soluble)	[3]
Bhutan	(Human [soluble] insulin) 40 I.U./mL (10 mL) (Human insulin isophane) 40 I.U./mL (10mL) (Human mixtard [neutral + isophane]) 30:70 (10 mL)	[4]
Myanmar	(short- acting soluble insulin) (Intermediate- isophane) (Premixed - biphasic insulin) (Long- acting insulin acting- insulin zinc suspension [mixed, suspension]) 100 IU/mL in 10mL vial	[5]
Nepal	(insulin [soluble]) (injection) 40 IU/mL in 10-mL vial (intermediate acting insulin) (injection) 40 IU/mL in 10mL vial (as compound insulin zinc suspension or isophane insulin) (tablet) 500mg (hydrochloride)	[6]
Sri Lanka	(soluble) (injection) 100 IU/mL in 10mL vial	[7]
Pakistan	(insulin injection) (soluble) 40 iu/ml in 10 ml-vial, 100 iu/ml in 10 ml-vial (intermediate-acting insulin) (soluble) 40iu/ml in 10-ml vial, 100iu/ml in 10-ml vial (as compound insulin zinc suspension or isophane insulin)	[8]
China	injection	[9]

**Table 1:** Insulin as represented in model essential list of WHO and in the essential medicine list of India and its bordering Nations (WHO data accessed on 27.12.2018).

It is a matter of pleasure that insulin is recognized as essential medicine in India and its bordering nations. Therefore, if the drug price is controlled by respective state and if drug quality is maintained by strict quality control by public and private endeavor the

chance of availability of the drug increases at times of need. This is going to control diabetes and its complications to a significant extent.

It is noteworthy that as per data available as on date on WHO website there is deviation of representation of Insulin formulation as well as other parameters in some nations compared to the essential drug list declared by WHO as model list. Mere perusal of Table 1 will make such issue evident. We feel that there must be international endeavors to reduce such discrepancies.

### Bibliography

1. <http://apps.who.int/iris/bitstream/handle/10665/273826/EML-20-eng.pdf?ua=1>
2. [http://www.searo.who.int/entity/medicines/neml\\_ind\\_2015\\_govweb\\_ok.pdf?ua=1](http://www.searo.who.int/entity/medicines/neml_ind_2015_govweb_ok.pdf?ua=1)
3. [http://www.searo.who.int/entity/medicines/neml\\_ban\\_2008\\_govweb\\_ok.pdf?ua=1](http://www.searo.who.int/entity/medicines/neml_ban_2008_govweb_ok.pdf?ua=1)
4. [http://www.searo.who.int/entity/medicines/neml\\_bhu\\_2016\\_govweb\\_ok.pdf?ua=1](http://www.searo.who.int/entity/medicines/neml_bhu_2016_govweb_ok.pdf?ua=1)
5. [http://www.searo.who.int/entity/medicines/neml\\_mmr\\_2010\\_wco\\_ok.pdf?ua=1](http://www.searo.who.int/entity/medicines/neml_mmr_2010_wco_ok.pdf?ua=1)
6. [http://www.searo.who.int/entity/medicines/neml\\_nep\\_2011\\_govtwebsite\\_ok.pdf?ua=1](http://www.searo.who.int/entity/medicines/neml_nep_2011_govtwebsite_ok.pdf?ua=1)
7. [http://www.searo.who.int/entity/medicines/neml\\_srl\\_2013\\_14\\_govtweb\\_ok.pdf?ua=1](http://www.searo.who.int/entity/medicines/neml_srl_2013_14_govtweb_ok.pdf?ua=1)
8. <http://apps.who.int/medicinedocs/documents/s23102en/s23102en.pdf>
9. [https://www.who.int/selection\\_medicines/country\\_lists/chn\\_eml\\_primarylevel\\_Western\\_medicines.pdf?ua=1](https://www.who.int/selection_medicines/country_lists/chn_eml_primarylevel_Western_medicines.pdf?ua=1)

**Volume 3 Issue 3 March 2019**

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