



Newborn Screening (NBS) has taken big steps in the past few months.

- ICMR has started screening for two disorders; Hypothyroidism (CH) and Congenital Adrenal Hyperplasia in 5 centers (Chennai, Mumbai, Hyderabad, Kolkata and Delhi).
- The Goa Government launched a comprehensive NBS program that covers over 50 metabolic disorders to benefit its citizens. It is the most far reaching effort in neonatal screening in a developing country, on par with what is offered in the developed world. The government is funding the screening, confirmatory and treatment costs for all babies born in government health care facilities.

This effort will help determine the incidence of many more disorders than the 2 or 3 that are currently tracked.

NeoGen Labs has partnered with the Goa Government in this program and the first sample was collected at Goa Medical College on June 14, 2008. Please see the following link for the announcement.

Click [Navhind Times article](#) for coverage on the program.

Q&A

Q: What are specific analytes assayed and quantified by Tandem Mass Spectrometry (MS/MS)?

A: The most common (but rare) fatty acid oxidation, amino acid, urea cycle and organic acid disorders are easily detected by MS/MS technology. The complete list of analytes measured by MS/MS in our laboratory is as follows:

AMINO ACIDS:

Glycine, Alanine, Valine, Glutamine, Glutamate, Leucine, Isoleucine, Methionine, Histidine, Phenylalanine, Tyrosine, Aspartate, Serine, Arginine, Citrulline, Ornithine

FATTY ACIDS:

Free Carnitine, Hydro AC, C2, C2-Glu, C3, C3-Met, C4, C5:1, C5, C4-OH, C6, C5-OH, BenzoylCN, C6-OH, C8:1, C8, C3DC (C8OH), C10:2, C10:1, C10, C4DC, C5DC (C10-OH), C12:1, C12, C6DC, C12-OH, C14:2, C14:1, C14, C14-OH, C16:1, C16, C16-OH, C18:2, C18:1, C18, C12DC, C18:1-OH, C18-OH

Based on measurement of these 55 analytes from a single drop of dried blood from an infant, and calculating 21 key ratios (not shown) we can very accurately diagnose over 45 metabolic disorders PRE-SYMPTOMATICALLY.

By combining this panel of treatable disorders with 5 other treatable disorders (CH, CAH, G6PD, CF, Galactosemia) screened by enzyme assay/enzyme immunoassay, we offer the most comprehensive newborn screen in India, in one package.

May 2008 Statistics

- 2 Cases of **Propionic Acidemia** (1:100,000)

Diets

One of the challenges after confirming the existence of an IEM is to source diets for treatments. We have been working with Nutricia, a company in the UK, to make available diets. Their product range covers numerous IEMs including PKU, Urea Cycle Disorders, FAO Disorders, Propionic Acidemia, and many more.

The following link provides a list of the products by conditions. <http://www.shs-nutrition.com/products/>

Contact:

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First Step Partner

Health N Wellness in the Mumbai Metropolitan area is our newest partner. They will send a technician to the patient's home, if needed, to collect the sample.

Contact:

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Screening Panels

We offer 3 panels for newborns and children

- **First Step** (Over 50 IEMs for Rs. 3975)
- **First Step MS/MS** (45 IEMs, includes Fatty Acid Oxidation Disorders, Amino Acid Disorders, and Organic Acid Disorder panels for Rs. 3250)
- **First Step Bio** (5 IEMs which include CH, CAH, G6PD, GALT and Cystic Fibrosis for Rs.1250).

As always, we look for your feedback on how this newsletter can be improved. Let us know specific topics you would like us to cover.

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Giving babies the best start in life!