

Complete list of conditions covered in New Born Screening

| Disorder | Method | Frequency |
|---|------------|---|
| I) Endocrine Disorders | | |
| Hypothyroidism (TSH) | Photometry | 1: 4000 |
| Adrenogenital Syndrome (17-OH Progesterone) | Photometry | 1: 11000 |
| II) Hemoglobinopathies | | |
| HbS, beta-Thal, HbH etc. | CA | Depending on the country up to >1:10 |
| III) Others | | |
| G6PDH Deficiency | Photometry | Depending on the country: >1:10 |
| Galactosemia | Photometry | 1: 60000 |
| Biotinidase Deficiency | Photometry | 1: 75000 |
| Cystic Fibrosis (Immuno Reactive Trypsin) | Photometry | 1: 4000 |
| Severe Combined Immunodeficiencies - SCID | PCR | 1:100000 |
| IIIa) Disorders of Amino Acid Metabolism | | |
| PKU (Phenylketonuria) Hyperphenylalaninemia | MS/MS | 1:5.500 |
| Disorders of biopterin cofactors biosynthesis (Hyperphenylalaninemia) | MS/MS | 1: 500000 |
| Disorders of biopterin cofactors regeneration (Hyperphenylalaninemia) | MS/MS | 1:250000 |
| PBGS Deficiency (Porphobilinogen Synthase); (Tyrosinemia Type 1) | Photometry | < 1: 100000 |
| Tyrosinemia Type 2 | MS/MS | Tyrosine levels may not be sufficiently elevated for detection! |
| Tyrosinemia Type 3 | MS/MS | Tyrosine levels may not be sufficiently elevated for detection! |
| Maple Syrup Disease (MSUD) | MS/MS | 1:150000 |
| Hypermethioninemia/ Homocystinuria | MS/MS | <1:100000 |
| Arginase Deficiency | MS/MS | n.a |
| Argininosuccinate Synthase Deficiency | MS/MS | n.a. |
| Argininosuccinate Lyase Deficiency | MS/MS | n.a. |
| IIIb) Urea Cycle Disorders | | |
| Ornithine Aminotransferase Deficiency | MS/MS | The diagnosis in the neonatal presentation of OAT deficiency is difficult as hyperornithinaemia is absent |
| Citrullinemia Type I | MS/MS | 1<100000 |
| Citrullinemia Type II (ASA) | | 1:150000 |
| Argininemia | MS/MS | 1:250000 |

| IIIc) Fatty Acid Oxidation Disorders | | |
|--|-------|---|
| Carnitine uptake defect | MS/MS | 1:50000 |
| Long Chain 3-OH acyl CoA dehydrogenase deficiency (LCHAD) | MS/MS | 1:50000 (see Trifunctional Protein deficiency!) |
| Medium Chain 3-OH acyl CoA dehydrogenase deficiency (MCAD) | MS/MS | 1:11000 |
| Trifunctional Protein Deficiency | MS/MS | See LCHAD! |
| Very long chain acyl CoA dehydrogenase deficiency | MS/MS | 1:75000 |
| Dienoyl reductase deficiency | MS/MS | 1: 2000000 |
| Carnitine Palmitoyl Transferase I deficiency | MS/MS | 1:300000 May not be reliably detected in the first few days of life |
| Carnitine Palmitoyl Transferase Type II deficiency | MS/MS | 1:250000 (detection as neonatal form is extremely rare) |
| Glutaric academia type II | MS/MS | 1:250000 |
| Medium/short chain 3-OH acyl CoA dehydrogenase deficiency | MS/MS | 1:2000000 |
| Medium chain ketoacyl CoA dehydrogenase deficiency | MS/MS | 1:2000000 |
| Short chain acyl-CoA dehydrogenase deficiency | MS/MS | 1:30000 |
| Carnitine/acylcarnitine translocase deficiency | MS/MS | 1:300000 |
| III d) Organic Acid Disorders | | |
| Glutaric Aciduria Type I | MS/MS | 1:100000 |
| Methylmalonic acidemia (A, B) | MS/MS | 1:100000 |
| Methylmalonic acidemia (Mut) | MS/MS | 1:40000 (combined with A, B) |
| 3-Methyl Crotonyl CoA carboxylase deficiency | MS/MS | 1:50000 |
| 3-Hydroxy 3-Methylglutaric aciduria | MS/MS | 1:250000 |
| Beta-Ketothiolase deficiency | MS/MS | 1:300000 |
| Multiple carboxylase deficiency | MS/MS | 1:250000 |
| Propionic acidemia | MS/MS | 1:150000 |
| 2-Methyl- 3- hydroxybutyric aciduria | MS/MS | 1:1000000 |
| 2-Methylbutyryl CoA dehydrogenase deficiency | MS/MS | <1:100000 |
| 3-Methylglucaconic aciduria | MS/MS | 1:100000 |
| Isobutyryl CoA dehydrogenase deficiency | MS/MS | 1:100000 |
| Malonic aciduria | MS/MS | 1:300000 |
| Methylmalonic acidemia (Cbl, C, B) | MS/MS | 1:100000 |