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CORD BLOOD & PERISTEM™ CELL BANK

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What is Cord Blood Used for Today?

Cord Blood Stem Cells: Current Uses

Cord blood stem cells can be used in the treatment of over 80 diseases. This doesn't mean they will be used and using them doesn't guarantee success. Each case is unique and only a doctor can determine eligibility.

Cancers

- Acute lymphoblastic leukemia (ALL)
- Acute myeloid leukemia (AML)
- Burkitt's lymphoma
- Chronic myeloid leukemia (CML)
- Juvenile myelomonocytic leukemia (JMML)
- Non-Hodgkin's lymphoma
- Hodgkin's lymphoma
- Lymphomatoid granulomatosis
- Myelodysplastic syndrome (MDS)
- Chronic myelomonocytic leukemia (CMML)

Immunodeficiencies

- Ataxia telangiectasia
- Chronic granulomatous disease
- DiGeorge syndrome
- IKK gamma deficiency
- Immune dysregulation polyendocrineopathy
- X-linked Mucolipidosis, Type II
- Myelokathexis X-linked immunodeficiency
- Severe combined immunodeficiency
- Adenosine deaminase deficiency
- Wiskott-Aldrich syndrome
- X-linked agammaglobulinemia
- X-linked lymphoproliferative disease
- Omenn's syndrome
- Reticular dysplasia
- Thymic dysplasia
- Leukocyte adhesion deficiency

Blood Disorders

- Sickle-cell anemia (hemoglobin SS)
- HbSC disease
- Sickle βo Thalassemia
- α-thalassemia major (hydrops fetalis)
- β-thalassemia major (Cooley's anemia)
- β-thalassemia intermedia
- E-βo thalassemia
- E-β+ thalassemia

Metabolic Disorders

- Adrenoleukodystrophy Gaucher's disease (infantile)
- Metachromatic leukodystrophy
- Krabbe disease (globoid cell leukodystrophy)
- Gunther disease
- Hermansky-Pudlak syndrome
- Hurler syndrome
- Hurler-Scheie syndrome
- Hunter syndrome
- Sanfilippo syndrome
- Maroteaux-Lamy syndrome
- Mucolipidosis Type II, III
- Alpha mannosidosis
- Niemann Pick Syndrome, type A and B
- Sandhoff Syndrome
- Tay-Sachs Disease
- Lesch-Nyhan disease

Bone Marrow Failure Syndromes

- Amegakaryocytic thrombocytopenia
- Autoimmune neutropenia (severe)
- Congenital dyserythropoietic anemia
- Cyclic neutropenia
- Diamond-Blackfan anemia
- Evan's syndrome
- Fanconi anemia
- Glanzmann's disease
- Juvenile dermatomyositis
- Kostmann's syndrome
- Red cell aplasia
- Shwachman syndrome
- Severe aplastic anemia
- Congenital sideroblastic anemia
- Thrombocytopenia with absent radius (TAR syndrome)
- Dyskeratosis congenita

Other

- Osteopetrosis
- Langerhans cell histiocytosis
- Hemophagocytic lymphohistiocytosis

At CReATe Cord Blood we have been collecting and storing MSCs since 2006 using our exclusive Peristem™ technology.

Scientific progress. Growing potential.

The therapeutic value of cord blood transplants today is clear, approximately 35,000 cord blood transplants have been performed worldwide.[1] Scientists around the world continue to look for new possibilities for cord blood stem cells; many are involved in an exciting area of research known as regenerative medicine. In recent years a special type of stem cell called Mesenchymal Stem Cells (MSCs), found in cord tissue, have been identified as highly capable cells with immense therapeutic potential.[2, 3] Stem cells from cord tissue have the power to regenerate other cells, as well as, structural and connective tissue. Research is ongoing in many areas, some of which include:

- Lung cancer[4]
- Parkinson's disease[5]
- Rheumatoid arthritis[6]
- Sports injuries (cartilage)[7]
- Type 1 diabetes[8]
- Stroke[9]

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Clinical Trials

Clinical Trials where children use their own (autologous) Cord Blood Stem Cells

Diagnosis	Trial stage	Trial registry
Acquired Hearing Loss	phase 1	NCT01343394 NCT02038972
Autism	phase 2 phase 1	NCT01638819 NCT02176317 India
Cerebral Palsy	phase 2	NCT01147653 NCT01072370 NCT01988584 Japan
Cerebral Palsy	phase 1	Romania Slovakia Spain
Encephalopathy (neonatal)	phase 1	UMIN000014903
Hypoplastic Left Heart Syndrome (HLHS)	phase 1	NCT01445041 NCT01856049 NCT01883076
Neonatal Oxygen Deprivation	phase 1	NCT00593242 NCT01506258 NCT01649648 Japan
(pre-/peri-natal) Stroke	phase 1	NCT02460484
Traumatic Brain Injury	phase 1	NCT01251003 NCT01700166
Type 1 Diabetes	phase 1 & 2 phase 0	NCT00989547 NCT00873925 CoRD ACTRN12613000186752

Clinical Trials using donor (allogeneic, includes siblings) Cord Blood Stem Cells

Diagnosis	Trial stage	Trial registry
Alzheimer's Disease	phase 1/2	NCT02054208
Bronchopulmonary Dysplasia	phase 1/2 phase 2	NCT02381366 NCT01897987
Cartilage Repair	Approved by Korean FDA (Cartistem)	NCT01733186
Cerebral Palsy	phase 2	NCT01193660 NCT01528436 NCT01639404 NCT01991145 NCT02025972
Cerebral Palsy	phase 1	NCT02599207 Russia
Critical Limb Ischemia	phase 1	NCT01019681 KCT0000194
Global development delay (both autologous and allogeneic)	phase 1	NCT01769716
Graft versus Host Disease (GvHD)	phase 1/2	KCT0000389
HIV	phase 1	NCT02140944 Spain
Infertility	phase 1	ChiCTR-OPC-14005553 NCT02313415
Intraventricular hemorrhage	phase 1	NCT02274428
Liver Cirrhosis	unknown	ChiCTR-TRC-14004411
Neurodegenerative disorders	phase 1	NCT02236065
Stroke	phase 1	NCT01673932 NCT02397018 NCT02433509
Sweat gland regeneration	unknown	NCT02304562
Type 1 Diabetes	phase 2	NCT01350219 NCT01996228

Clinical Trials using donor Mesenchymal Stem Cells (MSC) from Cord Tissue

Diagnosis	Trial registry
Alzheimer's disease	NCT01547689
Aplastic anemia	NCT02218437
Cardiomyopathy	NCT02635464 NCT02439541
Cartilage repair	NCT02291926
Cerebral Palsy	NCT01929434 ChiCTR-ONC-12003124
Connective tissue diseases	ChiCTR-OPB-15005956
Diabetes (Type 2)	NCT02302599 ChiCTR-TRC-12002868
Erectile Dysfunction	NCT02579148 ChiCTR-OCN-15007041
Liver failure	NCT01844063 ChiCTR-ONRC-13004581 NCT02223897
Lung injury	NCT02444455 NCT02444858
Lupus	ChiCTR-OPC-15006322
Multiple Sclerosis	NCT01883661 NCT02587715 NCT02237547
Muscular Dystrophy	NCT02285673
Myocardial Infarction	NCT02323477
Osteoarthritis	NCT02237846 NCT02580695
Ovarian failure	NCT02644447
Parkinson's disease	ChiCTR-ONRC-12002937
Psoriasis	NCT02491658
Retinitis pigmentosa	NCT01914913
Rheumatoid Arthritis	NCT01985464
Sepsis	ChiCTR-TRC-14005094
Spinal Cord Injury	NCT02481440 NCT02237547
Stroke	NCT02378974 ChiCTR-ONRC-12002929
Traumatic optic neuropathy	ChiCTR-TRC-14005093
Ulcerative colitis	NCT02442037

Tables researched by Frances Verter, PhD, Alexey Bersenev, MD PhD, and Pedro Silva Couto, MSc ©2014-2016. Sources of trial data are ClinicalTrials.gov and WHO International Clinical Trials Registry Platform (ICTRP) including: Chinese Clinical Trial Registry (ChiCTR), Korea's Clinical Research Information Service (CRIS), Japan's University hospital Medical Information Network (UMIN), Australian New Zealand Clinical Trials Registry (ANZCTR), etc., plus private communication from lead investigators.

For a link to any of
these clinical trials, please visit
http://parentsguidecordblood.org/en/trials.

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