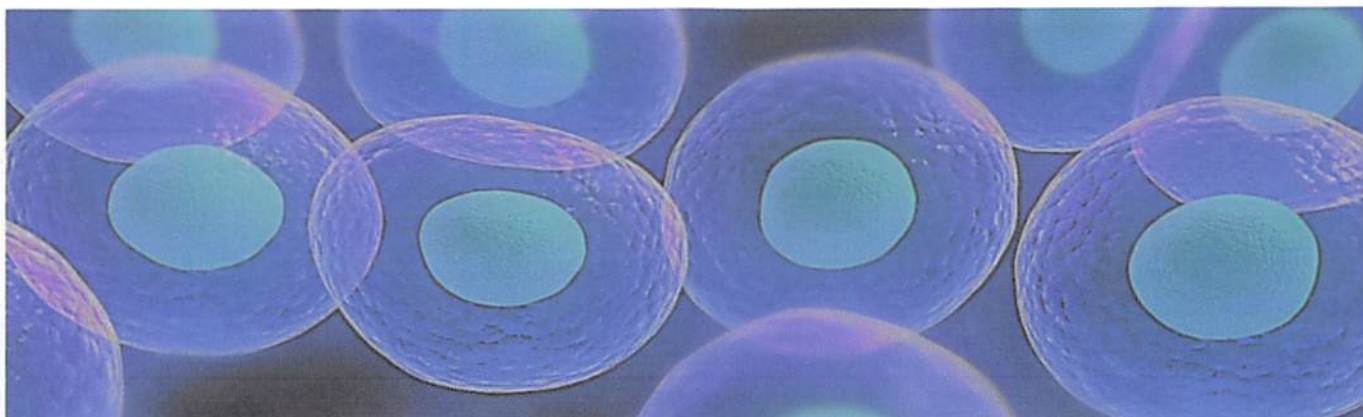


Stem Cells

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What are Stem Cells?



Stem cells are the newest and leading frontier in Medicine. Stem cells have been shown to have great therapeutic and biotechnological benefits and untapped potential. Stem cells not only replace damaged or dysfunctional cells in the individual body, but also rescue them and/or deliver therapeutic proteins after they have been engineered to do so. We use mesenchymal stem cells postnatally recovered from umbilical cord blood that are uniquely and meticulously processed for safe injection or infusion in our patients. These stem cells are capable of performing the task of tissue repair and regeneration and are called multipotent or pluripotent cells.

Stem cells are defined simply as cells meeting three basic criteria. First they renew them-selves by dividing to produce identical daughter cells. Second, they have the capacity to undergo differentiation to become specialized progeny cells. Third, they may renew the tissues that they populate. Thus they provide the ability to slow the rate of tissue degradation from natural aging.

All tissue compartments contain cells that satisfy the definition of "stem cells", and the rate at which the stem cells contribute to the replacement cells varies throughout the body. For example, blood forming stem cells, gut and skin cells must be constantly replaced for normal health. In contrast, the stem cells in

the nervous system the replace neurons are relatively quiescent and do not participate in tissue renewal or replacement.

Stem cells obtained from the adult tissue sources undergo senescence (failure to divide) and have limitations to viability and effectiveness. Stem cells derived from "younger" tissues, for example umbilical cord blood, have an extended capacity for expansion and cell division before the undergo senescence and are preferred for our patients.

Contact our office today to see if and how Stem Cell Therapy can help you!

