

## Apheresis, Medical 128

### Table of Content

- [Purpose](#)
- [Description & Definitions](#)
- [Criteria](#)
- [Coding](#)
- [Document History](#)
- [References](#)
- [Special Notes](#)
- [Keywords](#)

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**Member-specific benefits take precedence over medical policy and benefits may vary across plans. Refer to the individual's benefit plan for details <sup>\*</sup>.**

### Purpose:

This policy addresses the medical necessity of - Apheresis.

### Description & Definitions:

Apheresis (also known as pheresis or therapeutic pheresis) is a medical procedure utilizing specialized equipment to remove selected blood components (plasma, leukocytes, platelets, or cells) from whole blood, treat, and return back to the blood circulation. During the procedure, whole blood is removed from the body and the blood plasma and blood cells are separated. Antibodies are found in plasma, so the plasma is discarded. The blood cells are recombined with a plasma substitute, or donor plasma, and is returned to the body.

Plasmapheresis is one form of apheresis. Other types of apheresis are designed to isolate and remove specific pathogenic factors (e.g., cytopheresis isolates and removal of cellular components of the blood, while low-density lipid apheresis isolates and removes low-density lipoproteins; Protein A column pheresis (aka extracorporeal immunoadsorption) isolates and removes pathogenic immunoglobulins).

Therapeutic plasmapheresis resembles dialysis but, in addition, can remove protein-bound toxic substances. To be of benefit, plasmapheresis should be used for diseases in which the plasma contains a known pathogenic substance, and plasmapheresis should remove this substance more rapidly than the body can produce it.

### Criteria:

Therapeutic apheresis may be indicated for 1 or more of the following:

- Acute disseminated encephalomyelitis, as indicated with all the following:
  - where conventional treatment (including corticosteroids) has failed (i.e., severe neurological deficits have persisted after treatment with corticosteroids)
  - last resort
- Acute inflammatory demyelinating polyneuropathy (Guillain-Barre syndrome), as indicated by **all** of the following:
  - Individual has grades 3 to 5 disease.
  - Treatment will be initiated within 2 weeks of onset of neuropathic symptoms for ambulant individuals and within 4 weeks of symptom onset for non-ambulant individuals.

- Antiphospholipid syndrome (catastrophic), as indicated by **ALL** of the following:
  - Acute involvement of 3 or more organs, systems, or tissues
  - Antiphospholipid antibodies present
- Age-related macular degeneration (dry)
- Amanita mushroom poisoning
- Antiglomerular basement membrane disease, as indicated by **1 or more** of the following:
  - Diffuse alveolar hemorrhage.
  - Individual not dialysis dependent, and creatinine less than 6.6 mg/dL (583 micromoles/L)
- Antineutrophil cytoplasmic antibody (ANCA)-associated vasculitis, (Wegener's granulomatosis, microscopic polyangiitis, Churg-Strauss syndrome) indicated by **ALL** of the following:
  - Antineutrophil cytoplasmic antibody positive
  - Appropriate clinical condition, as indicated by **1 or more** of the following:
    - Dialysis dependent
    - Dialysis is imminent.
    - Diffuse alveolar hemorrhage.
- Autoimmune encephalitis
- Babesiosis (severe) as indicated by **1 or more** of the following:
  - Disseminated intravascular coagulation.
  - Greater than 10% parasitemia
  - Pulmonary, renal, or hepatic dysfunction
  - Significant hemolysis (eg, blood hemoglobin level less than 10 g/dL (100 g/L), hemoglobinuria)
- Cardiac transplant, as indicated by **1 or more** of the following:
  - Cellular or recurrent rejection treatment needed.
  - Desensitization prior to transplant
  - Rejection prophylaxis needed.
- Chronic inflammatory demyelinating polyradiculoneuropathy, as indicated by **ALL of the** following:
  - Hyporeflexia or areflexia present in most limbs.
  - Insufficient response to corticosteroids or intravenous immunoglobulin
  - Progressive or relapsing motor and sensory impairment of more than one limb
- Chronic relapsing polyneuropathy, as indicated by **ALL of the** following:
  - Individual has severe or life threatening symptoms.
  - Individual failed to respond to conventional therapy.
- Cryoglobulinemia, as indicated by **1 or more** of the following:
  - Membranoproliferative glomerulonephritis
  - Neuropathy (eg, mononeuritis multiplex)
  - Ulcerating purpura
  - Vasculitis
- Focal segmental glomerulosclerosis, as indicated by **1 or more** of the following:
  - Post transplant: recurrent focal segmental glomerulosclerosis
  - Pretransplant: to prevent or delay recurrence.
- Glomerulonephritis (Goodpasture's syndrome) associated with antiglomerular basement membrane antibodies and advancing renal failure or pulmonary hemorrhage.
- Graft vs host disease, steroid-dependent or steroid-refractory
- HELLP (hemolysis, elevated liver enzymes, and low platelets) syndrome of pregnancy, if thrombocytopenia, hemolysis, or renal failure continues to worsen 48-72 hours postpartum.
- Hemochromatosis (hereditary)
- Hemolytic uremic syndrome (Atypical HUS, non-diarrhea associate HUS, or HUS associated with complement factor antibodies)
- Heterozygous familial hypercholesterolemia, as indicated by **1 or more** of the following:
  - Individual with progressive coronary artery disease and **1 or more** of the following:

- LDL cholesterol is greater than 200 mg/dL (5.18 mmol/L) or has decreased by less than 40% with medical therapy for 6 or more months.
    - Lipoprotein(a) is greater than 60 mg/dL (2.14 micromoles/L) and LDL cholesterol is greater than 125 mg/dL (3.24 mmol/L) despite medical therapy for 6 or more months.
  - Individual without coronary artery disease and **ALL of the** following:
    - LDL cholesterol is greater than 300 mg/dL (7.77 mmol/L).
    - LDL cholesterol has decreased by less than 40% with medical therapy for 6 or more months.
- Homozygous familial hypercholesterolemia, as indicated by **ALL of the** following:
  - Age is older than 2 years.
  - LDL cholesterol is greater than 500 mg/dL (12.95 mmol/L).
- Hyperviscosity due to clonal thrombocytosis (eg, from essential thrombocythemia or other myeloproliferative disorder), as indicated by **1 or more** of the following:
  - Platelet count 1,500,000/mm<sup>3</sup> (1500 x10<sup>9</sup>/L) or greater.
  - Platelet count 450,000/mm<sup>3</sup> (450 x10<sup>9</sup>/L) or greater and 1 or more of the following:
    - History of thrombosis or bleeding
    - Vascular stasis signs or symptoms
- Hyperviscosity due to erythrocytosis, as indicated by **ALL of the** following:
  - Hematocrit greater than 55% (0.55)
  - Hyperviscosity symptoms
  - Simple phlebotomy has failed to reverse symptoms.
- Hyperviscosity due to leukocytosis, as indicated by **ALL of the** following:
  - Vascular stasis signs or symptoms
  - White blood cell count greater than 50,000/mm<sup>3</sup> (50 x10<sup>9</sup>/L)
- Hyperviscosity due to monoclonal gammopathy (eg, Waldenstrom macroglobulinemia, multiple myeloma with IgA, IgG, or kappa light chains), as indicated by **1 or more** of the following:
  - Neurologic signs or symptoms
  - Spontaneous bleeding from mucous membranes
  - Vascular stasis signs or symptoms
  - Visual disturbance due to retinopathy
  - Used as a prophylactic treatment in persons with IgM greater than or equal to 5000 mg/dL and is being treated with rituximab or ofatumumab.
- Leukemia as indicated by **All** of the following:
  - The treatment will be used for acute debulking only,
  - When the white blood cells count is greater than 100,000/ $\mu$ L.
- Lipoprotein(a) hyperlipoproteinemia, as indicated by **ALL of the** following:
  - LDL cholesterol is greater than 125 mg/dL (3.24 mmol/L) despite medical therapy for 6 or more months.
  - Lipoprotein(a) greater than 60 mg/dL (2.14 micromoles/L)
  - Progressive coronary artery disease
- Liver failure (acute)
- Liver transplant (ABO-incompatible), as indicated by **ALL of the** following:
  - Desensitization prior to transplant
  - Living related donor
- Lung allograft rejection, as indicated by **ALL of the** following:
  - Bronchiolitis obliterans syndrome
  - Failure of steroids or other immunosuppressive agents to halt syndrome progression.
- Multiple sclerosis as indicated by **ALL of the** following:
  - The member has acute, severe neurological deficits,
  - The member has had a poor response to treatment with high dose glucocorticoids.
- Myasthenia gravis, as indicated by **1 or more** of the following:
  - During initiation of immunosuppressive therapy
  - During myasthenic crisis with ventilatory insufficiency or failure

- During postoperative period after thymectomy
- Needs rapid improvement of strength before surgery or irradiation.
- Symptomatic individual resistant to or intolerant of immunosuppressive therapy
- Mucocutaneous T-cell lymphoma (cutaneous T-cell lymphoma) for erythrodermic disease (stage III)
- Natalizumab-associated progressive multifocal leukoencephalopathy.
- Neuromyelitis optica (acute), when high-dose intravenous steroids fail to resolve symptoms.
- Paraproteinemic demyelinating neuropathies associated with IgA, IgG or IgM monoclonal gammopathy of undetermined significance (MGUS) (excluding multiple myeloma)
- Pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections (PANDAS), as indicated by **1 or more** of the following:
  - Refractory disease
  - Severe symptoms (eg, chorea, cognitive deficits, motor hyperactivity)
- Pemphigus vulgaris is indicated by **ALL of the** following:
  - Individual has failed or has a contraindication to at least two (2) alternative treatments (dapsons, corticosteroids, immunosuppressants such as azathioprine or cyclosporine);
- Phytanic acid storage disease (Refsum disease), as indicated by **1 or more** of the following:
  - Acute neurologic or cardiac symptoms
  - Disease exacerbation
  - Maintenance therapy
- Polyarteritis nodosa associated with hepatitis B virus, in combination with glucocorticoids.
- Polyneuropathy due to monoclonal gammopathy (paraprotein neuropathy) with IgA, IgG, or IgM
- Primary macroglobulinemia (Waldenstrom)
- Pruritis of Cholestatic Liver Disease (plasma perfusion of charcoal filters)
- Refsum's disease
- Renal transplant (ABO compatible), as indicated by **1 or more** of the following:
  - Antibody-mediated rejection
  - Desensitization prior to transplant with crossmatch-positive living donor
- Renal transplant (ABO-incompatible), as indicated by **1 or more** of the following:
  - Antibody-mediated rejection
  - Desensitization prior to living donor transplant
- Rheumatoid vasculitis, as indicated by **ALL of the** following:
  - Disease is life threatening
  - Treatment is a last resort.
- Scleroderma and polymyositis, as indicated by **ALL of the** following:
  - Disease is life threatening.
  - Individual failed to respond to conventional therapy.
- Sickle cell disease (acute) with complications, as indicated by **1 or more** of the following:
  - Acute stroke
  - Severe acute chest syndrome (ie, oxygen saturation less than 90% despite oxygen therapy)
- Sickle cell disease (nonacute) with complications, as indicated by 1 or more of the following:
  - Cerebral infarct documented on brain MRI in absence of symptoms.
  - High risk for stroke, as documented by transcranial Doppler study with mean blood flow velocity in the internal carotid artery or middle cerebral artery of 200 cm/second or higher.
  - History of acute stroke or evidence of cerebral infarct on brain MRI
  - History of iron overload
- Systemic lupus erythematosus, as indicated by **ALL of the** following:
  - Disease is life threatening.
  - Conventional therapy has failed to prevent clinical deterioration.
  - Treatment is a last resort.
- Thrombotic microangiopathy (drug-related)
- Thrombotic thrombocytopenic purpura where treatment is a last resort.

- Transverse myelitis treatment when corticosteroid treatment has failed.
- Vasculitis associated with HIV.
- Wilson disease

Apheresis is considered not medically necessary for any use other than those indicated in clinical criteria.

## Coding:

Medically necessary with criteria:

Coding	Description
36511	Therapeutic apheresis; for white blood cells.
36512	Therapeutic apheresis; for red blood cells.
36513	Therapeutic apheresis; for platelets.
36514	Therapeutic apheresis; for plasma pheresis.
36516	Therapeutic apheresis; with extracorporeal selective adsorption or selective filtration and plasma reinfusion.

Considered Not Medically Necessary:

Coding	Description
	None

U.S. Food and Drug Administration (FDA) - approved only products only.

## Document History:

Revised Dates:

- 2023: May
- 2022: May
- 2020: May, July
- 2018: September
- 2016: January, February, November
- 2015: February, March
- 2014: January, November
- 2013: April, October
- 2012: September, October

Reviewed Dates:

- 2024: June – no changes
- 2021: May
- 2018: August
- 2017: November
- 2011: April
- 2010: April
- 2009: April

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Medical 128

## References:

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### Special Notes: \*

Medical policies can be highly technical and complex and are provided here for informational purposes. These medical policies are intended for use by health care professionals. The medical policies do not constitute medical advice or medical care. Treating health care professionals are solely responsible for diagnosis, treatment, and medical advice. Sentara Health Plan members should discuss the information in the medical policies with their treating health care professionals. Medical technology is constantly evolving, and these medical policies are subject to change without notice, although Sentara Health Plan will notify providers as required in advance of changes that could have a negative impact on benefits.

Services mean both medical and behavioral health (mental health) services and supplies unless We specifically tell You otherwise. We do not cover any services that are not listed in the Covered Services section unless required to be covered under state or federal laws and regulations. We do not cover any services that are not Medically Necessary. We sometimes give examples of specific services that are not covered but that does not mean that other similar services are covered. Some services are covered only if We authorize them. When We say You or Your We mean You and any of Your family members covered under the Plan. Call Member Services if You have questions.

### Keywords:

SHP Apheresis, medical 128, Plasmapheresis, LDL Pheresis, Lipoprotein