**Therapeutic Plasma Exchange (TPE)**

**What is TPE?**

TPE is a treatment provided by the Acute Dialysis and Pheresis Team (ADAPT) at Children’s of Alabama. TPE is used for many diseases and diagnoses. TPE works by removing your child’s plasma, which contains antibodies or abnormal proteins that are making your child sick. Replacement plasma is then given back to your child. TPE has several names, including plasmapheresis and PLEX.

**How does TPE work?**

TPE is performed using a machine that separates the parts of your child’s blood. First, an intravenous (IV) catheter will be placed by either the surgery or ICU team in a large vessel, either in the neck or groin, and used to pull blood from the body into the machine. The ADAPT nurse will set up and use a machine that will separate the liquid part of the blood (called plasma) from the white and red blood cells. The plasma is the part of the blood that has the abnormal proteins and antibodies causing the disease your child has. Your child’s plasma is removed and thrown away. The machine then replaces your child’s plasma with either man made plasma (albumin) or donor plasma (fresh frozen plasma, FFP).

**What else do you need to know?**

* This procedure usually takes about 2-4 hours per treatment.
* The ADAPT nurse will frequently monitor your child’s vital signs, including heart rate and blood pressure.
* Although TPE removes abnormal proteins and antibodies, it can also remove things your body needs, such as factors that help your blood clot and some medications. We will give extra doses of medications your child is on that may be removed in the plasma before and during this treatment. We will also monitor clotting levels prior to treatments.
* The calcium levels in your blood will be monitored frequently, as we use a blood thinner to keep the blood from clotting while it is in our machine. Any abnormal values will be treated.

**How long will my child need TPE?**

Because TPE treats many different diseases, the number of sessions of TPE required can vary. We will discuss with you the initial treatment plan, and most patients receive at least 3 sessions, either daily or every other day, in the beginning. If you have any questions about this treatment, please ask for your ADAPT provider.