Steroid Response...Steroid Resistance?
Sally Wenzel MD, Director of UPMC’s Asthma Institute, clarified what is sometimes referred to steroid resistance in patients who are steroid dependent. For patients who are on higher and higher doses, likely the immune system that is being suppressed by the steroids begins to fight back, developing new inflammatory pathways. The need for higher doses reflects a poor response, rather than a resistance. She noted, as well, that patients who do not respond to steroids may not have an inflammatory component to their illness. At times, even with an inflammatory component, there may be environmental or chemical interference preventing cells from responding to steroids and this must be addressed. Remember as well that steroids are like band-aids, and that inflammation can come back. Steroids do not cure the vicious cycle.

Unfortunately for many patients, prednisone remains the best treatment option, even with its side effects. Remember, all medications have effects and side effects. Side effects of prednisone, at very high doses, include tissue effects, as the medication can ‘melt’ tissue and bone, leading to risk of infection, for example, a bowel rupture. However, it is important to make sure you have the right diagnosis. Although lot of patients are given a diagnosis of asthma and severe asthma, different subtypes of this disease are being identified. One of these is Asthmatic Granulomatosis. Others include an overlap with autoimmune disease. These subtypes can be identified by lung biopsies, respond better to other treatments, including Imuran, CellCept and even Methotrexate, and treating physicians should be made aware of this. Although Methotrexate may in the past have been the most popular, according to Dr. Wenzel this immunosuppressant has not been found to be as good as Imuran or CellCept. Research has
found side effects including scarring of lung tissue (fibrosis), and liver problems. Are there long-term damages to the lungs as a result of **long-term inflammation**? There may be risks of scarring.

**Asthma and Gender**  
Studies of the impact of hormones on asthma show that real differences exist. Boys outgrow asthma, while girls do not. New cases are often diagnosed in adolescence. In females, asthma progresses in adolescence, can improve during pregnancy, but can worsen with menstrual cycles or in menopause. Dr. Wenzel describes working with gynecologists at times to incorporate hormone replacement therapy as needed. Our understanding of the causes is poor, making the study of patients through SARP, over time, a great benefit. For information on SARP, the Severe Asthma Research Program, go to [www.severeasthma.org](http://www.severeasthma.org)