The following are summaries of studies regarding pediatric spay/neuter. As you read, keep in mind that there are no published studies indicating any problem with pediatric spay/neuter or any studies to support the traditional age of six months.

By Tracy Land, DVM                  President & Founder, Project Spay/Neuter, Inc  www.PetOrphans.com/earlyneut.html
-Began specializing in spay/neuter and doing pediatrics in 1996, have since personally done over 10,000 pediatric procedures

**A Case for Neutering Pups and Kittens at Two Months of Age**
by Leo Lieberman, DVM  Journal of the American Veterinary Medical Association, Volume 191, No 5, Sept 1987
-Dr Lieberman has published information on the neutering of over 100 pups & kittens, 8-10 wks old. Two years later, undesirable side effects were not reported by the owners.
-Florida SPCA:  1600 surgeries at 8-12 wks, no undesirable effects reported.
-Medford Oregon SPCA, 1974 to 1980  8,000 surgeries at 8-12 wks. Undesirable effects were not reported by owners
-Persistent concerns that there might be long term undesirable effects led the SPCA to sponsor a retrospective study. Questionnaires were sent to the owners of 200 dogs, 3-14 yrs old, that had been neutered at 6-12 wks, and to owners of 200 dogs neutered after 6 months of age. Results, fewer behavior problems, fewer medical problems in the dogs spayed/neutered early than in those done at the traditional age. Questionnaires were also sent to owners of 120 cats neutered at 6-12wks, 4-14 yrs after surgery. Undesirable effects not reported by the owners.
-Please note that these studies are following case histories that are now 25yrs old.

**Implications of Early Neutering in the Dog & Cat**
This study divided dogs and cats into three groups. Group one was neutered at 7 wks, group two at 7 months, and group three remained unneutered.
-Instead of causing stunted growth, early spay/neuter may result in a slight increase in adult height
-In response to concerns about urinary incontinence, the authors measured urethral pressures (a diagnostic test for incontinence). Profiles were similar among those intact, those neutered at seven wks, and those neutered at 7 months.
-Also evaluated were behaviors, such as activity level, playfulness, vocalization, excitement, aggression, and affection in dogs and cats. While unneutered animals tended to be somewhat more aggressive and somewhat less affectionate, no other difference were noted between groups. Neutered dogs & cats were not lethargic or inactive.
-Growth rates, food intake, and weight gain were not affected.
-The external genitalia remained smaller in pups & kittens neutered early. No problems associated with this finding.
-Conclusions, early age neutering is safe & effective “does not seem to adversely affect skeletal, physical, or behavioral development”

**Gonadectomy in Immature Dogs:  Effects of Skeletal, Physical & Behavioral Development**
More scientific detail on the research in the study above. Conclusion “Neutering pups at 7 wks affected skeletal, physical & behavioral development much the same as did neutering pups at 7 months.

**Prepubertal Gonadectomy in Dogs & Cats**
Lisa How DVM Compendium  Vol 21, No 2 Feb 1999
An excellent overview article “Early age neutering has become common in many humane organizations as a method of population control. The concept of prepubertal gonadectomy has remained controversial among veterinarians despite the lack of scientific data to support current recommendations regarding the ideal age at which dogs and cats should be neutered. Studies suggest that gonadectomy is safe in dogs and cats as young as 6 wks, however, many vets are reluctant to anesthetize and perform surgery on pediatric patents.
-Today staffs of many vet hospitals as well as humane societies perform prepubertal gonadectomies with great success
-Pediatric patients as young as 6 wks can easily and safely anesthetized
-technically simple, and any vet comfortable with traditional age gonadectomy can safely perform pediatric gonadectomy
-does not increase morbidity or mortality
Short term Results and Complications of Prepubertal Gonadectomy in Dog & Cats
-Following passage of a resolution supporting early spay/neuter by the American Vet Med Assn, fourth year vet students at Texas A&M performed the procedures in this study. 723 animals less than 12 wks of age were spayed & neutered. 733 animals six months or older were spayed & neutered. Results, the animals spayed & neutered at the tradition age had significantly more complications than those under 12 wks.
-Note, this result was obtained by vet students, totally inexperienced surgeons. We were told we couldn’t do the babies. When told they could, these students got better result with the babies. What does that say about the intrinsic ease and safety of the pediatric procedures?

Early Age Neutering of Dog & Cats
This study was a cooperative effort between Angell Memorial Hospital and the Boston Animal Shelter. Over 350 puppies & kittens between 6 and 14 wks were spayed & neutered. Serious complications or deaths were not observed.

The Effect of Prepubertal Castration on the Penile Urethra of the Cat
-The belief has existed that early castration may contribute to failure of normal urethral development, resulting in a smaller urethra and thus increasing the probability of obstruction. The study found that castration before puberty did not affect urethral circumference. Please note the this study is over 25 yrs old and to the best of my knowledge, remains unchallenged.

Surgical Techniques for Neutering 6 to 14 wk old kittens
-96 kittens between 6-14 wks were spayed and neutered between 1990 and 1992. Results, not deaths, no surgical complications, no significant anesthetic complications, “a low risk procedure”

Early Neutering of the Dog & Cat
Perston Stubbs, DVM, Katherine Salmer idVM, Mark Bloomber DVM Current Vet Therapy XII, 1995
This represents the transference of the studies above from research journals into a standard vet textbook.

The Winn Feline Foundation Report on Early Spay/Neuter in the cat
An excellent study available on line at  www.winnfelinehealth.org/reports/early-neuter.html

Survey of the Coalition of Spay/Neuter Veterinarians
Tracy Land, DVM, Samantha Wall, BS Published as letter to the editor in Journal of the Am Vet Medical Assoc, Vol 216, No 5, March 2000
-Eighty five veterinarians responded, having collectively performed 235,053 early spay/neuters surgeries. Their unanimous opinion is that these procedures are easier, faster, and safer.