A lifelong breeder-owner-handler of Staffordshire Bull Terriers, Kathy Bolin of Foxsong Chihuahuas was a newcomer to the breed in 2004 when a puppy she had just begun showing was diagnosed with luxating patella, a painful, potentially crippling genetic disease. Though the Chihuahua, named “Seamus,” had been giving Bolin hints about having the condition, she hadn’t noticed.

Seamus was reluctant to stack squarely, and he occasionally moved one of his hind legs just enough so it was no longer parallel with the other one. Bolin repositioned him each time, unaware that stacking was uncomfortable for the dog.

One unforgettable day, while Bolin was stacking Seamus on the table to be judged at the Toy Dog Breeders Association of Southern California Dog Show, she heard and felt the dog’s patella (kneecap) pop. With limited experience in the breed, Bolin, of La Quinta, Calif., was unsure about what had happened.

“I wasn’t aware of the knee problems Chihuahuas can have,” Bolin says. “My veterinarian determined that Seamus had a bad knee. I then had all my dogs evaluated. The veterinarian referred me to an orthopedic specialist with ‘Tiffy,’ who was just 10 months old. The specialist confirmed that Tiffy had a severe case of luxating patella, with a Grade 3 luxation in the left stiffe (knee) and a Grade 4 luxation in the left stifle (knee)."

How to Take Part in Patellar Luxation Database

Breeders and owners of Chihuahuas are encouraged to have their dogs tested for patellar luxation. The condition occurs when the patella (kneecap) pops out of place causing pain and sometimes lameness.

Patellar luxation is one of three conditions for which the Chihuahua Club of America encourages health testing. The other two are eye disorders and congenital heart disease. The parent club also encourages breeders to register health test results with the Canine Health Information Center (CHIC), a central database and DNA bank sponsored by the Orthopedic Foundation for Animals and the Canine Health Foundation.

The benefits of health testing and reporting the results publicly in the CHIC database are many. CHIC provides a parent club with recommended health screening protocols and standardizes testing methods. It also provides a database to archive data, promote more informed breeding decisions, increase awareness of health issues and testing, and promote betterment of the breed through the pursuit of breeding healthier dogs. The data also can be used by researchers who study demographic information across breeds.

For information about the patellar luxation database, visit the OFA Web site at www.offa.org/patluxgeninfo.html.

Continued on page 2
Patellar Luxation

continued from page 1

causes the patella to jump sideways, inside or outside the groove in the joint. Most commonly the displacement occurs toward the inside of the joint, known as medial patellar luxation (MPL). Lateral patellar luxation (LPL), or displacement that occurs toward the outside of the joint, is less common. Luxation can also result from trauma.

Experts believe the alignment problem occurs during skeletal growth and that this can result in a shallow groove that allows the patella to become displaced. Other causes include weak ligaments that fail to hold the patella in place, tight ligaments that do not allow for sufficient flexibility, and a developmental lag between the time it takes for a dog’s legs to grow to maturity and cartilage to mineralize. All these structures and processes are affected at least to some extent by genetics.

Treatment for patellar luxation is based on severity and the cause of the condition. Dogs can be affected as early as 8 weeks of age; however, health test results are not accepted in the patellar luxation database maintained by OFA until dogs are 12 months of age. Based on health tests submitted from 1974 to 2009, the Chihuahua breed ranks 22 out of 93 breeds included in the database. Of the 638 Chihuahua evaluations entered in the database, 94.5 percent were normal tests and 5.5 percent were affected dogs.

“If a dog is normal at 2 years of age and has had no indication of luxating patella, then, it is uncommon to see clinical problems develop later,” Cook says.

Veterinary orthopedic specialists grade a dog’s luxation according to severity, ranging from Grade 0, indicating a normal state, to Grade 4, where it’s out all the time,” says James K. Roush, D.V.M., DACVS, professor of clinical sciences at Kansas State University College of Veterinary Medicine.

In dogs with Grade 4 patella luxation, “we typically see marked bone deformities of the femur and/or tibia,” Cook says. “Surgery is recommended, but it is very involved with multiple osteotomies. We typically have to cut the femur and tibia in multiple places and do internal fixation, which involves using bone plates to straighten out the limb and make the patella seat align and track correctly. These are major surgeries with higher costs and complication rates and more guarded prognoses.”

A physical examination combined with radiography helps veterinarians diagnose patella luxation. “Radiographs will only find patellae that are ‘out,’ as in Grade 3 or 4,” Roush says. “They will miss Grade 1 and 2 luxations because the patella may not be displaced at the time of the X-ray. The only way a radiograph can find Grade 1 or 2 luxation is if secondary osteoarthritis is detected; however, osteoarthrit- is may not be present or may be due to something other than patellar luxation. A physical examination is the diagnostic method of choice.”

Not a condition that improves over time, patellar luxation can lead to lameness and osteoarthritis. Medical management includes restricted exercise and nonsteroidal, anti-inflammatory medications for low-grade patella luxation. Surgery, used for more severe, high-grade cases, consists of returning the patella to its proper position to correct the anatomical abnormality.

Dogs with Grades 1 to 3 luxating patella generally have a good to excellent prognosis, says Roush, noting that even dogs with Grade 4 luxation can have quality lives with careful monitoring. “The limited factor is the length of time the luxation has occurred and the degree of secondary osteoarthritis present at the time of surgery,” he says.

Prudent Breeding Recommendations

Breeding recommendations for dogs diagnosed with luxating patellar should be made cautiously. “Patellar luxation is most likely a complex genetic disease involving several genes,” Roush says. “Breeders can select against the disease by choosing not to breed dogs diagnosed with it, but this isn’t complete assurance.”

The prevalence of luxating patella in Chihuahuas is not known. Patellar luxation may affect some but not all puppies in a litter. The more generations bred without the condition, the stronger the indication the disease is reduced in a bloodline. Still, it’s never certain that it will not reappear.

“The dilemma is that while you’re selecting against patellar luxation, you may introduce other heritable problems,” Roush cautions. “As a result, it is important to not cull dogs with quality traits because this could result in reducing genetic diversity. Dogs that carry this mutation also carry other important good genes that breeders may not want to lose from the breed.”

“Ideally, you would not breed pairs that produce puppies with patellar luxation, especially if there is a high incidence and high severity,” Cook says. “As with everything genetically based, you have to consider all factors and strike the best balance of desirable and nondesirable traits when breeding.”

As for Tiffy, who is now 5 years old, she has fared well since her surgeries. Following her veterinarian’s direction, Bolin continues to give Tiffy medications that include an anti-inflammato- ryo and she tries to make sure Tiffy is comfortable and pain-free.

“Tiffy is a little trooper,” Bolin says. “Through it all, she has had lots of spunk. When she feels good, she’ll even gallop a little. She is a happy little dog.”

Purina appreciates the support of the Chihuahua Club of America and particularly Beverly Fritzler, D.V.M., chairwoman of the CCA Health Related Issues Committee, in helping to identify topics for the Purina Pro Club Chihuahua Update newsletter.

Want to Reach the Editor?

Have comments about Purina Pro Club Update? Send them to us at: Purina Pro Club Update, c/o Editor, Nestlé Purina PetCare, 2T Checkerboard Square, St. Louis, MO 63164 or via e-mail at today’sbreeder@purina.com.

Send Us Your Questions

Have questions about your Purina Points or how to redeem weight circles for rewards and rebate checks? Contact Purina Pro Club at 877-PRO-CLUB, or 877-776-2582, between 7 a.m. and 5 p.m. Central time Monday through Friday. You may also visit www.purinaproclub.com to review and redeem Purina Points.
Pro Plan Selects Natural Dog Food Is Made Without Corn, Soy or Wheat

Purina Pro Plan brand Selects natural dog food will soon offer optimal nutrition formulated without corn, soy or wheat. Pro Plan Selects already is made without added artificial favors, colors or preservatives.

The new formulations without corn, soy and wheat are coming in July. New packaging for the six natural dog foods in the Selects portfolio is also coming in July. The new Selects packaging notes the excluded ingredients and promotes the inclusion of real meat as the No. 1 ingredient, whole grains, and egg and pea protein sources. Easy to read and understand, the Selects packaging features the same soulful photographs of purebred dogs that were featured on the original packaging.

The six formulas in the Selects line are:

- **Pro Plan Selects Natural Turkey & Barley Puppy Formula Plus Essential Vitamins and Minerals**;  
- **Pro Plan Selects Natural Turkey & Barley Adult Formula Plus Essential Vitamins and Minerals**;  
- **Pro Plan Selects Natural Turkey & Barley Senior Formula Plus Essential Vitamins and Minerals**;  
- **Pro Plan Selects Natural Chicken & Brown Rice Adult Formula Plus Essential Vitamins and Minerals**;  
- **Pro Plan Selects Natural Salmon & Brown Rice Adult Formula Plus Essential Vitamins and Minerals**; and  
- **Pro Plan Selects Natural Beef & Barley Adult Formula Plus Essential Vitamins and Minerals**.

Offering complete and balanced nutrition for each specified life stage, Pro Plan Selects contains nutrients to help support a dog’s immune and digestive systems and promote healthy skin and coat. The omega-3 fatty acids DHA (docosahexaenoic acid) and EPA (eicosapentaenoic acid), combined with natural sources of glucosamine, help support healthy cartilage and joints. Pro Plan Selects contain the easily absorbed chelated minerals zinc, copper and manganese. Chelated minerals are bonded to an amino acid, making them easy to digest and be used by the body.

Pro Plan Selects is sold at PetSmart, PETCO, and pet specialty and farm supply stores. For information, visit [www.proplan.com](http://www.proplan.com) or to talk with a pet nutrition consultant, call 800-PRO-PLAN, or 800-887-7526, from 9 a.m. to 4 p.m. Central time Monday through Friday.

Purina Event Center Soon to Open at Purina Farms

The dog fancy will soon have a new venue for holding dog shows, agility and obedience trials when the world-class Purina Event Center opens in September at Gray Summit, Mo. Construction of the multimillion-dollar indoor facility will be completed this summer ahead of schedule, says Director Brock Fitzgerald.

Events already are being booked. National Specialties scheduled for this fall include the Full Club of America, Ibizan Hound Club of the United States, and the Border Collie Society of America. All-breed dog shows include the Three Rivers Kennel Club of Missouri and the Gateway Cluster. The Doberman Pinscher Club of St. Louis Specialty Show is also scheduled.

The United Kennel Club (UKC) has announced a new event, the UKC Gateway Nationals, which will be held Oct. 29 to 31 and include conformation and dock jumping, with agility, obedience and rally competitions planned for the future. The United Flyball League International is planning to hold its Tournament of Champions Nov. 12 to 14. The 45,000-square-foot main exhibition hall and the adjoining 13,500-square-foot benching and grooming area were designed to provide comfort and convenience for exhibitors and guests. Amenities include: 158 grooming stations with electrical access; six stainless steel dog bathing tubs with easy access ramps; skid-resistant, coated-concrete flooring in the grooming area; special padded sport flooring; high-efficiency fluorescent lighting that shows the true colors of dogs’ coats; free wireless Internet service; several drop-off entrances for unloading grooming supplies and equipment; and 24-hour security.

For more information, visit the Purina Farms’ Web site at [www.purina farms.com](http://www.purina farms.com). To inquire about reservations, you may call 888-688-PETS, or 888-688-7387, or send an e-mail to Brock.Fitzgerald@Brock.Fitzgerald@purina.nestle.com.

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<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Location</th>
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<tbody>
<tr>
<td>Northeastern Brace Beagle Federation</td>
<td>May 17 to 21</td>
<td>Hunlock Creek, PA</td>
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<tr>
<td>PKC (Professional Kennel Club) Walker Days</td>
<td>May 13 to 15</td>
<td>McAlester, OK</td>
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<tr>
<td>Purina Labrador Retriever Awards</td>
<td>May 21</td>
<td>Salt Lake City, UT</td>
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<tr>
<td>Arkansas State Championship (UKC Coonhound)</td>
<td>May 28 to 29</td>
<td>Imboden, AR</td>
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<tr>
<td>Ducks Unlimited Sporting Exposition</td>
<td>May 28 to 30</td>
<td>Grapevine, TX</td>
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<tr>
<td>American Redbone Days</td>
<td>June 4 to 5</td>
<td>Mishicot, WI</td>
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<tr>
<td>Purina All-Age and Top Shooting Dog Awards</td>
<td>June 4 to 5</td>
<td>Valdosta, GA</td>
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<tr>
<td>Professional Kennel Club (PKC) National</td>
<td>June 10 to 12</td>
<td>Salem, IL</td>
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<tr>
<td>Retriever National Amateur Championship</td>
<td>June 16 to 26</td>
<td>Klamath Falls, OR</td>
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*This table lists some, but not all, upcoming sporting events sponsored by Purina.
The winner of the 2010 Pro Plan Champions Cup will receive a $10,000 cash prize and a trip for two on next year’s K-9 College Cruise to the Caribbean. Cash prizes also will be awarded to the second, third and fourth place finishers.

“The Pro Plan Champions Cup was introduced 10 years ago to honor those who promote excellence in the sport of purebred dogs through conformation dog shows and to support the dog fancy,” says Ann Viklund, Purina Director of Breeder-Enthusiast Marketing. “We are very excited to expand to a yearlong program that includes all Purina-sponsored all-breed dog shows.”

Previously, the Pro Plan Champions Cup was awarded to the dog earning the most points at three select Purina-sponsored benched dog shows. Now, over 200 all-breed dog shows are included. At the end of 2010, points will be tabulated based on the following:

- Best in Show, 5 points;
- Group One, 4 points;
- Group Two, 3 points;
- Group Three, 2 points; and
- Group Four, 1 point.

The dog earning the most points will win the $10,000 cash prize, K-9 College Cruise and a keepsake Pro Plan Champions Cup trophy. A permanent Pro Plan Champions Cup will be displayed at the new Purina Event Center along with a plaque engraved with the winners’ names. The Event Center opens in September 2010.

Cash prizes will be awarded to the top-placing dogs as follows:

- Second place, $5,000;
- Third place, $2,500; and
- Fourth place, $1,250.

More information about the 2010 Pro Plan Champions Cup, a running tabulation of individual dogs’ points, and a complete list of qualifying shows are available on the Purina Pro Club Web site at www.purinaproclub.com. See the Purina-Sponsored Dog Show calendar (below) for upcoming events that are part of the competition.

The Pro Plan Champions Cup is sponsored by Purina Pro Plan brand dog food.

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### Purina-Sponsored Dog Shows¹
**May to June 2010**

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<tr>
<th>Event</th>
<th>Date</th>
<th>Location</th>
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<tbody>
<tr>
<td>American Boxer Club National Specialty</td>
<td>May 9 to 14</td>
<td>Fort Mitchell, KY</td>
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<tr>
<td>Colonial Rottweiler Specialty</td>
<td>May 11 to 13</td>
<td>Lancaster, PA</td>
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<tr>
<td>Miami Valley Labrador Retriever Club Specialty</td>
<td>May 14 to 15</td>
<td>Hamilton, OH</td>
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<tr>
<td>Rio Grande Kennel Club Dog Show¹</td>
<td>May 14 to 17</td>
<td>Albuquerque, NM</td>
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<tr>
<td>Atlantic Shore Memorial Cluster²</td>
<td>May 28 to 31</td>
<td>Freehold, NJ</td>
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<tr>
<td>Chihuahua National Roving Specialty</td>
<td>June 3 to 6</td>
<td>Romulus, MI</td>
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<td>Fargo-Moorhead Kennel Club Dog Show¹</td>
<td>June 4 to 6</td>
<td>Fargo, ND</td>
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<td>Mississippi Valley Kennel Club Dog Show¹</td>
<td>June 5 to 6</td>
<td>Purina Farms</td>
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<tr>
<td>Flagstaff Valley Kennel Club Dog Show³</td>
<td>June 12 to 13</td>
<td>Flagstaff, AZ</td>
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<tr>
<td>Rolla Kennel Club Dog Show²</td>
<td>June 19 to 20</td>
<td>Purina Farms</td>
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<tr>
<td>Yellowstone Valley Kennel Club Dog Show²</td>
<td>June 22 to 24</td>
<td>Billings, MT</td>
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<tr>
<td>Central Florida Cluster²</td>
<td>June 24 to 27</td>
<td>Orlando, FL</td>
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</tbody>
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¹ This table list some, but not all, upcoming Purina-sponsored dog shows.
² Denotes an event that is part of the 2010 Pro Plan Champions Cup competition.