THE STEPS OF DENTAL PROPHYLAXIS (CLEANING)

NORMAL DENTAL ANATOMY AND GENERAL INFORMATION: Dental prophylaxis requires general anesthesia because it involves multiple steps which can result in a long procedure, may require radiographs (x-rays) to examine tooth roots, may cause pain, may involve extraction of teeth and suturing of gums, may require to use of bonded sealants, composite fillings, growth tissue regeneration (GTR) and usually requires the animal to remain completely still for a minimum of 30 minutes to as long as 2 -3 hours, depending upon the extent of dental disease.

DENTAL CHARTING: The process of dental prophylaxis starts with a complete oral examination, probing of tooth pockets called charting and scaling of teeth. Teeth and gingiva (gums) are examined for pockets below the gingival line, for caries and FORLs (cavities), missing teeth, loose teeth, fractured teeth, gum recession and resorptive lesions. Normal teeth have pockets of less than 3 mm. Teeth with pockets between 3 – 6 mm require a subgingival application of antibiotic gel to reduce infection and hopefully reduced further gingival and possibly tooth loss. Teeth with pockets > 7 mm require advanced treatment or extraction.

DENTAL RADIOGRAPHS (X-RAYS): Based upon probing, radiographs of the teeth are taken to determine root infection, degeneration and bone loss. Radiographs will determine which teeth will need to be extracted. Many teeth may look normal upon examination but may have significant disease below the gum line that cannot be visualized. Teeth that have root infections require extraction or referral to a veterinary board certified dentist for root canal therapy and additional treatment. At Arlington Animal Hospital we use a digital dental radiology unit to quickly capture images of your pet’s teeth.

SCALING: Scaling is performed with an ultrasonic scaler to remove tartar above and below the gum line using vibration. Ultrasonic scaling is safer and less damaging to the enamel than hand scaling/scraping away of tartar. And unlike hand scaling/scraping, ultrasonic scaling can be used to remove tartar below the gum surface. Hand scaling/scraping can scratch or extensively damage tooth enamel allowing infection to enter the tooth. Although ultrasonic scaling is far superior to hand scaling/scraping, damage to enamel surfaces can still occur with poor scaling technique. At Arlington Animal Hospital we utilize a high quality modern scaler that uses air to produce vibrations and is less damaging to teeth.

ENAMEL POLISH AND IRRIGATION: Minor tooth surface defects are smoothed out with pumice utilizing a low speed polishing unit. This makes the tooth surface resistant to plaque formation and adhesion. All tooth surfaces must be polished for proper efficacy including the lingual (tongue side) tooth surfaces. After polishing a pressurized spray of water combined with air is utilized to remove small amounts of tartar, plaque, left over pumice and bacteria from the tooth surfaces, gums and between the teeth. Irrigation allows for clearer final examination of the teeth and gums.

FLUORIDE TREATMENT: The surface of the teeth are coated in fluoride foam and allowed to sit for at least four minutes. This decreases tooth sensitivity, strengthens enamel and decreases the rate of future plaque formation. Following fluoride treatment the entire oral cavity is irrigated to remove all the foam and any debris.
ADVANCED DENTAL TREATMENTS

GENERAL INFORMATION:  Advanced dental treatments are required when the tooth crown or root has evident infection or damaged, with enamel damage or loss and if cavities are present. These treatments are less expensive and time consuming in comparison to tooth extraction. The goal of these treatments is to preserve the pet’s teeth for as long as possible much like human dentistry.

EXTRCTIONS/SUTURING:  Teeth that are loose, have extensive gum recession, are fractured or have root degeneration may need to be extracted and their pockets sutured to prevent infection. Extraction of teeth can be a difficult process and may required use of high speed drills, gum flaps and lip flaps. Some tooth extractions require root cutting with a high speed drill and extractions have to be done carefully to prevent fractures of the jaw and damage to other teeth. After extraction the pocket must be cleaned of any infected bone. Often times bone graft material is placed in tooth pocket prior to suturing to promote bone regeneration.

ORAL ANTIBIOTIC GEL APPLICATION (PERIODONTAL FILLERS):  Clinical studies have shown that the application of antibiotic gels, known as periodontal fillers, in pockets between 3 – 6 mm produces a significant reduction in the number of bleeding sites, pocket depth, infection and bone loss. Periodontal fillers thicken after application which produces a barrier in the periodontal pocket that remains in place for 7-10 days and is then bioabsorbed by the body. Periodontal fillers can also be applied in conjunction with fluoride treatments and in extraction pockets to prevent the entrance of water and other fluids.

BONDED SEALANT:  Dental fractures with exposed dentin are associated with nerve stimulation causing pain and bacterial migration. Dentinal tubules contain fluid that communicates with nerve endings and fluid movement in daily activity results in pain. Dentinal tubules also allow bacteria to migrate directly into the pulp which may result in an abscessed tooth. Additionally, the rough surface associated with an enamel fracture serves as an adhesion site for plaque. Applying a light cured bonded sealant to the enamel fracture will immediately seal the exposed dentinal tubules to help prevent infection and decrease pain. The sealant will penetrate the dentin below the tooth surface.

CAVITY RESTORATION (FILLINGS):  Dental filling are also known as composite restoration and involve filling tooth enamel defects with composite resin and light curing the resin to a solid state. In addition to restoring the tooth surface, composite resin are similar in color to the tooth and are aesthetically pleasing. Prior to the filling the tooth surface will be removed of decay with a high speed diamond burr, prepared for bonding and then filled with composite resin. The resin will then be cured with a UV light to a solid state similar to the tooth. Cavity restoration can be used for uncomplicated crown fractures, caries (cavities) and enamel hypocalcification.

BONE GRAFTING AND GUIDED TISSUE REGENERATION (GTR): Bone grafting and guided tissue regeneration (GTR) are treatments aimed at regenerating the lost gum and bone tissue around a tooth. The process involves folding back the gum tissue, removing tartar and disease bone around the tooth. The void is then filled with bone graft material and a regenerative membrane to block out soft tissue as the bone regenerates and the gum is sutured closed.

THE KEY TO MAINTAINING GOOD DENTAL HEALTH IN YOUR PET IS CONSISTENT DENTAL EXAMS EVERY 6-12 MONTHS, ROUTINE CLEANINGS, A PROPER DIET AND AGGRESSIVE HOME DENTAL CARE.