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Please read consent form. Signatures will be required at the office the day of your procedure.

PROSTHODONTIC TREATMENT INFORMED CONSENT

Prosthodontic information **Potential risks and problems**

Please read this document carefully and make note of any questions you may wish to discuss with me. You will be expected to sign a copy of this document before treatment begins.

INTRODUCTION:

The purpose of this document is to inform you of what to expect during prosthodontic treatment along with potential risks or problems which may be encountered before, during, or after treatment.

The following information is routinely available to anyone considering prosthodontic treatment in our office. While recognizing the benefits of a pleasing smile and well functioning teeth, you should also be aware that prosthodontic treatment, like any treatment of the body, has some inherent risks and limitations. These are seldom enough to contraindicate treatment but should be considered in making the decision to have prosthodontic treatment. Prosthodontic treatment usually proceeds as planned; however, **like all other healing arts, results cannot be guaranteed.**

Initial Diagnostic Procedures:

Diagnostic procedures are selected to help formulate treatment recommendations. When appropriate, these procedures may include (1) a medical and dental history, (2) discussion of your dental problems, concerns, and desires, (3) physical examination of the mouth and associated structures, (4) x-rays, (5) plaster models of the teeth and/or associated structures, (6) photographs, and (7) conference with previous or concurrent health professionals. If additional diagnostic procedures are indicated, they would be discussed with you.

Treatment Recommendations:

Prosthodontic treatment recommendations are based upon the information gained from the initial diagnostic procedures as well as the previous experience and accumulated dental knowledge and skill of the prosthodontist. Therefore, treatment recommendations of similar situations can vary, and second opinions are often appropriate. The ultimate goal of treatment is to help you obtain your optimum dental health and appearance.

You have been informed of the most appropriate and ideal treatment plan, based upon my opinion. You have also been informed of reasonable alternative treatment plans. In addition, you have been informed of the dental prognosis of each of these treatment plans as well as a dental prognosis if no prosthodontic treatment is initiated at this time.

If you have any questions regarding any of the treatment recommendations or the associated prognoses, you are welcome to further discuss them with me.

REFERRALS TO OTHER SPECIALISTS:

Prosthodontic treatment often requires concurrent treatment with one of the other recognized dental specialties:

Periodontics	(Treatment of gum tissue, implant placement)
Endodontics	(Root canal treatment)
Orthodontics	(Tooth straightening)
Oral Surgery	(Extractions, jaw surgery and implant placement)
Pediatric dentistry	(Children's dentistry)
Oral Pathology	(Diseases of the mouth)

Occasionally, referral to another health professional is appropriate, e.g., physician, physical therapist, or speech therapist.

Usually, the need for treatment by another dental specialist or health practitioner is evident during the initial diagnostic procedures, and the referrals are made during the treatment recommendations. If appropriate, you have been informed of treatment that can be provided by one or more other dental specialist and/or health professionals. Achieving the optimum prosthodontic treatment would require obtaining this recommended treatment.

Sometimes the need for treatment by another dental specialist or health practitioner becomes evident during prosthodontic treatment. In this situation, the appropriate referral and the reasons for the referral would be discussed with you in detail.

ANESTHETICS:
Most prosthodontic procedures are performed with local anesthetics, commonly called "Novocain." In addition, sedative medications and pain medications (analgesics) can be used to help minimize anxiety and discomfort. In rare instances, allergic reactions can occur. You are requested to inform our office staff of any known allergies you may have.

Some sedative or pain medications can cause drowsiness. Therefore, you would need to make arrangements for transportation to and from the office with a responsible person when these medications are used.

FIXED PROSTHODONTICS
Crown and Fixed (stationary) Bridges
Dental crowns are restorations that cover or "cap" teeth, restoring them to their natural size, shape and color. The crown not only helps appearance but can also strengthen a tooth that might otherwise be lost.

A fixed (stationary) bridge, also called a fixed partial denture, is designed to replace teeth that have been lost. Aside from obvious effects that missing teeth can have on personal appearance and mastication, there are other concerns. Normal pressure of chewing and stress can cause the remaining teeth to shift out of alignment resulting in malocclusion and periodontal (gum) problems. An etched metal bridge is a more conservative approach to replacing a missing tooth. Although it does not strengthen the tooth, it involves little grinding of the tooth structure. The long-term success rate may not be as high as conventional bridge work.

Sometimes a crown covering the entire tooth is not necessary and a partial crown or porcelain laminate is recommended. Generally, a particular crown restores the chewing part of a tooth including the cusps, and a porcelain laminate covers the front part of the tooth.

Dental crowns and fixed bridges are made of porcelain for optimum appearance and an inner layer of metal for strength. Sometimes teeth do not require porcelain for appearance, and the crown or bridge is made completely of metal. Porcelain laminates are made without metal. For discussion in this document, the term "crown" will include inlay, onlay and porcelain laminate. Dental crowns and fixed bridges are attached to teeth with dental cement.

Potential Problems with Fixed Prosthodontics (crowns or bridges):
Properly fitted crowns and fixed bridges do not cause root canals, tooth decay, fractured teeth, malocclusion; crowns and fixed bridges are used to *treat* these problems. However, dental restorations are handmade replacements of natural teeth and as such, potential problems do exist.

Before embarking on a program of prosthodontic treatment, it is advisable that you be made aware of the following potential problems.
1. **Root Canals:** A root canal is a filling for the dental pulp, the innermost part of the tooth. A root canal becomes necessary when the pulp is irreversibly injured or infected. This usually results from the cumulative effects of cavities, fillings, and cracks in the teeth.

Restorations of damaged teeth, with a dental crown, are considered the best way to *prevent* a root canal. However, the need for a root canal may not become apparent until after the crown is made. Normally, a root canal can be performed without remaking the dental crown; however, situations could arise whereby the need for a root canal can necessitate replacement of the dental crown or fixed bridge. Teeth that have had a root canal usually require a bonded core filling and/or a cast post and core. Posts are helpful in crown restoration.

2. **Periodontal (gum) Disease:** Periodontal disease (pyorrhea or gum disease) can occur at any age, with or without crowns and fixed bridges. Customarily, dental crowns and fixed bridges are placed on the teeth when the gum tissue is in a satisfactory state of health. However, periodontal disease can occur after crowns and fixed bridges.

Generally speaking, dental crowns and fixed bridges do not create or prevent periodontal disease. Oral hygiene, regular cleaning and dental examinations, diet, general health, and stress are among the factors that influence the health of your gum tissue.

3. **Tooth Preparation:** Preparing teeth for dental crowns and fixed bridges requires removal of fillings, tooth decay and damaged enamel. In addition, the removal of undamaged tooth enamel is often required to make room for the porcelain and/or metal. Ordinarily, a reduction of $1/16^{th}$ of an inch is needed to accommodate the thickness of porcelain and/or metal.

On occasions, irreversible damage to the dental pulp and the indication for a root canal is discovered at the time of tooth preparation. This is usually the result of a tooth fracture not evident on the x-ray or deep decay that is hidden on the x-ray by a metal filling or crown.

4. **Provisional (temporary) Restorations:** Provisional crowns and fixed bridges are used to protect the teeth and provide a satisfactory appearance while the new crowns and fixed bridges are being fabricated. The provisional restorations are usually made of acrylic resin and, as such, are not as strong as the porcelain/metal restorations. In addition, the provisional restorations are attached to the teeth with a relatively weak cement to facilitate their removal at subsequent appointment(s).

Regarding these factors, it is important to minimize the chewing pressure on provisional restorations as they can be fractured and dislodged. If this occurs, call our office for a repair or re-cementation.

5. **Porcelain Fractures:** Porcelain is the most suitable material for the esthetic replacement of tooth enamel. Because porcelain is a “glass-like” substance, it can break. However, the strength of dental porcelain is similar to dental enamel and the force necessary to fracture dental porcelain would usually be sufficient to fracture natural tooth enamel. Fractures of porcelain often require a new crown or fixed bridge.

6. **Dark Lines at the Gum Tissue:** Sometimes dark lines appear at the gum line of porcelain crowns and fixed bridges. The dark line is the metal edge of the crown or the dark root. Usually, the metal at the edge of the crown is hidden under the gum tissue, but if the gum tissue recedes, the metal will show. If the dark metal line appears after the placement of a crown or fixed bridge, it can often be eliminated by the use of a tooth-colored filling material.

The dark metal lines at the gum line can be minimized by using porcelain edges on the crowns and fixed bridges. However, in some situations, this design is not feasible for technical reasons.

Recession of gum tissue can expose an area of the root of the tooth that is not covered by the dental crown or fixed bridge. If the root is usually a darker color than the crown, a dark area at the gum line will appear. This can be corrected by the use of a tooth-colored filling material or placement of new crowns and/or fixed bridges that compensate for the new position of the gum tissue.

7. **Stains and Color Changes:** All dental restorative materials can stain. The amount of stain generally depends upon oral hygiene as well as the consumption of items such as tobacco, coffee, and tea. However, dental porcelain usually stains less than natural tooth enamel. Typically, the stain accumulated on porcelain can be removed at dental hygiene cleaning appointments.

Natural teeth darken with time more than dental porcelain crowns. Therefore, a new dental porcelain crown or fixed bridge may have a good color match with adjacent natural teeth, but less of a match after many years of service. Natural teeth can be lightened by bleaching. Crowns and fillings cannot be lightened or bleached.

8. **Tooth Decay:** Tooth decay can occur on areas of the tooth or root not covered by the dental crown. The cement seal at the edge of the crown can be lost, and decay can form at the junction of the crown and the tooth. If the decay is

discovered at an early stage, it can often be filled without remaking the crown or fixed bridge. Proper hygiene helps prevent decay. Daily brushing and flossing are essential.

9. **Loose Crown or Loose Fixed Bridge:** A dental crown or fixed bridge can separate from the tooth if the cement is lost or the tooth fractures. Most loose crowns and fixed bridges can be recemented; however, some tooth fractures require a new crown or new fixed bridges.

10. **Tooth Root Mobility:** Tooth roots can become mobile if they are not strong enough to withstand the forces on the crowns or fixed bridges. This occurs when the gum tissue and bone around the roots have severely receded, and/or the biting forces on the crowns or fixed bridges is excessive.

11. **Food Impaction:** Food can become lodged between dental crowns or under fixed bridges. Often, dental crowns and fixed bridges are connected (splinted) together creating the need for specialized hygiene techniques. In addition, gum recession can make food impaction unavoidable even with the most ideal contour of the dental crowns and fixed bridges.

12. **Excessive Wear:** Sometimes crowns and fixed bridges are used to restore badly worn teeth. If the natural teeth were worn from clenching and grinding the teeth (bruxism), the new crowns and fixed bridges may be subjected to the same wear. In general, dental porcelain and metal alloys wear at a slower rate than tooth enamel. However, excessive wear of the crowns and fixed bridges may necessitate an acrylic resin nightguard.

13. **Temporomandibular Joint (TMJ) Dysfunction:** Placement of dental crowns and fixed bridges inevitably changes the occlusion (bite). On rare occasions, the change, even if it technically improves the bite, can precipitate TMJ symptoms.

REMOVABLE PROSTHODONTICS

Removable prosthodontics is the replacement of missing teeth with dentures that can be removed from the mouth. There are several types of dentures. They include complete removable dentures supported by gum tissue, removable partial dentures supported by gum tissue and remaining teeth, and overdentures supported by roots of natural teeth or dental implants.

Potential Problems with Removable Prosthodontics:

Dentures are handmade replacements of natural teeth, and, as such, potential problems do exist. **Before embarking on a program of removable prosthodontic treatment, it is advisable that you be made aware of the following potential problems.**

1. **Mastication, Stability and Retention:** Removable dentures, under the best of circumstances, do not have the same chewing efficiency as natural teeth. The ability to masticate food is affected by the stability and retention of the dentures. Chewing efficiency may be reduced by as much as 80%.

Stability is the ability of the dentures to resist dislodgement. The stability and retention of the dentures are dependent upon many factors including the attachment of the dentures to natural teeth or implants, the amount and type of bone, gum tissue, and saliva, as well as your dexterity and the fit of the dentures.

2. **Appearance:** Properly fitting dentures will support the lips and facial contours in a manner similar to natural teeth. Often, dentures can be contoured to provide additional facial support if desired. However, excessive lip and facial support from dentures can result in a “swollen” appearance and irreversible tissue damage.

3. **Speech:** Removable dentures cover areas of the jaws and palate that are not normally covered. The presence of acrylic resin, metal or porcelain in these areas requires adaptation of the tongue and lips for proper speech.

4. **Denture “Click”:** Denture “clicks” occur when the upper and lower denture teeth contact inadvertently during speech or mastication. Retention may be improved with implants.

5. **Taste:** Taste buds are located on the tongue which is not covered by removable dentures. Contrary to popular belief, there are no taste buds on the palate. However, the acrylic resin and metal of removable dentures can affect the taste and texture of food, especially if the dentures are not properly cleaned.

6. **Stain and Cleaning:** The amount of stain on dentures generally depends upon oral hygiene, as well as the consumption of items such as tobacco, coffee, and tea. Commercially available denture cleaning solutions are usually sufficient to maintain clean dentures. Bleach should not be used to clean removable dentures, as the bleach can corrode the metal portion of the dentures and/or severely fade the pink acrylic resin.

7. **Denture Odor:** The pink acrylic resin portion of the denture is a plastic material and has a minor amount of porosity which can collect debris and odor. In addition, dental plaque and the associated odor can accumulate on dentures in the same manner as it accumulates on natural teeth. Therefore, it is imperative to thoroughly clean your dentures for the health of your gum tissue as well as the elimination of denture odor.

You will be given written and verbal instructions on proper cleaning procedures for you dentures. An evaluation of your dentures at recall appointments may necessitate additional cleaning recommendations.

Never use tooth paste on dentures. Toothpaste is abrasive and will create small cracks in the denture which collect plaque and lead to odor.

8. **Chipping and Wear:** Porcelain denture teeth have a tendency to chip. Slight chips can be polished; however, larger chips usually require replacements of the porcelain tooth on the denture.

Acrylic resin denture teeth have more resistance to chipping, but they have a tendency to wear down faster than porcelain. If the wear adversely affects the appearance or occlusion, the acrylic resin teeth can be replaced on the denture.

Chips and cracks of the pink acrylic resin portion can usually be repaired without remaking the denture.

9. **Relines:** The shape and size of the gum tissue and the bone underneath it changes with time. A reline procedure readapts the pink acrylic resin portion of the denture to the new shape and size of the gum tissue. Typically, a reline is necessary every one to five years. However, this can vary depending upon individual factors.

10. **Numb Lip (paresthesia):** The nerve to the lower lip travels through the lower jawbone. If the bone covering the nerve is lost, the nerve will be present directly under the gum tissue. Pressure from a removable denture on this area can cause a numb lip in a manner similar to pressure on your elbow causing numb fingers. This problem requires selective adjustment of the denture base. In very rare and extreme situations, the nerve would have to be surgically repositioned.

11. **Food Retention:** Removable dentures always have some space between the pink acrylic resin portion and the gum tissue. In addition, there is always some movement of the removable denture during mastication. These factors create a situation where food can accumulate between the denture and the gum tissue. Therefore, it is essential to remove the denture for cleaning on a periodic, daily basis. Removable partial dentures may have additional food retention problems with metallic clasps.

DENTAL IMPLANTS

Alternative to dental implants

I have considered the following alternatives to implant treatment: no treatment, construction of conventional complete or partial denture(s) and/or tooth replacement with conventional bridgework supported by my remaining natural teeth (if possible).

Risk of dental implant treatment

The risks of no treatment include, but are not limited to, continuing use of removable partial or complete dentures with associated potential for discomfort and shrinkage of the jawbones which would require periodic relining or remaking of the denture(s); periodontal disease which could lead to the loss of teeth if not treated; and tooth decay which could also lead to the loss of teeth if not treated.

Surgical risks include, but are not limited to, infection, bleeding, adverse drug reactions, discomfort, bruising, and perforation of the sinus or floor of nose, nerve damage, bone fracture, jaw joint injury, or loss of one or more implants. Nerve damage may be transient or permanent and can result in numbness, tingling or other sensations in the lower lip. Failing implant(s) would require surgical removal and may require additional prosthodontic procedures or the subsequent placement of additional implant(s).

Prosthodontic risks regarding implant treatment include, but are not limited to, failure of an implant to osseointegrate (may be immediate or delayed), fracture of the restoration and/or implant components, wear of the restoration requiring remake, compromised esthetic or functional outcome as a result of implant loss or less than ideal position of the implant(s).

Guarantees of implant treatment
No guarantee or warranty of any kind has been made to me that the proposed implant treatment will be 100% successful or that the final restoration(s) will be totally successful from a functional or esthetic (appearance) standpoint. No medical or dental procedure is totally predictable including treatment with dental implants. Unknown or unforeseen factors, further surgical or prosthodontic procedures beyond those described to me might be necessary. Long-term success of my proposed implant treatment requires necessary hygiene procedures as directed by the doctor and scheduled follow-up appointments.

TEMPORALMANDIBULAR JOINT (JAW JOINT)
Jaw joint (temporomandibular joint, or TMJ) pain or clicking may occur at any time during one's life. Usually, multiple factors cause this condition. In most instances jaw muscle spasms are the cause of the pain. Sometimes, actual joint pathology such as arthritis may be present. The emotional state of a person predisposed to this problem has a direct relationship to joint pain. Therefore, the pain and/or clicking may fluctuate with the emotional state of the individual.

Treatment of the problem may take several courses and can be very simple or become quite complex. Typically, prosthodontic treatment of TMJ problems involves treatment of the muscles associated with the joints and treatment of the occlusion. Procedures designed to relax the musculature and improve the occlusion can often relieve the TMJ symptoms. Severe TMJ problems usually require a coordinated treatment plan with other health professionals in addition to the prosthodontist.

An occlusal splint (bite guard) is used to determine if improvement of the bite, or a repositioning of the jaw, would improve the symptoms. If this is achieved, the occlusal splint can be continually worn, or the occlusion can be corrected to eliminate the need of the occlusal splint.

Correction of the occlusion may require selective grinding on the chewing surfaces of the natural teeth, crowns and fixed bridges, orthodontic treatment, and/or surgical repositioning of the jaws or teeth. Orthodontic treatment would be available by an orthodontist and surgical procedures would be available by an oral surgeon.

Treatment of the musculature associated with the TMJ may include exercises, medication, physical therapy, acupuncture, biofeedback nutritional recommendations, ice packs, immobilization, etc.

Before embarking on a program of prosthodontic TMJ treatment, it is advisable that you be made ware of the following potential problems.
1. **Continued Symptoms:** Initial prosthodontic treatment with an occlusal splint and muscle therapy is considered an appropriate, conservative, and reversible approach. However, this approach does not treat some of the disorders that can occur within the joint itself. The need for consultation and additional treatment with other specialist may become apparent during this phase.

In addition to problems within the joints themselves, TMJ symptoms can be perpetuated by the habit of clenching or grinding the teeth (bruxism), even with optimum occlusion, normal joints and proper musculature.

2. **Deterioration and the Occlusal Splint:** Occlusal splints are usually made of acrylic resin, and as, are subject to breakage and wear. Usually, the occlusal splint can be repaired; however, excessive breakage and wear may require a new occlusal splint with metal reinforcements.

BRUXISM
Bruxism is the name for clenching or grinding. It is a common habit that usually occurs at night. It is the most destructive problem in dentistry. It can destroy natural teeth, crowns and dentures. Treatment may include correcting the bite, crowns, and a bite guard, referral for biofeedback training, stress management, physical therapy or medication.

PREGNANCY
Prosthodontic Treatment during Pregnancy: Elective prosthodontic procedures, or procedures that can be easily postponed, should generally wait until after childbirth or be performed during the second trimester. Treatment of dental pain and urgent procedures can be performed with relative safety to the fetus by minimizing the use of medications and avoiding the use of nitrous oxide and other medications with know fetal effects.

DRY MOUTH
Dry Mouth: The quantity of saliva can be adversely affected by ageing, medication use, chemotherapy and/or radiation therapy and other autoimmune disorders. Lack of saliva can increase the irritation of a removable denture against the gum tissue and lack of saliva can severely increase the incidence of tooth decay. Prescription strength fluoride and oral lubricants should be used regularly in additional to impeccable hygiene practices.

SUMMARY
The overall intent of this pamphlet is to inform you of the range of possibilities that exist as potential problems undergoing prosthodontic treatment. Many of the problems or conditions mentioned occur only occasionally or rarely. There may be other inherent risks not discussed in this brochure. The point is that you should be aware that problems can happen. If this should occur, every effort will be made to treat the condition or conditions that develop or refer you to the appropriate health professional. Treatment of human biologic conditions will never reach a state of perfection despite technological advancements.

This pamphlet attempts to inform you of the general procedures and potential difficulties and problems associated with prosthodontic treatment. Because of the variables presented by each patient, a pamphlet such as this can only generalize. Your individual treatment depends upon a close professional working relationship, and I will make every effort to discuss and explain the specifics of your treatment in detail.

INFORMED CONSENT AND TREATMENT CONFIRMATION
I certify that this “Prosthodontic Treatment” pamphlet outlining general treatment considerations and potential problems and hazards of prosthodontic treatment was presented to me and that I have read and understand its contents. I also understand that potential hazards and problems may include, but are not limited to, those described in the brochure. I have had the opportunity to discuss my proposed treatment and the potential problems with Dr. Miller to clarify any areas I did not understand. I authorize Dr. Miller to provide prosthodontic treatment.