

1	<input type="checkbox"/> MR. <input type="checkbox"/> MRS. <input type="checkbox"/> MISS	LAST NAME OF PATIENT 성명	FIRST NAME	MIDDLE NAME	<input type="checkbox"/> SINGLE/독신 <input type="checkbox"/> MARRIED/기혼 <input type="checkbox"/> DIVORCED/이혼 <input type="checkbox"/> WIDOWED/사별	TELEPHONE 전화	
	HOME ADDRESS OF PATIENT 주소					CITY	ZIP
	SOCIAL SECURITY NO. 소셜시큐리티번호	DRIVER'S LICENSE NO. 운전면허번호	OCCUPATION OF PATIENT 직업		BIRTHDATE 생년월일	AGE 나이	
2	RESPONSIBLE PARTY OR SPOUSE 배우자		RELATIONSHIP TO PATIENT 환자와의 관계		SOCIAL SECURITY NO. 소셜시큐리티번호	BIRTHDATE 생년월일	
	ADDRESS 주소					CITY	ZIP
	EMPLOYER 직장	ADDRESS 주소		CITY	ZIP	TELEPHONE AT WORK 직장전화	
3	DO YOU OR ANY MEMBER OF YOUR FAMILY PARTICIPATE IN A DENTAL PLAN? <input type="checkbox"/> YES <input type="checkbox"/> NO 당신 또는 당신 가족이 덴탈보험에 가입하셨습니다? WHICH PLAN? 무슨보험입니까? _____ GROUP NO. _____				EMPLOYEE'S NAME 직장이름 _____		
					DATE EMPLOYED 취업일자 _____		
	INSURED MEMBERS SOCIAL SECURITY NUMBER 보험자의 소셜시큐리티번호 _____				LOCAL NUMBER 조합번호 _____	NO. OF DEPENDANTS 가족수 _____	
	DRIVER'S LICENSE NO. 운전면허번호 _____				RELATIONSHIP TO PATIENT 환자와의 관계 _____		
4	HOW LONG SINCE YOUR LAST VISIT TO A DENTIST? 마지막 치과 가신게 언제입니까? _____				REFERRED BY 소개자 _____		
	WHY ARE YOU HERE TODAY? 무엇때문에 오셨습니까?		CHECKUP 진찰 _____	E-MAIL/이메일 _____			
			TOOTHACHE 치통 _____				
		ESTIMATE 경비견적 _____					

ASSIGNMENT AND RELEASE

I, the undersigned, have insurance with _____
 Name of Insurance Company(ies)
 and assign directly to Dr. San Diego Dental Group all benefits, if any otherwise payable to me for services rendered. I understand that I am financially responsible for all charges whether or not paid by insurance. I hereby authorize the doctor to release all information necessary to secure the payment of benefits. I authorize the use of this signature on all my insurance submissions whether manual or electronic.

 Date Signature

MINOR/CHILD CONSENT

I, being the parent or guardian of _____ do hereby request
 Name of minor/child
 and authorize the dental staff to perform necessary dental services for my child, including but not limited to X-rays, and administration of anesthetics which are deemed advisable by the doctor, whether or not I am present at the actual appointment when the treatment is rendered.

 Date Signature of Insured / Guardian

FINANCIAL AGREEMENT

I acknowledge that payment is due at the time of treatment, unless other arrangements are made. I agree that parents/guardians are responsible for all fees and services rendered for treatment of a minor/child. I accept full financial responsibility for all charges not covered by insurance.

 Date Signature of Insured / Guardian

MEDICAL HISTORY OF PATIENT

병력란을 상세히 기입해 주십시오

1. Your current physical health is: ☐ Good ☐ Fair ☐ Poor
현재 건강상태:
2. Do you smoke or use tobacco in any other form? ☐ Yes ☐ No
흡연 중이십니까?
3. Are you taking any prescription / over-the-counter or herbal supplemental drugs? ☐ Yes ☐ No
드시는 약이 있으십니까?
* Which ones / 무엇입니까?
4. Have you ever taken Fosamax, or any other bisphosphonate? ☐ Yes ☐ No
포사맥스나 골다공증 약품을 드신적이 있으십니까?
5. Have you ever taken Phen-Fen? ☐ Yes ☐ No
펜테르민/헨플루라민을 드신적이 있으십니까?
6. Are you under a physician's care now? ☐ Yes ☐ No
치료 중이십니까?
If so, please give reason for treatment:
무슨 치료를 받으십니까?
Physician's Name: _____ Telephone: _____
의사이름: _____ 전화번호: _____

For Women :

7. Are you using a prescribed method of birth control? ☐ Yes ☐ No
처방받은 경구 피임약을 복용 중이십니까?
8. Are you pregnant? ☐ Yes ☐ No
임신 중이십니까?
Week (몇주) #: _____

9. Have you ever had any of the following diseases or medical problems?

- | | | | | | | | |
|----------------------------|----------------------------|------------------------------------|---------|----------------------------|----------------------------|--------------------------------|------------|
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Abnormal Bleeding | 심한출혈 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Herpes / Fever Blisters | 포진 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Alcohol / Drug Abuse | 술/약물남용 | Y <input type="checkbox"/> | N <input type="checkbox"/> | High Blood Pressure | 고혈압 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Anemia | 빈혈 | Y <input type="checkbox"/> | N <input type="checkbox"/> | HIV+ / AIDS | 에이즈 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Arthritis | 관절염 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Hospitalized for Any Reason | 입원 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Artificial Bones / Joints / Valves | 인공뼈 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Kidney Problems | 콩팥질환 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Asthma | 천식 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Liver Disease | 간장질환 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Blood Transfusion | 수혈 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Low Blood Pressure | 저혈압 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Cancer / Chemotherapy | 암 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Lupus | 낭창 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Colitis | 대장염 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Mitral Valve Prolapse | 승모판 탈출증 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Congenital Heart Defect | 선천성 심장병 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Osteoporosis / Paget's Disease | 골다공증 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Diabetes | 당뇨병 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Pacemaker | 인공 심장박동기 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Difficulty Breathing | 호흡곤란 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Psychiatric Problems | 정신병 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Emphysema | 폐기종 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Radiation Treatment | 방사선 요법 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Epilepsy | 뇌전증 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Rheumatic / Scarlet Fever | 류마치성열 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Fainting Spells | 실신 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Seizures | 뇌졸중 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Frequent Headaches | 두통 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Shingles | 대상 포진 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Glaucoma | 녹내장 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Sickle Cell Disease/ Traits | 겸상 적혈구성 빈혈 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Hay Fever | 고초열 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Sinus Problems | 코의 염증 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Heart Attack | 심장마비 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Stroke | 뇌졸중 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Heart Murmur | 심잡음 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Thyroid Problems | 갑상선 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Heart Surgery | 심장수술 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Tuberculosis (TB) | 결핵 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Hemophilia | 혈우병 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Ulcers | 궤양 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Hepatitis | 간염 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Venereal Disease | 성병 |

Please list any serious medical condition(s) that you have ever had:
건강에 대하여 참고 할 만한 사항 있으시면 기록하십시오:

10. Are you allergic to any of the following? / 이 중에서 알레르기가 있으십니까?

- | | | | | | | | |
|----------------------------|----------------------------|--------------------|---------|----------------------------|----------------------------|--------------|---------|
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Aspirin | 아스피린 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Latex | 라텍스 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Codeine | 코데인 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Penicillin | 페니실린 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Dental Anesthetics | 치과 마취 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Tetracycline | 테트라사이클린 |
| Y <input type="checkbox"/> | N <input type="checkbox"/> | Erythromycin | 에리스로마이신 | Y <input type="checkbox"/> | N <input type="checkbox"/> | Other | 기타 |

Please list any other drugs/materials that you are allergic to:
이 외에 알레르기 있으신 약들을 기록하십시오:



Tel: 858 279 1004 / Fax: 858 268 1004
7825 Engineer Rd. Ste 111
San Diego, CA 92111
www.sddentalgroup.com

PATIENT GENERAL CONSENT FOR TREATMENT

Patients Name _____

DATE _____

1. WORK TO BE DONE

I understand that I am having the following work done: Fillings____, Bridge____, Crown____, Extractions____, Root Canal____, Other____.

(Initials_____)

2. Drugs, Medications, and Sedation

I have been informed and understand that antibiotics, analgesics and other medications can cause allergic reactions causing redness and swelling of tissue, pain, itching, vomiting, and/or anaphylactic shock(severe allergic reaction)and the can cause pain, thrombophlebitis (inflammation of a vein)from intravenous and intramuscular injections, injury to and stiffening of the neck and facial muscles. They may cause drowsiness and lack of awareness and coordination which can be increased by the use of alcohol or other drugs .I understand and fully agree not to operate any vehicle or hazardous device for at lease 12 hours or until fully recovered from the effects of the anesthetic, medication and drugs that may have been given to me in the office for my care. I understand that failure to take medications prescribed for me in the manner prescribed may offer risks of continued or aggravated infection and pain and potential resistance to effective treatment of my condition.

(Initials_____)

3. Change in Treatment Plan

I understand that during treatment it may be necessary to change or add procedures because of conditions found while working on the teeth that were not discovered during examination, the most common being root canal therapy following routine restorative procedures. I give my permission to the dentist to make any/all changes and additions as necessary.

(Initials_____)

4. Removal of Teeth

Alternative to removal have been explained to me(root canal therapy, crowns, and periodontal surgery, etc.) and I authorize the dentist to remove the following teeth _____ and any others necessary for reasons in paragraph #3. I understand removing teeth does not always remove all the infection, if present, and it may be necessary to have further treatment. I understand the risks involved in having teeth removed, some of which are pain, swelling, spread of infection, dry socket, loss of feeling in my teeth, lips, tongue and surrounding tissue (Paresthesia) that can last for an indefinite period of time (days or months), or fractured jaw. I understand I may need further treatment by a specialist or even hospitalization if complications arise during or following treatment, the cost of which is my responsibility.

(Initials_____)

5. Crowns, Bridges, and Caps

I understand that sometimes it is not possible to match the color of natural teeth exactly with artificial teeth. I further understand that I may be wearing temporary crowns, which may come off easily and that I must be careful to ensure that they are kept on until the permanent crowns are delivered. I realize the final opportunity to make changes in my new crown, bridge, or cap (including shape, fit, size and color) will be before cementation.

(Initials_____)

6. Dentures, Complete or Partial

I realize that full or partial dentures are artificial, constructed of plastic, metal, and /or porcelain. The problems of wearing these appliances have been explained to me, including looseness, soreness, and possible breakage. I realize the final opportunity to make changes in my new dentures (including shape, fit, size, placement, and color) will be the "teeth in wax" try-in visit. I understand that most dentures require relining approximately three to twelve months after initial placement. The cost for this procedure is not included in the initial denture fee.

(Initials_____)

7. Endodontic Treatment (Root Canal)

I realize there is no guarantee that root canal treatment will save my tooth, and that complications can occur from the treatment, and that occasionally metal objects are cemented in the tooth or extend through the root, which does not necessarily affect the success of the treatment. I understand that occasionally additional surgical procedures may be necessary following root canal treatment (apicoectomy).

(Initials_____)



8. Periodontal Loss (Tissue & Bone)

I understand that I have a serious condition, causing gum and bone infection or loss and that it can lead to the loss of my teeth. Alternative treatment plans have been explained to me, including gum surgery, replacements and/or extractions. I understand that undertaking any dental procedures may have a future adverse effect on my periodontal condition.;

(initials _____)

9. Hugging Blanket and Mouth Prop

Sometimes kids need to be treated with the aid of a "hugging blanket" to keep the arms and legs still to reduce the risk of accidental injury from dental instruments. Young children find it difficult to keep their mouths open so we may use a mouth prop to reduce risk from a sudden mouth closure. I give the Dr. permission to use a "hugging blanket" and/or mouth prop on my child during treatment.

(initials _____)

10. Zoom and Take Home Teeth Whitening

I understand that there are sensitivity of teeth after teeth whitening, and that this sensitivity will subside after couple of days. I also understand that result of teeth whitening may vary from person to person. Some patients might get white spots, which goes away in few weeks. Existing crowns, composite, or other dental materials don't get whiten by the bleaching material. Gum and lip burning might happen, but will resolve in few days. (initials _____)

11. Orthodontics

I understand that orthodontic treatment requires monthly visits for approximately two years. I agree to abide by appointment schedules and wear appliances (rubber band, headgear, palatal, removable) as instructed by the doctor. I also understand that there is risk involved with orthodontic treatment such as root resorption, gum recession, mobility and sensitivity of teeth during active treatment.

(initials _____)

12. Implant Surgery and Prosthesis

I have been informed about alternative treatment to dental implants, such as dentures and fixed partial denture (bridges). As with any oral surgery, I understand the risks involved in placing dental implants, some of which are pain, swelling, bleeding, hematoma, bruising, spread of infections, dry socket, loss of feeling in my teeth, lips, tongue and surrounding tissue (paresthesia) that can last for an indefinite period of time or fractured jaw. I understand I may need further treatment by a specialist if complications arise during following treatment, the cost of which is my responsibility. (initials _____)

I understand that dentistry is not an exact science and therefore, reputable practitioners cannot fully guarantee results. I acknowledge that no guarantee or assurance has been made by anyone regarding the dental treatment which I have requested and authorized. I have had the opportunity to read this form and ask questions. My questions have been answered to my satisfaction. I consent to the proposed treatment.

Signature of Patient _____

Date _____

Signature of Parent/Guardian if patient is a minor _____

Date _____

HIPPA/ NOTICE OF PRIVACY PRACTICES **ACKNOWLEDGEMENT OF RECEIPT**

By signing this from, I acknowledge receipt of the *Notice of Privacy Practices* of SD Dental Group. Our *Notice of Privacy Practices* provides information about how we may use and disclose your protected health information. We encourage you to read it in full.
I acknowledge receipt of the *Notice of Privacy Practices* of San Diego California Dental Group.

Signature _____

Date _____

의사-환자 중재 합의서

- [조항1] **중재합의:** 본 합의서의 조건 아래 제공된 의료 서비스가 불필요 또는 불법이거나 부적합, 부주의, 무능력하다고 판단되는 의료 과실에 관한 모든 논쟁은 캘리포니아주에서 합법성을 재심 중인 중재 절차의 경우를 제외하고는 법적 소송 또는 사법처리 대신 캘리포니아주에서 재정한 중재 요구에 따라 해결됩니다.
- [조항2] **고소중재의 당위성:** 본 합의서는 의사가 제공한 치료나 서비스와 관련, 직접 또는 간접적으로 발생한 모든 고소사건이 환자 및 의사/의료기관 양측에 법적 구속력을 가지게 된다는 취지 아래 작성되었습니다. 여기에는 환자의 배우자 또는 상속자도 포함됩니다. 의사 및 의사의 동업자, 조업자, 협회, 기업 또는 협력업체 고용인, 대리인 그리고 이들의 재산에 대한 소규모 법정 소송의 사법 제한을 초과하는 금전상의 피해에 대한 모든 소송은 반드시 중재되어야 합니다. 여기에는 제한이 없으며, 배우자권, 부당한 사망, 정신적 고통, 응징적 피해도 포함됩니다. 의사가 환자에게 의료비 징수를 위한 법적 절차를 제기했다라도 의료과실에 대한 환자의 고소권은 유효합니다.
- [조항3] **절차 및 적용법:** 중재요청은 모든 관련 당사자들에게 반드시 서면 통보 되어야합니다. 각 당사자의 30 일 이내에 중재자 (당사자측 중재자)를 선임해야 하며, 당사자측 중재자는 상대방에게서 중립적 중재자를 요청하는 통보를 받은 후 30 일 이내에 제 3 중재자 (중립적 중재자)를 선임합니다. 조정에 참가하는 각 당사자는 상기 비용과 중재자 선임비용중 해당되는 액수는 물론 중재자에 의해 발생되거나 승인된 기타 조정비용을 지불해야 합니다. 그러나 이 비용에는 상담비, 증인비 또는 당사자에 이익을 위해 발생된 기타 비용은 포함되지 않습니다. 해당의료 기관과 환자 양측은 중재자가 본 합의서에 따라 중재자로서 대행할 때에는 배심원 출석의무로부터 면제된다는 사실에 동의합니다. 이러한 면제권은 다른 제정법 또는 일반법을 보완할 뿐 대체하지는 않습니다. 당사자는 중재자에게 서면 요청으로 책임 및 피해와 관련된 쟁점들을 독립적으로 중재자판에 회부할 수 있는 권리를 가집니다. 당사자 양측은 본 중재 재판에 있어서 다른 재판에 체류중인 인물 또는 기관의 추가 개입 및 공동 소송에 동의하는 바입니다. 이러한 개입 및 공동소송이 발생하는 경우 상기된 추가 인물 또는 기관에 대한 이전의 법적 소송은 중재 재판 이후로 보류됩니다. 당사자 양측은 본 저장 동의서와 관련된 논쟁에 캘리포니아주 의료법 규정이 적용된다는 사실에 동의합니다. 여기에는 민사소송법 340.5 및 667.7, 민법 3331.1 및 3333.2 항이 포함되거나 국한되지는 않습니다. 당사자는 중재자에게 민사소송법에 준하여 즉석판결을 신청할 수 있습니다. 발표요구수속은 민사 소송법 1283.05 조항에 따라 수행되지만 증인은 중재자의 사전승입 없이 수행할 수 있습니다.
- [조항4] **일반규정:** 동일한 사건, 화해 또는 관련 정황에 기초한 모든-소송은 동일한 소송 절차에서 조정됩니다. 다음과 같은 경우 소송은 보류되거나 영구히 금지됩니다. (1) 민법에 회부된 소송이 통보를 받은 날짜를 기준으로 캘리포니아주 제한법정 적용에 의해 금지되는 경우, 또는 (2) 소송을 제기한 측에서 본 계약서에 명시된 절차에 따라 적절하게 중재절차에 입하지 않는 경우 중재자는 문서에 명확히 제시되지 않은 안전과 관련, 캘리포니아주 민사소송법 중재관련 조항을 준수해야 합니다.
- [조항5] **소송취하:** 본 계약서는 서명한 후 30 일 이내에 의사에게 서면 통지를 전달하므로써 취소될 수 있습니다. 본 계약서와 취지는 조건 및 시간을 불문한 모든 의료행위에 적용됩니다.
- [조항6] **소급효력:** 환자가 본 계약서에 서명된 날짜이전에 받은 의료행위에 대해서 본 계약서의 규정을 적용할 의도이면 (응급처치 및 기타 포함) 아래 란에 영문 이니셜을 서명하십시오.

의료행위를 처음받은 날짜로부터 유효

환자 또는 환자 대리인 이니셜

본 중재 합의서의 규정 중 무효하거나 실행할 수 없는 점이 있더라도 나머지 조항에는 아무런 영향을 주지 않으며, 합의서의 다른 조항은 무효한 조항과 상관없이 계속 유효합니다. 본인은 본 조정 동의서의 복사본을 소지할 권리가 있음을 숙지하고 있습니다. 다음에 서명하므로 복사본을 수취했음을 확인하는 바입니다.

주의: 환자는 본 계약서에 서명하므로써 의료사고와 관련된 모든 쟁점에 관한 결정권을 중재자에게 위임한다는 것에 동의합니다. 또한 배심원 또는 법원 소송에 관한 권리를 포기하게 됩니다. 본 계약서에 조항 1 을 참조하십시오.

서명: _____ 서명: _____
 의사 또는 공증대리인 서명 (날짜) 환자 또는 환자 대리인 서명 (날짜)

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환자에게는 서명된 본 문서의 복사본이 수여되고, 원본은 환자의 의료 기록과 함께 보관됩니다.

샌디에고종합치과

The Dental Board of California

Dental Materials Fact Sheet

Supplied by the Board on October 17, 2001

As required by Chapter 801, Statutes of 1992, the Dental Board of California has prepared this fact sheet to summarize information on the most frequently used restorative dental materials. Information on this fact sheet is intended to encourage discussion between the patient and dentist regarding the selection of dental materials best suited for the patient's dental needs. It is not intended to be a complete guide to dental materials science.

The most frequently used materials in restorative dentistry are amalgam, composite resin, glass ionomer cement, resin-ionomer cement, porcelain (ceramic), porcelain (fused-to-metal), gold alloys (noble), and nickel or cobalt-chrome (base-metal) alloys. Each material has its own advantages and disadvantages, benefits and risks. These and other relevant factors are compared in the attached matrix titled, "Comparisons of Restorative Dental Materials." A "glossary of Terms" is also attached to assist the reader in understanding the terms used.

The statements made are supported by relevant, credible dental research published mainly between 1993-2001. In some cases, where contemporary research is sparse, we have indicated our best perceptions based upon information that predates 1993.

The reader should be aware that the outcome of dental treatment or durability of a restoration is not solely a function of the material from which the restoration was made. The durability of any restoration is influenced by the dentist's technique when placing the restoration, the ancillary materials used in the procedure, and the patient's cooperation during the procedure. Following restoration of the teeth, the longevity of the restoration will be strongly influenced by the patient's compliance with dental hygiene and home care, their diet and chewing habits.

Both the public and the dental profession are concerned about the safety of dental treatment and any potential health risks that might be associated with the materials used to restore the teeth. All materials commonly used (and listed in this fact

sheet) have been shown- through laboratory and clinical research as well as through extensive clinical use – to be safe and effective for the general population. The presence of these materials in the teeth does not cause adverse health problems for the majority of the population. There exist a diversity of various scientific opinions regarding the safety of mercury dental amalgams. The research literature in peer-reviewed scientific journals suggests that otherwise healthy women, children, and diabetics are not at increased risk for exposure to mercury from dental amalgams. Although there are various opinions with regard to mercury risk in pregnancy, diabetes, and children, these opinions are not scientifically conclusive and therefore the dentist the dentist may want to discuss these opinions are not scientifically conclusive and therefore the dentist may want to discuss these opinions with their patients. There is no research evidence that suggests pregnant women, diabetics and children are at increased health risk from dental amalgam fillings in their mouth. A recent study reported in the JADA factors in a reduced tolerance (1/50th of the WHO safe limit) for exposure in calculating the amount of mercury that might be taken in from dental fillings. This level falls below the established safe limits for exposure to a low concentration of mercury or any other released component from a dental restorative material. Thus, while these sub-populations may be perceived to be at increased health risk from exposure to dental restorative materials, the scientific evidence does not support that claim. However, ether are individuals who may be susceptible to sensitivity, allergic or adverse reactions to selected materials. As with all dental materials, the risks and benefits should be discussed with the patient, especially with those in susceptible populations.

There are differences between dental materials and the individual elements or components that compose these materials. For example, dental amalgam filling material is composed mainly of mercury (43-54%) and varying percentages of silver, tin, and copper (46-57%). It should be noted that elemental mercury is listed on the Proposition 65 list of known toxins and carcinogens. Like all materials in our environment, each of these elements by themselves is toxic at some level of concentration if they are taken into the body. When they are mixed together, they react chemically to form a crystalline metal alloy. Small amounts of free mercury may be released from amalgam fillings over time and can be detected in bodily fluids and expired air. The important question is whether any free mercury is present in sufficient levels to pose a health risk. Toxicity of any substance is related to dose, and doses of mercury or any other element that may be released from

Types of Restorative Dental Materials				
Comparative Factors	Amalgam	Composite Resin (direct and indirect Restorations)	Glass ionomer cement	Resin-ionomer cement
General Description	Self-hardening mixture in varying percentages of a liquid mercury and silver-tin alloy powder	Mixture of powdered glass and plastic resin, self-hardening or hardened by exposure to blue light	Self-hardening mixture of glass and organic acid	Mixture of glass resin polymer and organic acid self-hardening by exposure
Principle Users	Fillings; sometimes for replacing portions of broken teeth	Fillings, inlays veneers, partial and complete crowns, sometimes for replacing portions of broken teeth	Small fillings cementing metal & porcelain metal crown, inlays	Small fillings cementing metal, porcelain metal crowns, liners
Resistance to Further Decay	High; self-sealing characteristic helps resist recurrent decay but recurrent decay around amalgam is difficult to find in early stage	Moderate; recurrent decay is easily detected in early stages	Low-moderate some resistance to decay may be imparted through fluoride release	Low-moderate resistance to decay may be imparted through fluoride release
Estimated Durability (Permanent teeth)	Durable	Strong, durable	Non-stress bearing crown cement	Non-stress bearing crown cement
Relative Amount of Tooth Preserved	Fair; requires removal of healthy tooth to be mechanically retained; no adhesive bond of amalgam to the tooth	Excellent; bonds adhesively to healthy enamel and dentin	Excellent; bonds adhesively to healthy enamel and dentin	Excellent; bond adhesively to the enamel and dentin
Resistance to Surface Wear	Low similar to dental enamel; brittle metal	May wear slightly faster than dental enamel	Poor in stress bearing applications. Fail in non-stress bearing applications	Poor in stress bearing applications. Go on non-stress bearing application
Resistance to Fracture	Amalgam may fracture under stress; tooth around filling may fracture before the amalgam does	Good resistance to fracture	Brittle; low resistance to fracture but not recommended for stress-bearing restorations	Tougher than glass-ionomer. Recommended to stress bearing restoration
Resistance to Leakage	Good; self-sealing by surface corrosion; margins may chip over times	Good if bonded to enamel; may show leakage over time when bonded to dentin; does not composites	Moderate; tends to crack over time	Good; bonded to resin, and dentinal post-insert expansion may be seal the margins
Resistance to Occlusal Stress	High; but lack of adhesion may weaken the remaining tooth	Good to excellent depending upon product used	Poor; not recommended for stress-bearing restorations	Moderate; not recommended to restoring surface of adults; maybe used for short-term primary teeth restoration
Toxicity	Generally safe; occasional allergic reactions to metal components. However, amalgams contain mercury. Mercury in its elemental form is toxic and as such is listed on prop 65	Concerns about trace chemical release are not supported by research studies. Safe; no known toxicity documented. Contains some compounds listed on prop 65.	No known incompatibilities safe; no known toxicity documented	No known incompatibilities safe; no known toxicity documented
Allergic or Adverse Reactions	Rare; recommend that dentist evaluate patient to rule out metal allergies	No documentation for allergic reactions was found	No documentation for allergic reactions was found; progressive roughening of the surface may predispose to plaque accumulation and periodontal disease	No known documented allergic reactions. Surface may roughen overtime, predispose to plaque accumulation and periodontal disease
Susceptibility To Post-Operative Sensitivity	Minimal high thermal conductivity may promote temporary sensitivity to hot & cold; contact with other metals may cause occasional & transient galvanic response	Moderate; material is sensitive to dentists technique; material shrinks slightly when hardened, and a poor seal may lead to bacterial leakage, recurrent decay and tooth hypersensitivity	Low; material seals well and does not irritate pulp	Low; material seals well and does not irritate pulp
Esthetics (Appearance)	Very poor. Not tooth colored; initially silver-gray gets darker becoming black as it corrodes. May stain teeth dark brown or black overtime	Excellent; often indistinguishable from natural tooth	Good; tooth colored, varies in translucency	Very good; more translucency than glass ionomer
Frequency of Repair or Replacement	Low; replacement is usually due to fracture of the filling or the surrounding tooth	Low to moderate; durable material hardens rapidly. Some composite materials show more rapid than amalgam. Replacement	Moderate; slowly dissolves in mouth, easily dislodged.	Moderate; may hold better than ionomer but not as well as composite
Relative Costs to Patient	Low, relatively inexpensive; actual cost of fillings depends upon their size.	Moderate; higher than amalgam fillings; actual cost of fillings depends upon their size; veneers & crowns cost more.	Moderate; similar to composite resin (not used for veneer and crowns)	Moderate; similar to composite resin (not used for veneer and crowns)
Number of Visits	Single visit (polishing)	Single visit for fillings; more for veneers & crowns	Single visit	Single visit

dental amalgam fillings falls far below the established safe levels as stated in the 1999 US Health and Human Service Toxicological Profile for Mercury Update.

All dental restorative materials (as well as all materials that we come in contact with in our daily life) have the potential to elicit allergic reactions in hypersensitive individuals. These must be assessed on a case-by-case basis, and susceptible individuals should avoid contact with allergenic materials. Documented reports of allergic reactions to dental amalgam exist (usually manifested by transient skin rashes in individuals who have come into contact with the material), but they are atypical. Documented reports of toxicity to dental amalgam exist, but they are rare. There have been anecdotal reports of toxicity to dental amalgam and as with all dental material risks and benefits of dental amalgam should be discussed with the patient, especially with those in susceptible populations.

Composite resins are the preferred alternative to amalgam in many cases. They have a long history of biocompatibility and safety. Composite resins are composed of a variety of complex inorganic and organic compounds, any of which might provoke allergic response in susceptible individuals. Reports of such sensitivity are atypical. However, there are individuals who may be susceptible to sensitivity, allergic or adverse reactions to composite resin restorations. The risks and benefits of all dental materials should be discussed with the patient, especially with those in susceptible populations.

Other dental materials that have elicited significant concern among dentists are nickel-chromium-beryllium alloys used predominantly for crowns and bridges. Approximately 10% of the female populations are alleged to be allergic to nickel. The incidence of allergic response to dental restorations made from nickel alloys is surprisingly rare. However, when a patient has a positive history of confirmed nickel allergy, or when such hypersensitivity to dental restorations is suspected. Alternative metal alloys may be used. Discussion with the patient of the risks and benefits of these materials is indicated.

Glossary of Terms

General Description
Principle Uses- the types of dental restorations that are made from this material

Resistance to further decay- the general ability of the material to prevent decay around it

Longevity/durability- the probable average length of time before the material will have to be replaced (this will depend upon many factors unrelated to the material such as biting habits of the patient. The diet, the strength of their bite, oral hygiene, etc)

Conservation of Tooth Structure- a general measure of how much tooth needs to be removed in order to place and retain the material

Surface wear/fracture resistance- a general measure of how well the material holds up over time under the forces of biting, grinding, clenching, etc.

Marginal integrity (leakage)- an indication of the ability of the material to seal the interface between the restoration and the tooth, thereby helping to prevent sensitivity and new decay.

Resistance to occlusal stress- the ability of the material to survive heavy biting forces over time

Biocompatibility- the effect, if any, of the material on the general overall health of the patient

Allergic or adverse reactions- possible systemic or localized reactions of the skin, gums, and other tissues to the materials

Toxicity- an indication of the ability of the material to interfere with normal physiologic processes beyond the mouth

Susceptibility to sensitivity- an indication of the probability that the restored teeth may be sensitive stimuli (heat, cold, sweet, pressure) after the material is placed in them

Esthetics- indication of the degree to which the material resembles natural teeth

Frequency of repair or replacement- an indication of the expected longevity of the restoration made from this material

Relative cost- a qualitative indication of what one would pay for a restoration made from this material compared to all the rest

Number of visits required- how many times a patient would usually have to go to the dentist's office in order to get a restoration made from this material

Dental amalgam- filling material which is composed mainly of mercury (43-54%) and varying percentages of silver, in, and copper(48-57%)

TYPES OF INDIRECT RESTORATIVE DENTAL MATERIALS				
Comparative Factors	Porcelain(ceramic)	Porcelain(fused to metal)	Gold alloys (noble)	Nickel or Cobalt-chrome(base-metal) alloys
General Description	Glass-like material formed into fillings and crowns using models of the prepared teeth	Glass-like material that is enameled onto metal shells. Used for crowns and fixed bridge	Mixtures of gold, copper and other metals used mainly for crowns and fixed bridges	Mixtures of nickel, chromium
Principle Users	Inlays, veneers, crowns and fixed bridges	Crowns and fixed bridges	Cast crowns & fixed bridges; some partial denture frameworks	Crowns and fixed bridges; most partial denture frameworks
Resistance to Further Decay	Good, if the restoration fits well	Good, if the restoration fits well	Good, if the restoration fits well	Good, if the restoration fits well
Estimated Durability (permanent Teeth)	Moderate; brittle material that may fracture high biting forces, not recommended for posterior (molar) teeth	Very good, less susceptible to fracture due to the metal substructure	Excellent; does not fracture under stress; does not corrode in the mouth	Excellent; does not fracture under stress; does not corrode in the mouth
Relative Amount of Teeth Preserved	Good; moderate removal of natural tooth is necessary for veneers; more for crowns since strength is related to its bulk	Moderate-high; Molar tooth must be removed to permit the metal to accompany the porcelain	Good, a strong material that requires removal of a thin outside layer of the tooth	Good, a strong material that requires removal of a thin outside layer of the tooth
Resistance to Surface Wear	Resistant to surface wear; but abrasive to opposing teeth	Resistant to surface wear; permits either metal or porcelain on the biting surface of crowns & bridge	Similar hardness to natural enamel; does not abrade opposing teeth	Harder than natural enamel but minimally abrasive to opposing natural teeth. not fracture in bulk
Resistance to Fracture	Poor resistance to fracture	Porcelain may fracture	Does not fracture in bulk	Does not fracture in bulk
Resistance to Leakage	Very good can be truncated for very accurate fit of the margins	Good; very good depending upon design of the margins of the crowns	Very good- excellent. Can be formed with great precision, can be tightly adapted to the tooth	Good-very good; stiffer than gold; less adaptable, but can be formed with great precision
Resistance to Occlusal Stress	Moderate; brittle material susceptible to fracture under biting forces	Very good. Metal substructure gives high resistance to fracture	excellent	Excellent
Toxicity	Excellent. No known adverse effects	Very good to excellent. Occasionally rare allergy to metal alloys used	Excellent; rare allergy to some alloys	Good; nickel allergies are common among women, although rarely manifested in dental restorations
Allergic or Adverse Reactions	none	Rare. Occasional allergy to metal substructures	Rare; occasional allergic reactions seen in susceptible individual	Occasional; infrequent reactions to nickel
Susceptibility To Post-Operative Sensitivity	Not material dependent; does not conduct heat and cold well	Not material dependent; does not conduct heat and cold well	Conducts heat and cold; may irritate sensitive teeth	Conducts heat and cold; may irritate sensitive teeth
Esthetics (Appearance)	excellent	Good to excellent	Poor-yellow metal	Poor- dark silver metal
Frequency of Repair or Replacement	Varies; depends upon biting forces; fractures of molar teeth are more likely than anterior teeth; porcelain fracture may often be repaired with composite resin	Infrequent; porcelain fracture can often be repaired with composite resin.	Infrequent; replacement is usually due to recurrent decay around margins	Infrequent; replacement is usually due to recurrent decay around margins
Relative Costs to Patient	High, requires at least two office visits and laboratory services	High; requires at least two office visits and laboratory services	High; requires at least two office visits and laboratory services	High; requires at least two office visits and laboratory services
Number of Visits Required	Two- minimum; matching esthetics of tooth may require more visits	Two- minimum; matching esthetics of tooth may require more visits	Two- minimum	Two- minimum

I acknowledge receiving dental material sheet.

Signature _____ Date _____