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CHICAGO DENTAL SOCIETY
MIDWINTER MEETING

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SCIENTIFIC PROGRAM: FEBRUARY 21 - 24, 2008

EXHIBIT DATES: FEBRUARY 22 - 24, 2008

COURSE F19
FREEHAND COMPOSITE BONDING:
ACHIEVING ULTIMATE ESTHETICS
CORKY WILLHITE, DDS
THURSDAY, FEBRUARY 21, 2008

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CHICAGO DENTAL SOCIETY MIDWINTER MEETING COURSE EVALUATION

SPEAKER: _____ DATE: _____

SUBJECT: _____ NUMBER OF ATTENDEES: _____

PLEASE RATE YOUR SPEAKER AS TO:

	Excellent	Good	Fair	Poor	N/A
SUBJECT SELECTED	4	3	2	1	0
TIMELINESS OF SUBJECT	4	3	2	1	0
COMPREHENSIVENESS	4	3	2	1	0
MEETING YOUR EXPECTATIONS	4	3	2	1	0
CONTENT LEVEL	4	3	2	1	0
DELIVERY	4	3	2	1	0
VOICE QUALITY	4	3	2	1	0
HOLDING YOUR INTEREST	4	3	2	1	0
APPROPRIATE AUDIOVISUALS	4	3	2	1	0
EFFECTIVE AUDIOVISUALS	4	3	2	1	0
OVERALL EVALUATION OF SPEAKERS	4	3	2	1	0
OVERALL EVALUATION OF THE PROGRAM	4	3	2	1	0

SHOULD THIS SPEAKER BE INVITED FOR FUTURE MEETINGS? YES NO

WHAT TOPICS INTEREST YOU FOR THE FUTURE? _____

COMMENTS (use reverse if you need additional space): _____

NAME (REQUESTED BUT NOT REQUIRED—PLEASE PRINT): _____

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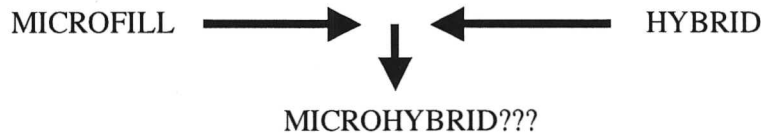
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Freehand Composite Bonding: Achieving Ultimate Esthetics

Corky Willhite, DDS

Chicago Dental Society
Midwinter Meeting
February 21, 2008

Materials for “Ultimate Esthetics”:



MICROHYBRID = HYBRID (Nanofill is also a hybrid)

Layering TECHNIQUE:

Ideal technique = “Cookbook technique with infinite flexibility”

MICROFILL

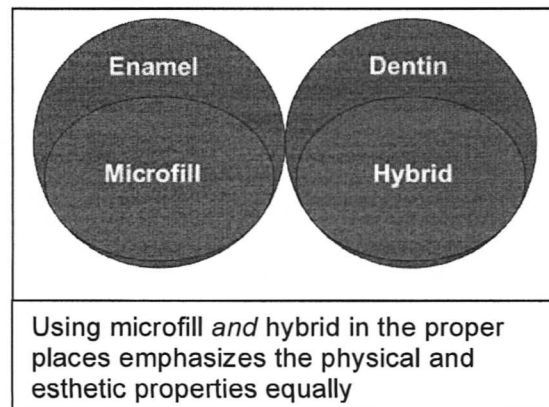
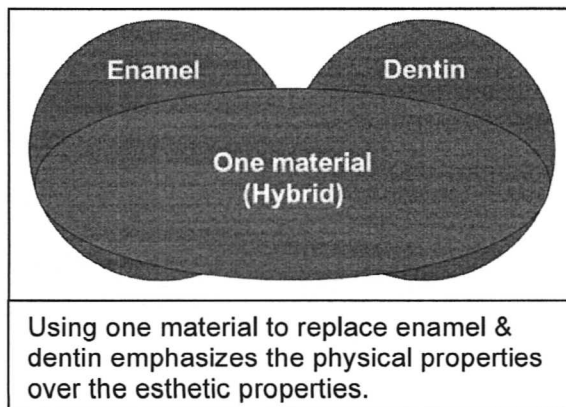
fracture susceptible
highly polishable
highly translucent

= ENAMEL
(facial layer)

HYBRID

fracture resistant
polish fades
less translucent

= DENTIN
(& lingual layer)



OPAQUERS

blocks color
raises value
use sparingly

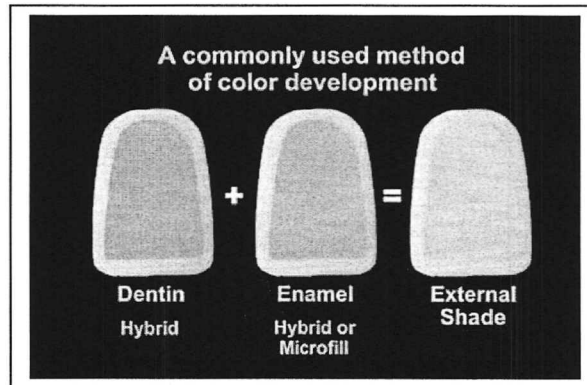
TINTS

enhances color
lowers value
use sparingly

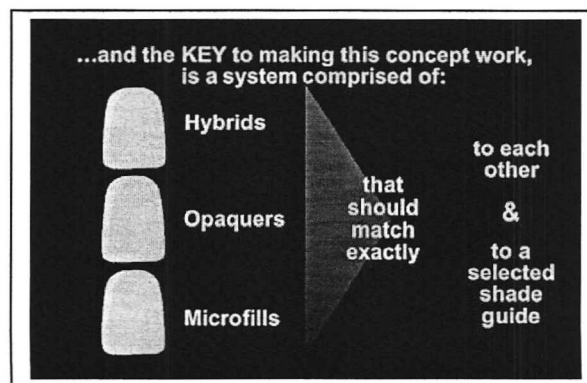
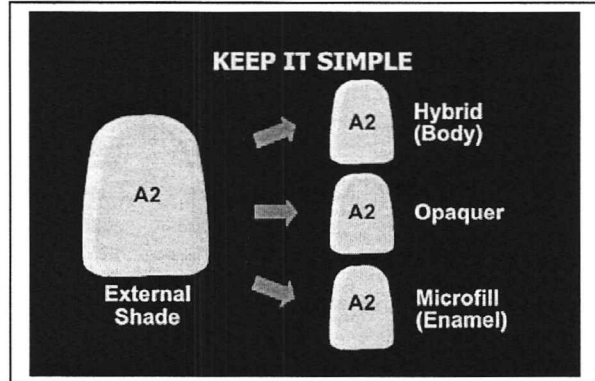
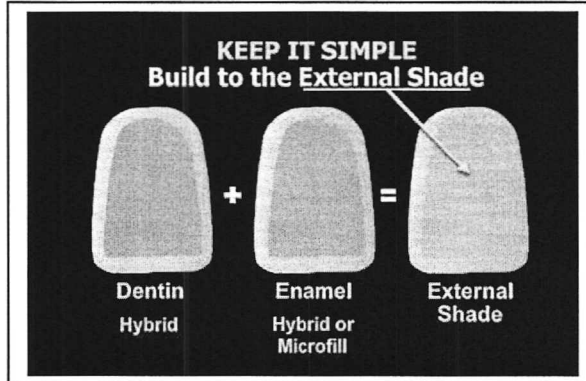
Layering TECHNIQUE:

Shade matching

Results are less predictable with most layering techniques that recommend different shade for each layer to end up with a shade in between. This may be how a natural tooth develops, but it is a difficult way to build a restoration to achieve a desired shade.



The most predictable results are achieved by using the final (external) shade for each layer.

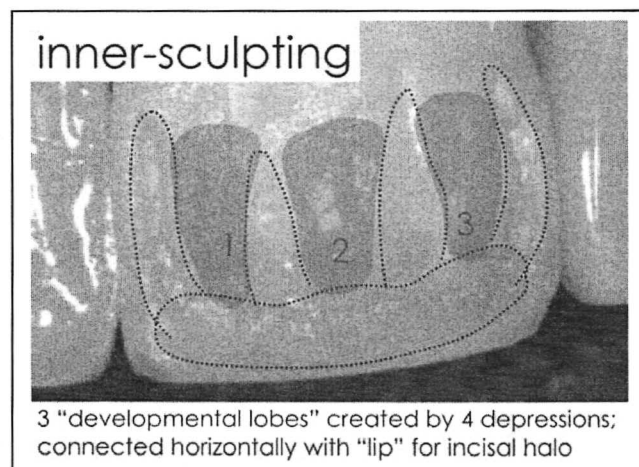


Slides courtesy of
Dr. Buddy Mopper

12 Technique Steps

- take shade
- moisture control
- preparation
- etch & adhesive
- pink opaque
- build “support”
- block color
- enhance color
- build “enamel”
- final cure
- contouring
- polishing

- take shade: take first before dehydration occurs
- moisture control: key is to have a compliant patient with healthy tissue
- preparation: for most cases is minimal (“microscopically roughen the tooth”), includes pumice
- etch & adhesive: 2 stage etch
(about 60 seconds for unprepped enamel, no more than 15 seconds for dentin)
- pink opaque (only used if want to brighten tooth)
- build “support” with hybrid (lingual layer, replaces dentin, may negate need for next step)
- block color: opaquer (keyed to body shade) used if any area still needs to be blocked;
goal is to no longer see defect, but NOT to see opaquer
- enhance color: easy to use too much, effect should be very subtle
- build “enamel” with microfill
body microfill → sculpted to full contour except for inner-sculpting
incisal microfill: generally choose
“light” shade with A1-B1;
“medium” with A2-B2;
“dark” for A3-B3 or darker
- final cure: glycerin gel
- contouring: no surface defects!
- polishing: should be very quick
when contouring is correct



change (making a dark tooth bright)

- take shade
- moisture control
- preparation

NOTE: This is the exception to “minimal prep/microscopically roughening the tooth” concept since must reduce enough to have space for layers of composite to block dark color but avoid bulking out the facial surface.

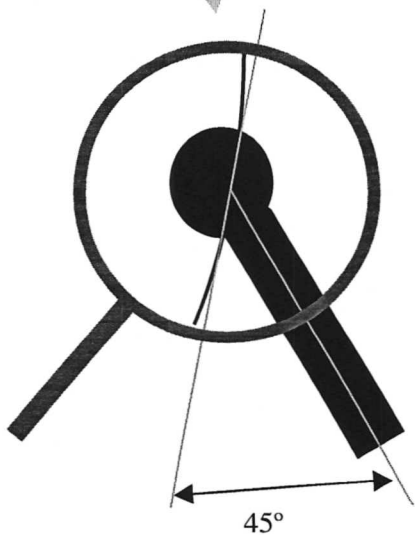
for shade change, minimal prep is NOT adequate (exception: if plan to add facial bulk)

DEEP CUT

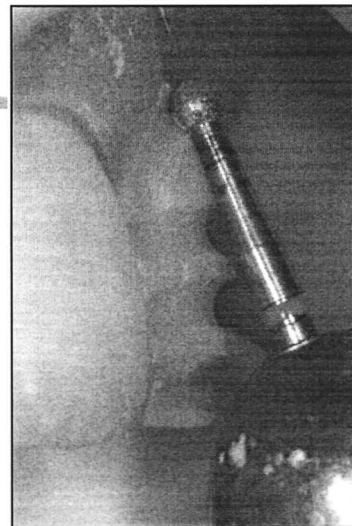


Brasseler 8801-018 fine diamond bur is angled higher to get deeper depth cut

round bur angled approximately 45° creates a depth cut of about 1 mm

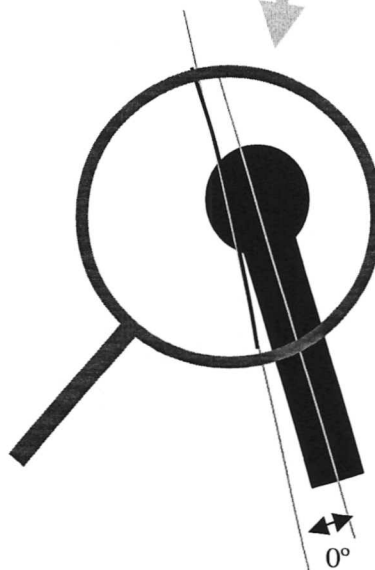


SHALLOW CUT



angled lower to get shallower depth cut

round bur angled approximately 0° creates a depth cut of about 0.3 mm



- etch & adhesive

- pink opaque

- build "support"

- block color

- enhance color

- build "enamel"

- final cure

- contouring

understanding tooth topography is invaluable when contouring restorations, if you aren't knowledgeable of the shape you are striving for, you will likely be wasting time

contouring is the process of adjusting the contours, it's NOT polishing

ALL contouring should be complete prior to ANY polishing

Start with ET and OS burs (Brasseler) or Flexidisks (coarse or extra-coarse; Cosmedent)

Complete contouring with medium grit Flexidisks (NO surface defects should be evident)

Proximal surfaces can also be contoured with coarse/medium grit Flexistrips (Cosmedent)

- polishing

polishing should be much quicker than contouring

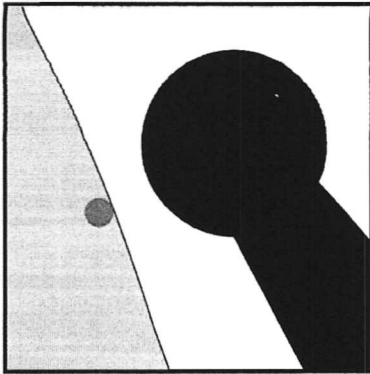
if surface defects are present, polishing will make them MORE evident

Start with fine grit Flexidisks, then ultra-fine

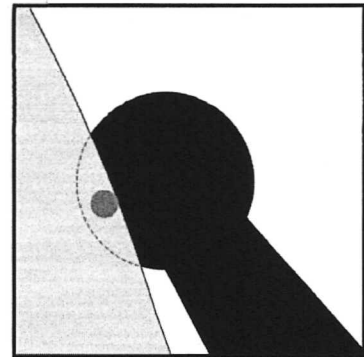
Proximal surfaces should be polished with fine/ultra-fine grit Flexistrips

Complete with Enamelize (aluminum oxide polishing paste) on a Flexi-buff disk

Repair of composite (during initial placement of restoration) should be done prior to polishing

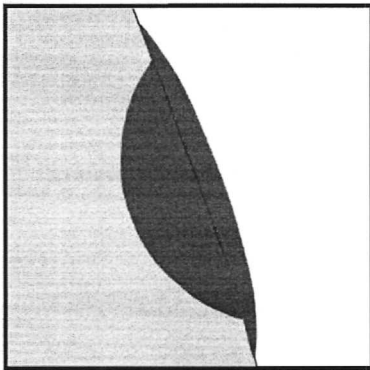


Use large, round, fine-grit diamond bur
(Brasseler 8801-018)

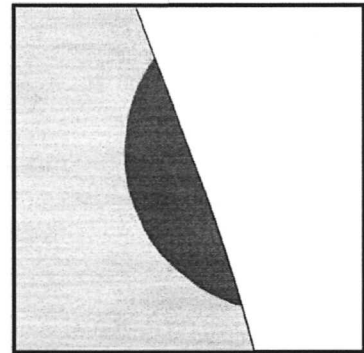


Bur should engage only deep enough to
make a saucer-shaped prep, a beveled
margin is desired, *not* a butt joint

Then etch (to clean), apply a thin layer of unfilled resin (but do not light cure)



Place and sculpt the composite without
overbulking it much, light cure



contour the repair, then polish
the restoration

If surface has already been polished before repair, added composite will *not* bond to polished surface, so either roughen surface around repair or contour past the previous polished surface

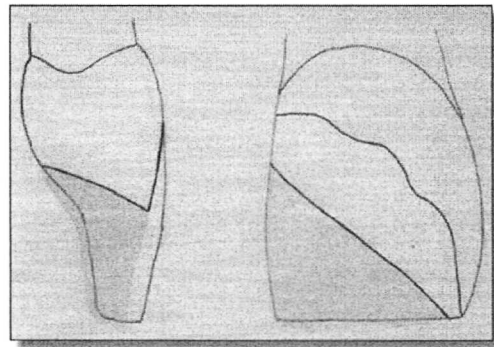
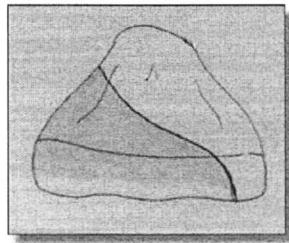
Repair of composite (found after restoration completed)

For microhybrid repairs that are more than one day old, same as above except also sandblast (micro-etch) prepped area prior to acid etching

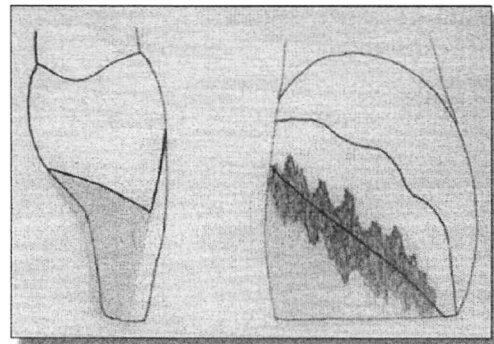
For microfill repairs, do *not* sandblast, because microfill particles are so small and uniform that sandblasting will DECREASE retention. Retention when repairing microfill is purely mechanical from the small bur marks.

Class IV

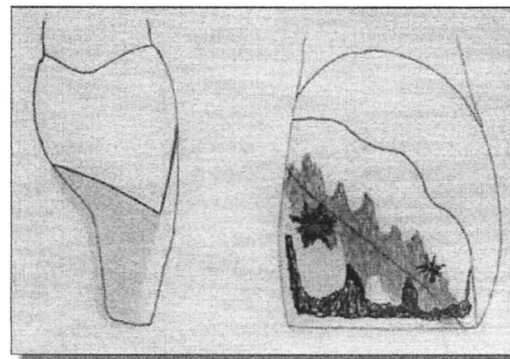
- take shade
- moisture control
- preparation
- etch & adhesive
- pink-opaque
- build “support” — **HYBRID**



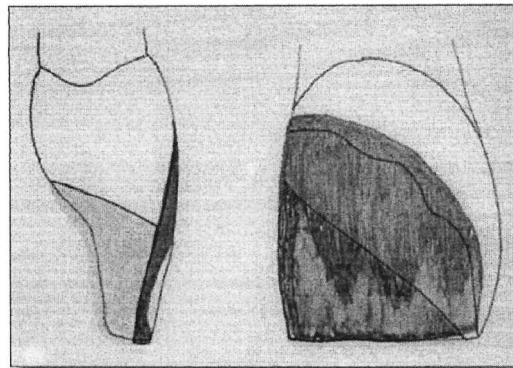
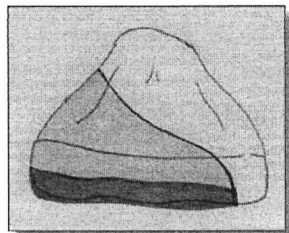
- block color — **OPAQUER**



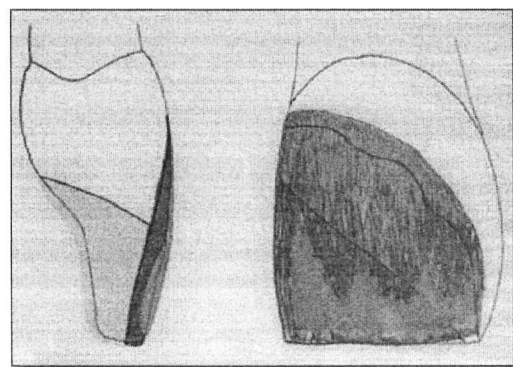
- enhance color — **TINTS**



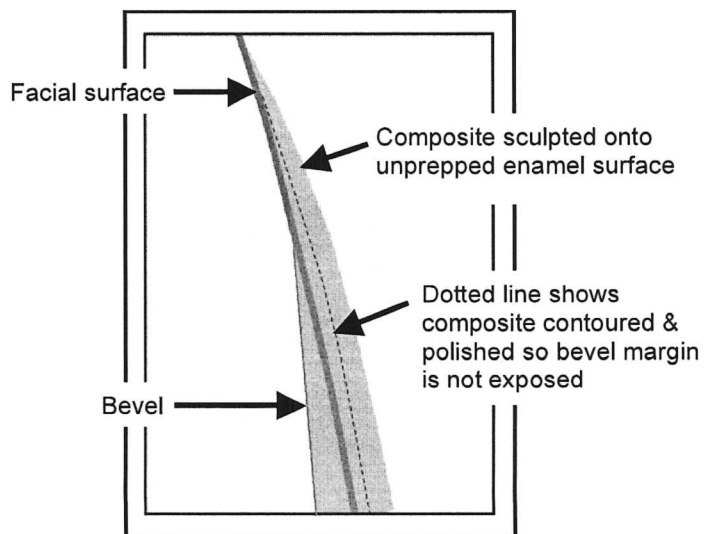
- build “enamel”
- **BODY MICROFILL**



- **INCISAL MICROFILL**



- final cure
- contouring

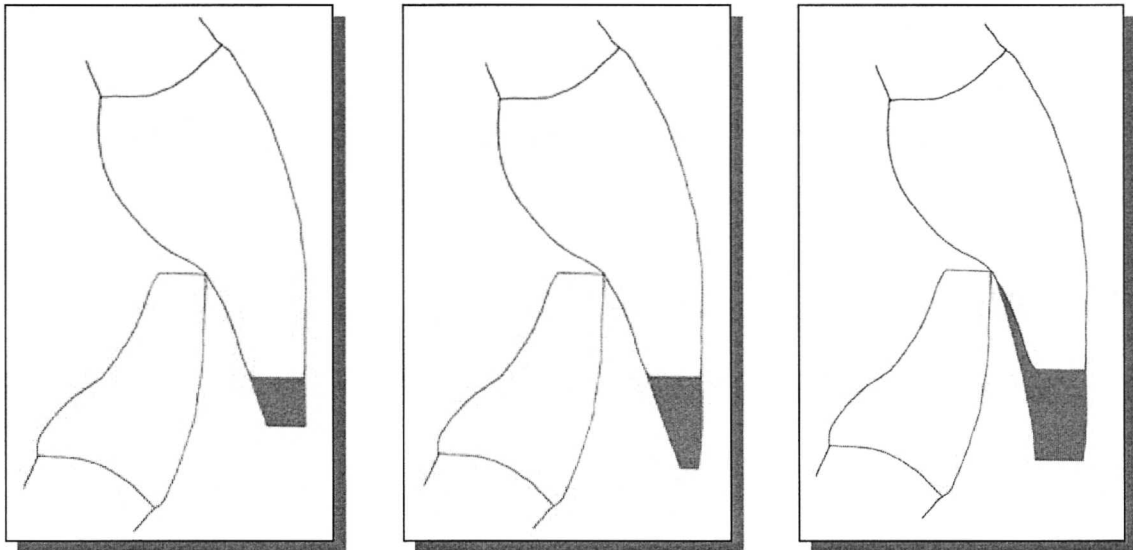


- polishing

building anterior guidance (lengthening anterior teeth):

- guidance path may be lengthened without occlusal restrictions (esthetics and phonetics do restrict)
- steeper guidance path requires a transitional phase
- develop two-point contact in protrusive (can eliminate deviation if develop with pt watching in mirror)
- posterior disclusion desired (may need to equilibrate posterior teeth to eliminate interferences, but less with add'l anterior length)

must control hyper-stress to expect longevity



guidance path not steepened

steepened path

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