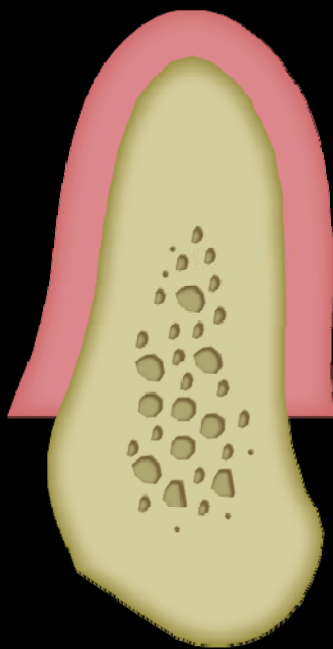


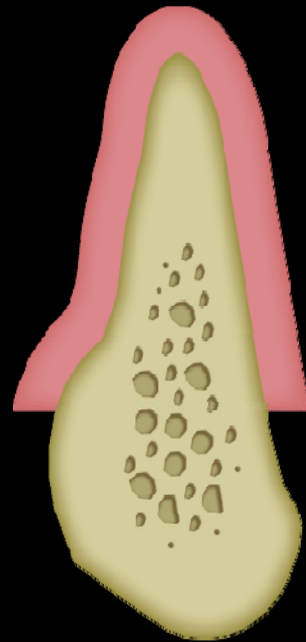


Angry Ridge  
Implant System!

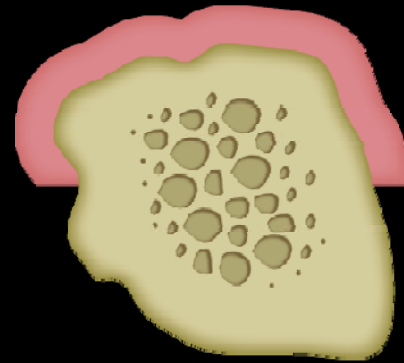
## Type of Ridge



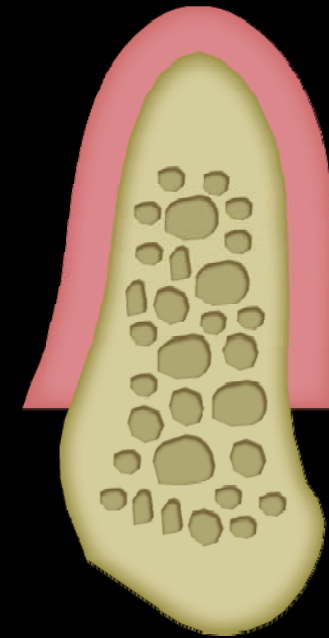
Normal  
Ridge



Thin  
Ridge

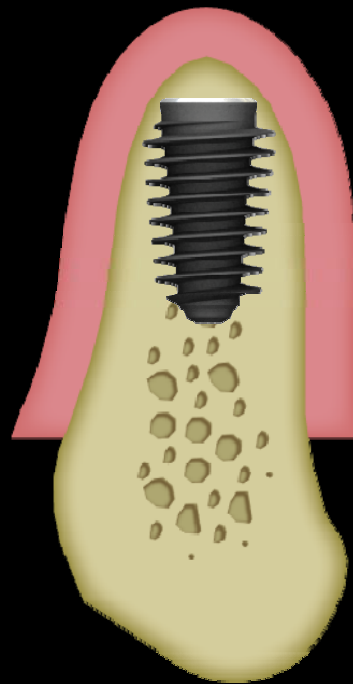


Low  
Ridge



Loose  
bone

## Type of Ridge and selection of fixture

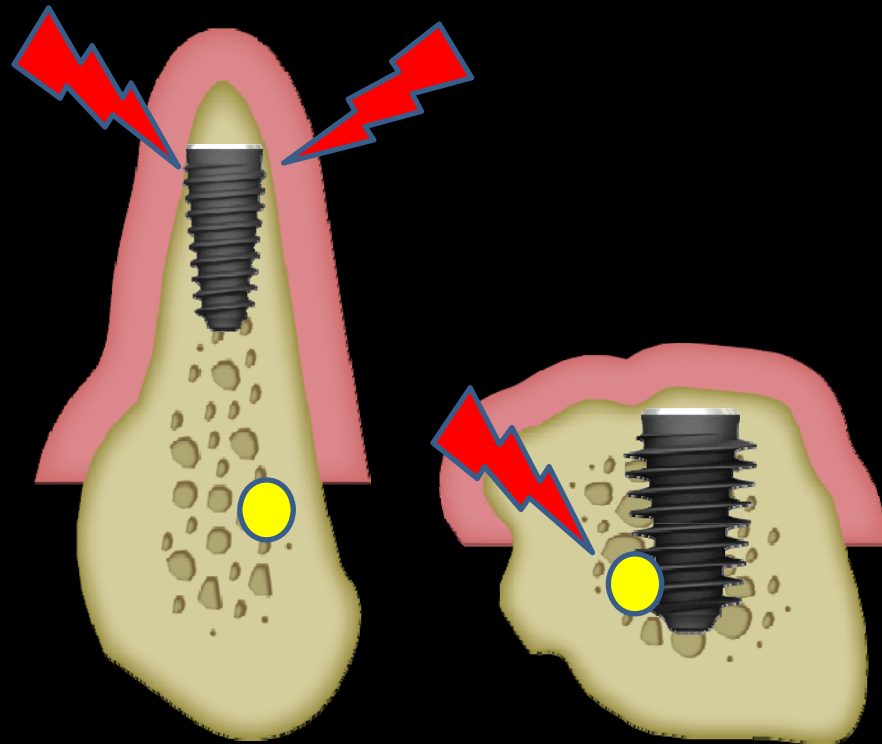


Normal  
Ridge

With the normal ridge,  
Standard implant is more than enough  
because there are

enough quantity  
and  
quality of bone.

## Type of Ridge and selection of fixture



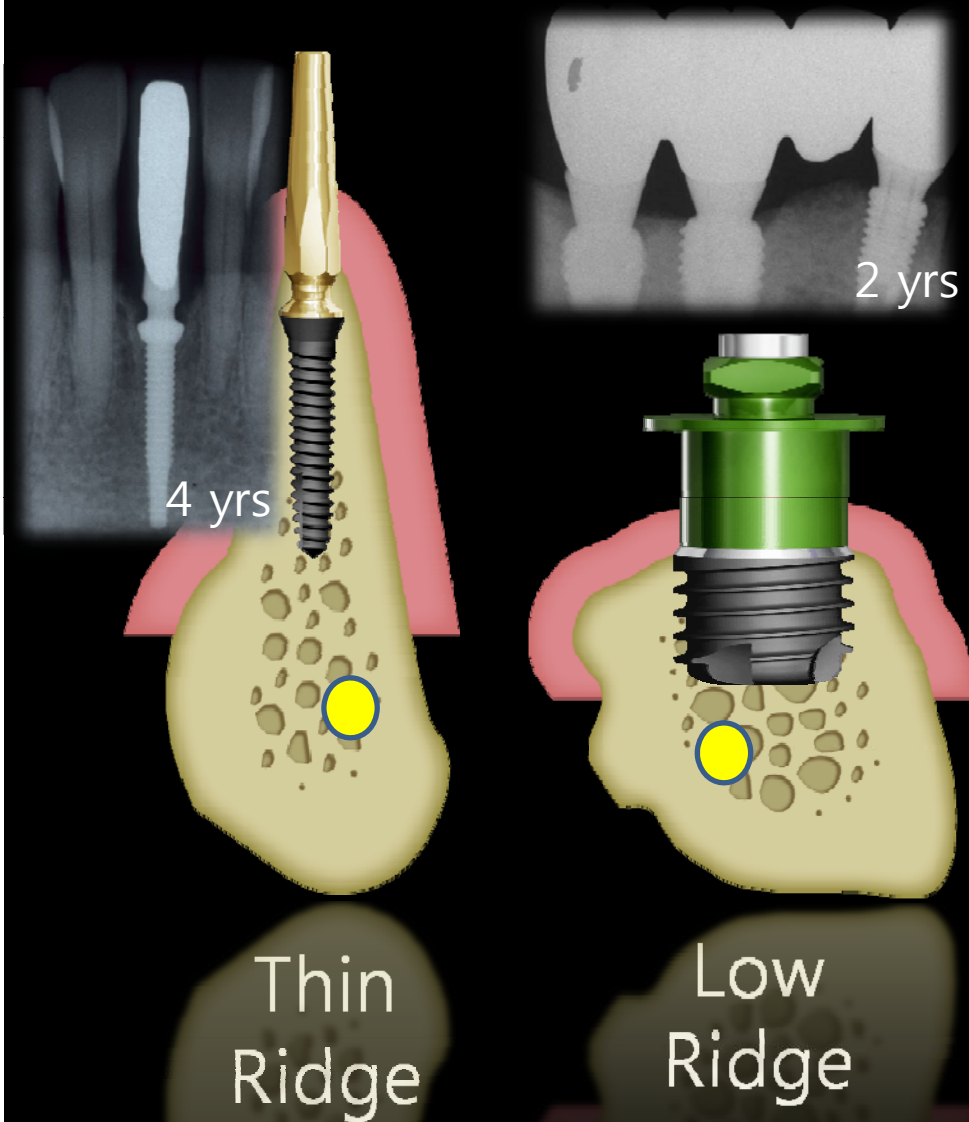
Thin  
Ridge

Low  
Ridge

With thin and low ridge, we usually have lots of problem as you know.

### Why?

It's because we don't have any appropriate implant system yet.

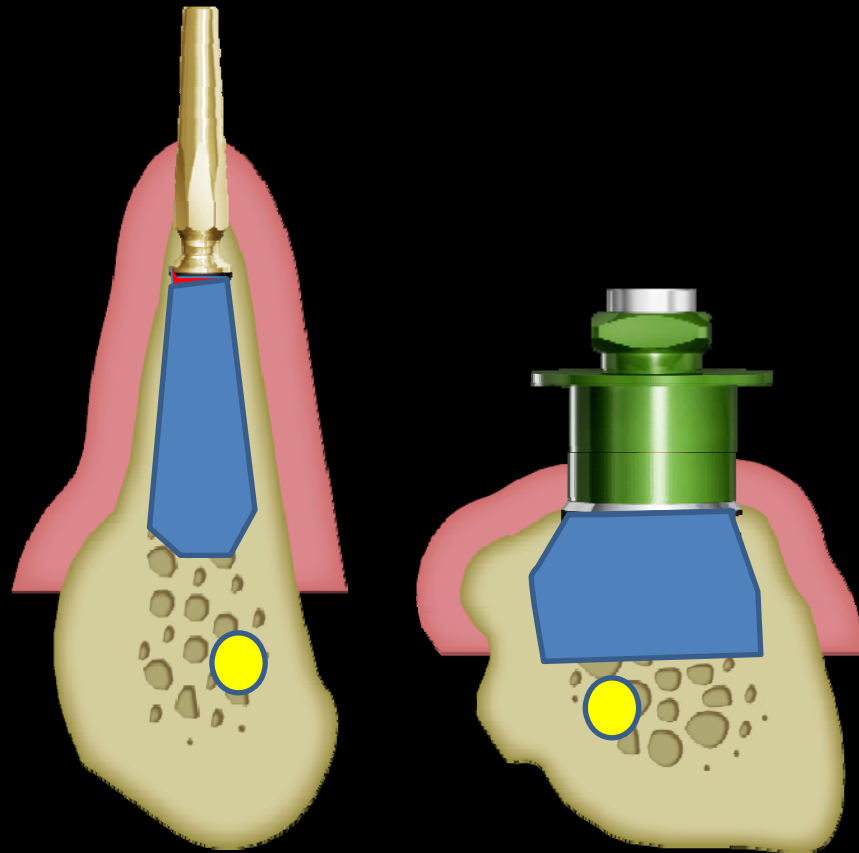


Already we have developed implant systems for thin and low ridge.

Their performance and results were really nice in some cases.

But not always in every cases.

Why?



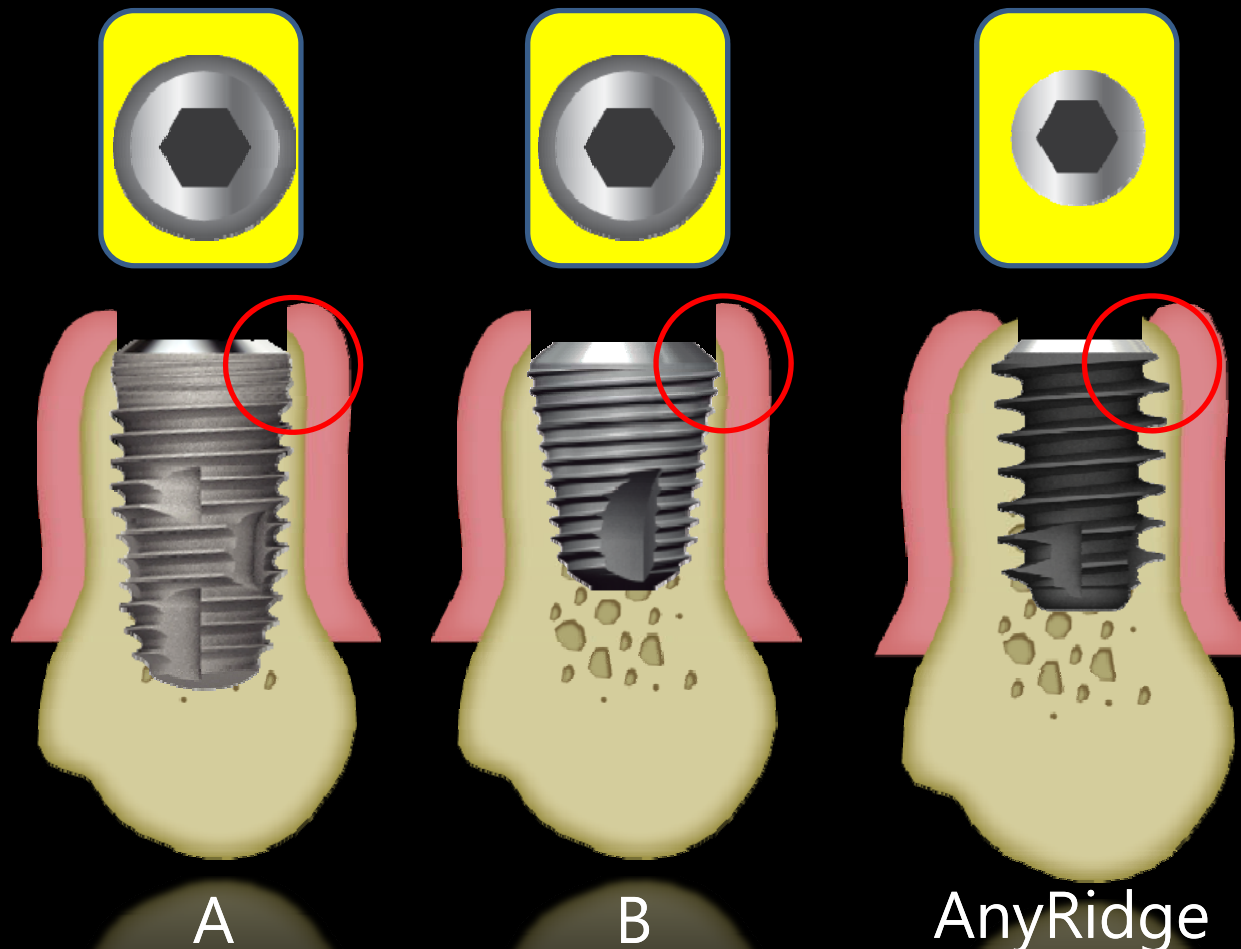
Thin  
Ridge

Low  
Ridge

It's because we only tried to use this portion of bone.

Why don't we try to utilize the bone on these area?

## Type of Ridge and selection of fixture



Small but  
Strong Core

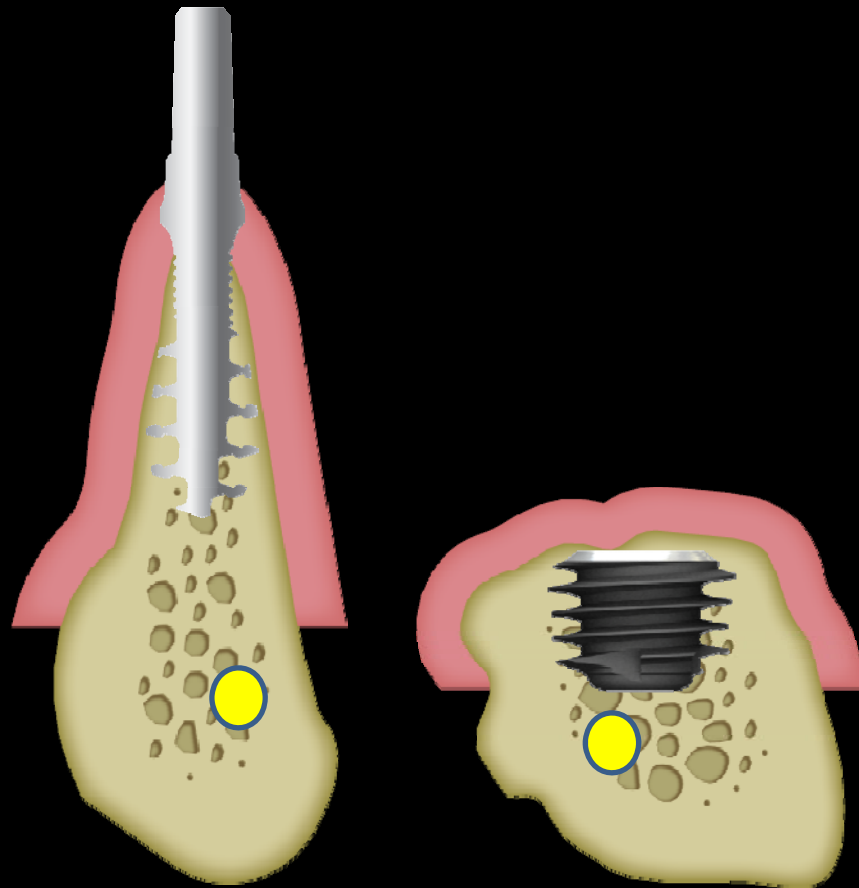
More B-L bone

Much wider  
surface to be  
integrated

A

B

AnyRidge



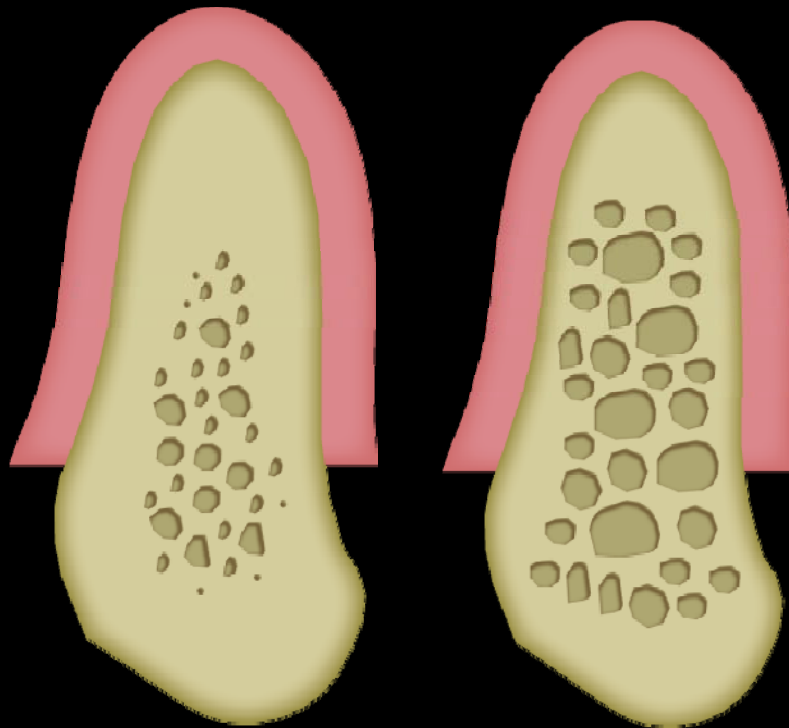
Thin  
Ridge

Low  
Ridge

Thin Ridge Implant system are under development, but the basic concept was already submitted for [International patent](#).

AnyRidge implant system for low and wide ridge will have much more excellent initial stability and wider implant surface for integration.

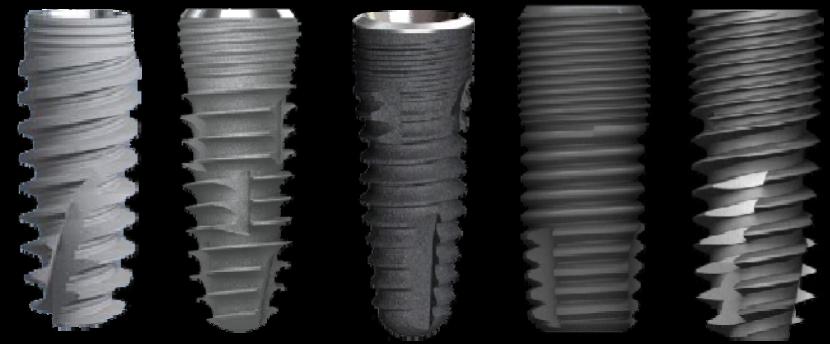
## Type of Ridge and selection of fixture



Normal  
Ridge

Loose  
bone

How about loose bone?

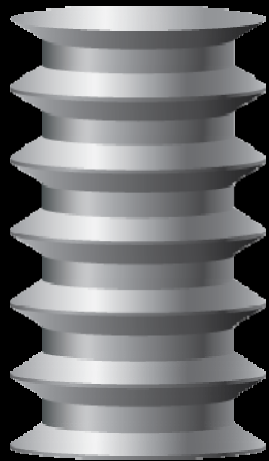


Can these fixture solve  
low quality of bone?

# Basic concepts for the Macro-design

- Utilize all the available bone
- Minimize the chance to bone graft or other advanced surgeries.
- Keep the buccal & lingual crestal bone as much as possible.
- Always excellent initial stability possible, even in Type IV bone.
- Minimize drilling sequence.
- Maximize self-tapping property
- Save and harvest as much autogenous bone as possible during drilling.

Currently available implant thread pattern types.



Standard V  
Thread



Spiral  
thread



Square  
Thread



Buttress  
Thread

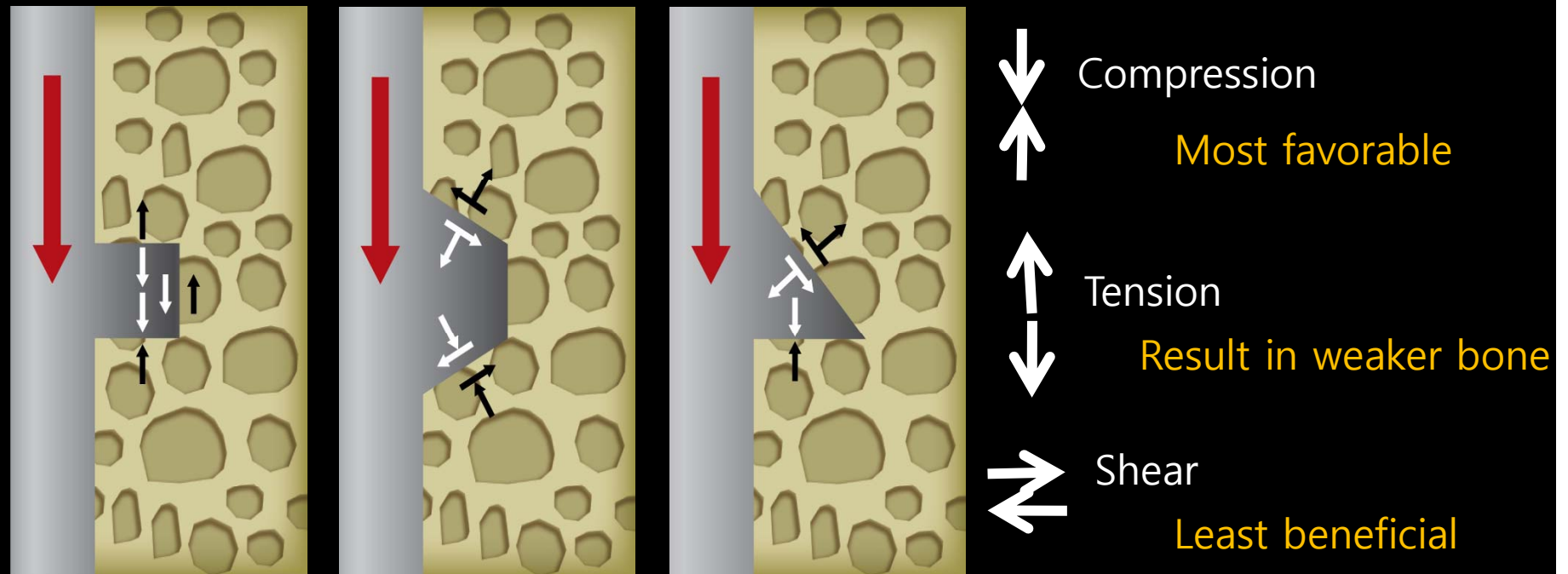


Reverse  
Buttress  
Thread



Locking  
Screw  
Design

Direction of forces generated at the implant and bone interface resulting from axial loading (Misch et al, 2008)



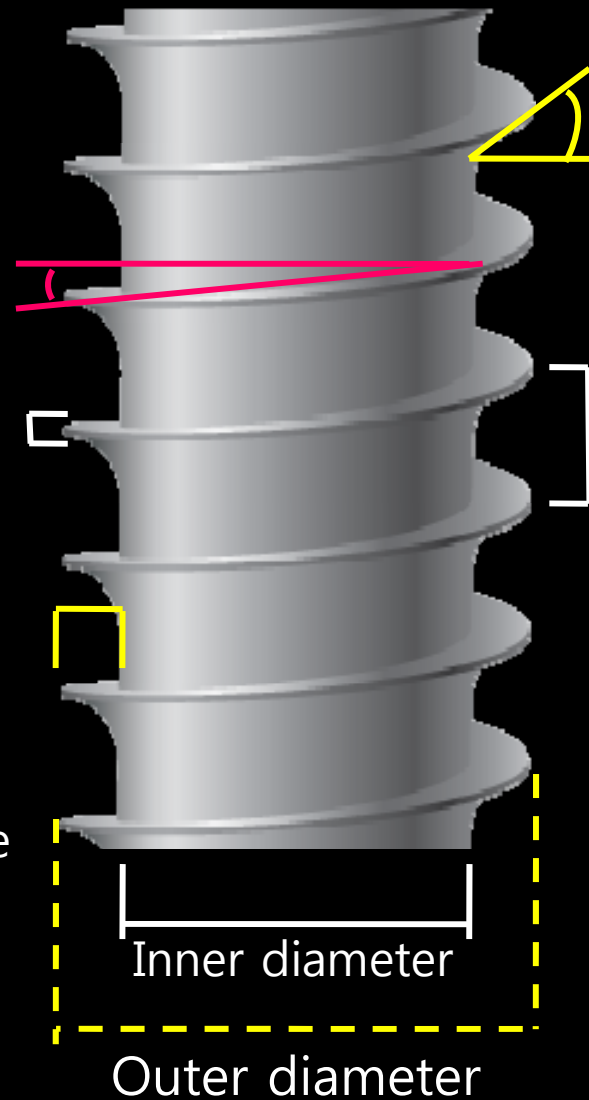
Thread helix angle

Thread width

; 0.18 ~0.3

Thread depth

; greater thread depth may be an advantage in areas of softer bone and higher occlusal force



Apical face angle

; generate shear force  
; square, reverse buttress – minimum shear force

Pitch

; 0.8 mm  
; more sensitive in cancellous bone than in cortical bone  
; greater role in protecting dental implant under axial load

## Single and Multiple Screw Heads



Single Thread



Double Thread

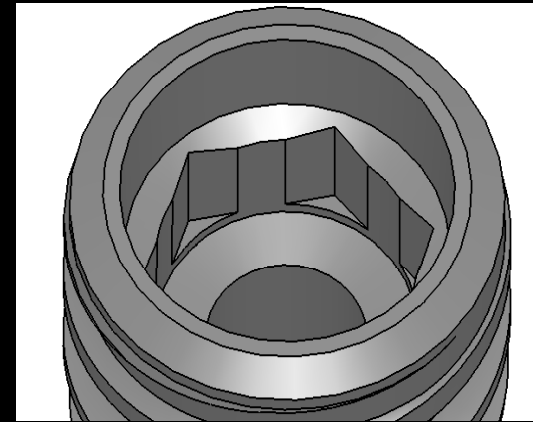


Triple thread

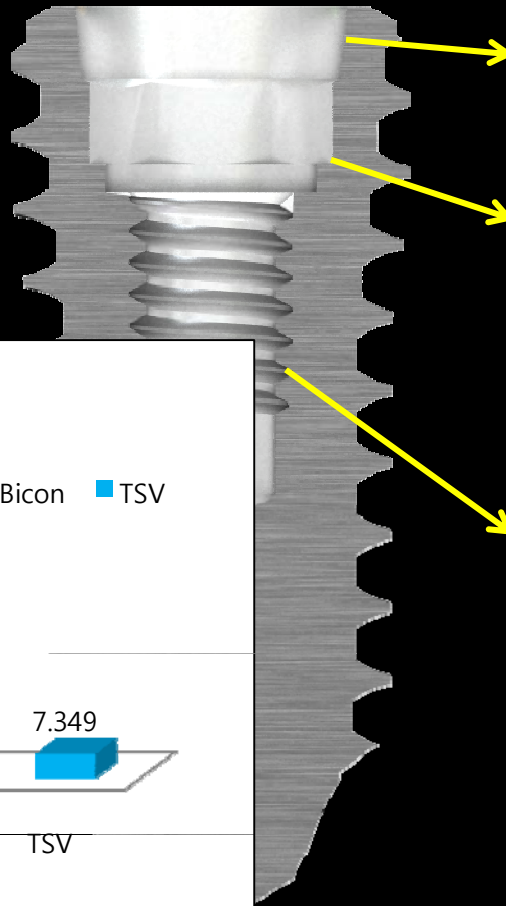
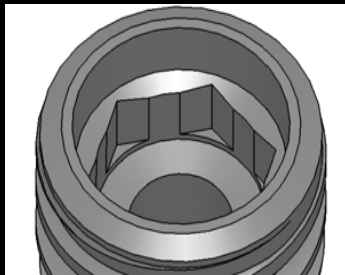
- The most favorable configuration in terms of implant stability appeared to be the **single-threaded one**. The triple threaded was found to be the least stable. [Ma et al, 2007]

## Basic concepts for Connection design.

- No screw loosening
- Cold welding and perfect sealing
- Smaller screw head
- Minimize the role of abutment screw
- Easy to find out the exact location
- Accuracy
- Platform switching



**Internal Connection – 5 degree**  
 - Strong connection between fixture and abutment



5 degree conical area

Hex Anti rotation area  
 $\Phi 3.5 \sim \Phi 5.5 = \text{Hex } 2.3$   
 $\Phi 6.0 \sim \Phi 8.0 = \text{Hex } 3.2$

Minimized female screw  
 $\Phi 3.5 \sim \Phi 5.5 = \text{M1.8-0.35P}$   
 $\Phi 6.0 \sim \Phi 8.0 = \text{M2.0-0.4P}$

