

# ANYCHECK

'2025 Global Top Dental Implant Company

Neo Biotech
Satisfaction to Dentists

# Anycheck

IF you want to check Loading time…

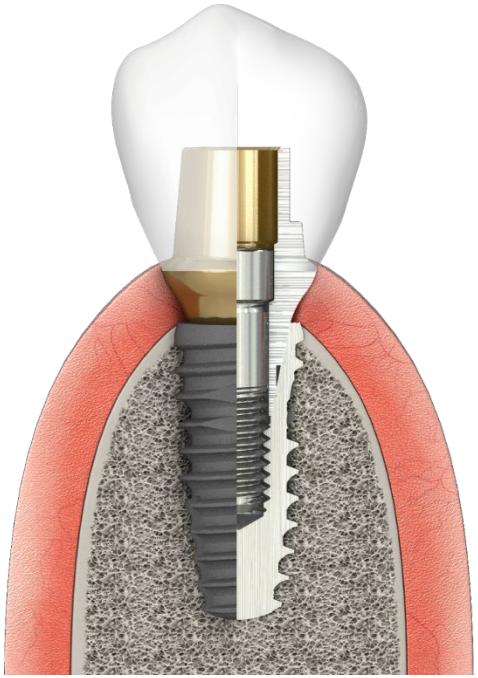
# ANYCHECK



# Anycheck

Anycheck :

- 何謂 Loading?



✓ 在植體上連接補綴物 根據植體承受施加的力量稱為 Loading (負載)

“Loading
= 連接補綴物!!
(Temporary or Final)”

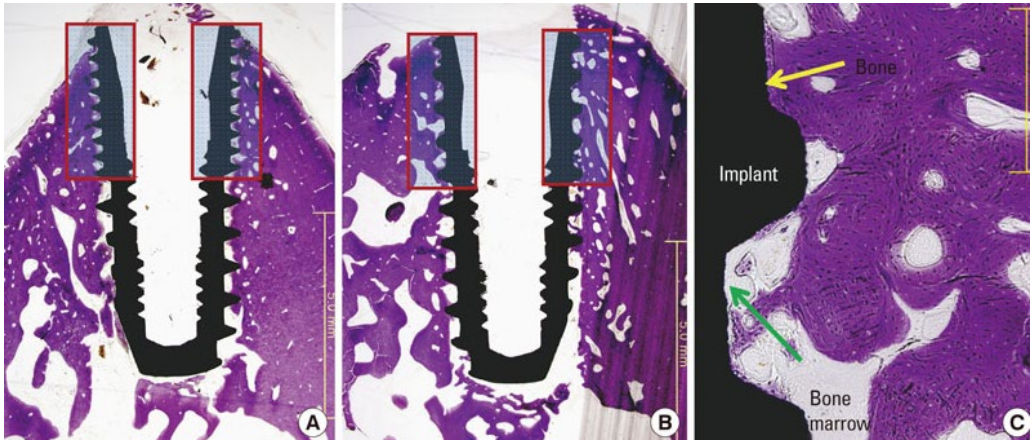
# Anycheck

Anycheck :

- 何時 Loading?

✓Loading (連接補綴物)是

在植體與齒槽骨穩固結合時才能進行




沒有充分骨結合的狀態下

進行Loading 很可能導致植牙手術失敗

“骨結合 X =

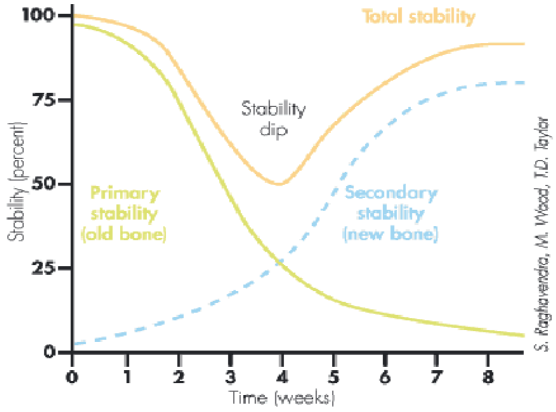
Fail 可能性提升”

# Anycheck

Anycheck :

- Loading 時期

✓一般的情況下建議植牙8週後
進行 Loading




- Primary Stability ；持續性下降
- Secondary Stability ; 持續性上升
- Stability dip ; 3~5週內 － 植體的安全性最低
- Total Stability ; 8週後穩定
- 8週後建議Loading - Conventional Loading 傳統負載

植體植入身體 因破骨細胞植體周圍的骨被吸收而固定力下降
過一段時間 因造骨細胞而有新的骨生長而植體固定力上升

“Loading
建議8週以後進行
(克服Stability dip後)”

# Anycheck

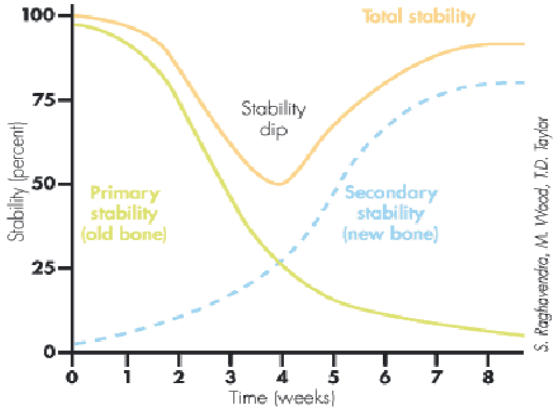
Anycheck :

- Loading 時期

✓一般的情況下建議植牙8週後

進行 Loading

✓但不是所有人都能用該圖表理論去適用




**Why??**

變數太多

克服Stability dip的時期都不相同

變數:

牙齒狀態, 咬合狀態, 個人習慣存在, 植體植入部位的特徵, 植體大小及型態, 植體材料及表面性質, 植體植入方式及時期, 植體初期穩定性

所以開始尋找能觀察植體穩定性(Stability)的方法

(發明儀器 => 動搖度測量儀)

# Anycheck

Anycheck :

✓利用植體的動搖程度來測量植體與齒槽骨結合程度



✓ 動搖 – 物品晃動的程度

✓ 晃動的程度少表示植體與骨骼的固定力高

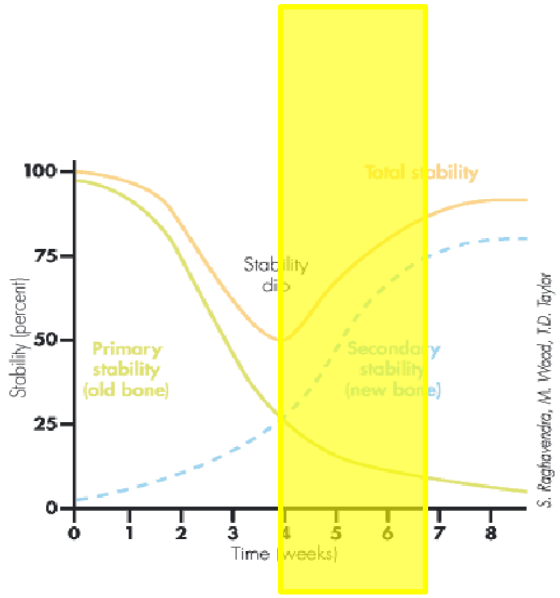
✓ 晃動的程度大表示植體與骨骼的固定力低

“晃動少
= 植體的安全性高
= 可進行Loading(?)”

# Anycheck

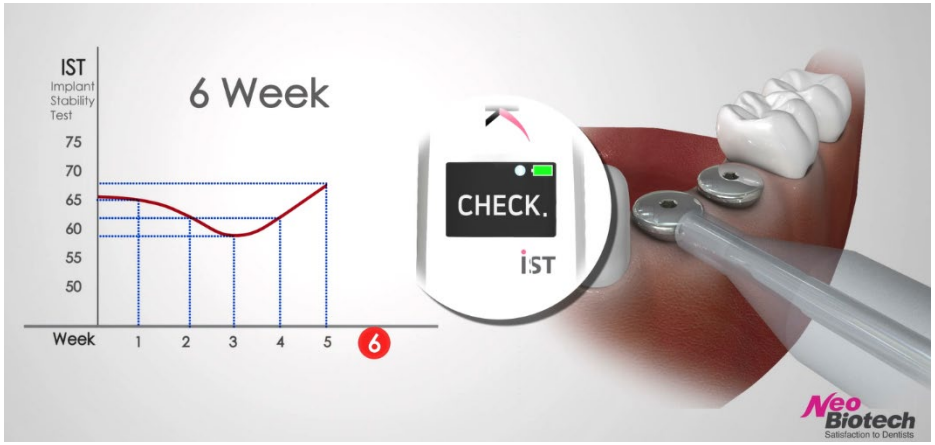
Anycheck :

- 可動搖度測量?




✓ 可測量植體的動搖度(利用客觀化的數據)來觀察克服 Stability dip的時機點

提高有關決定Loading的可預測性

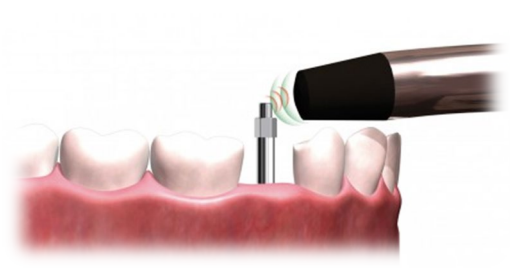



動搖度測量值提升
= 可進行Loading

# Anycheck

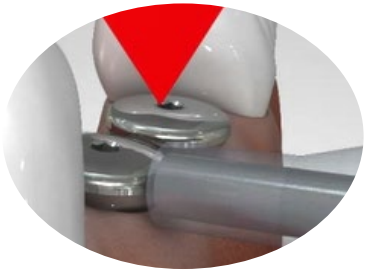
Anycheck :

- 動搖度測量儀的區分



## RFA Type

連接(Smartpeg)與本體發生的電磁場來分析



## Damping Type

直接敲擊Healing測量體來回本體時間來分析

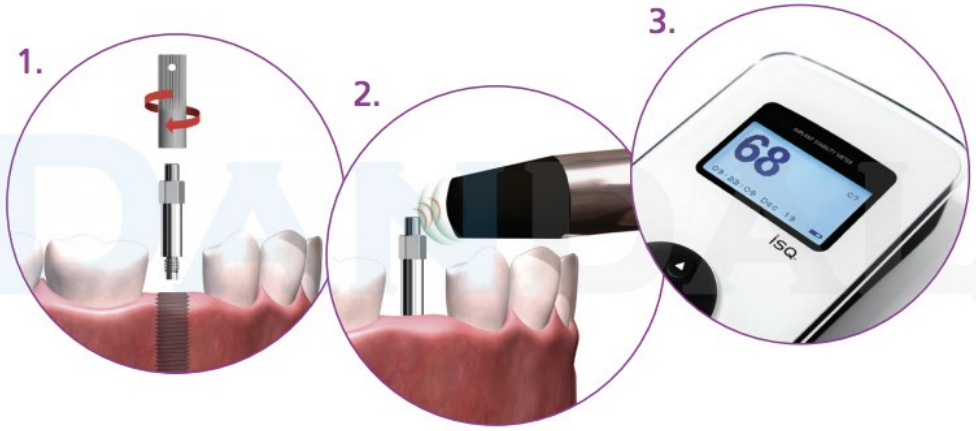
# Anycheck

Anycheck :

- RFA Type特徵- 操作方法

① 擁有磁性的Smartpeg

連接在想測量的植體裡




③ Probe感知特定頻率

用ISQ Data來轉換顯示

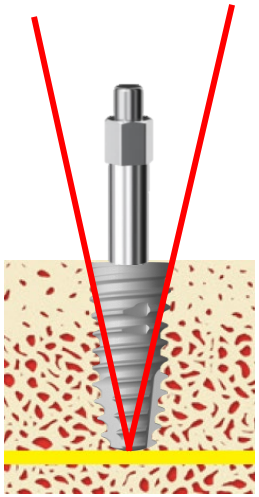
② 本體的Probe發出電磁場

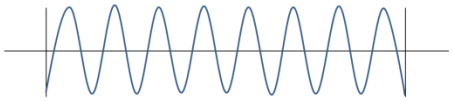
搖動Smartpeg(細微的晃動發生)

# Anycheck

Anycheck :

- RFA Type特徵- 操作方法

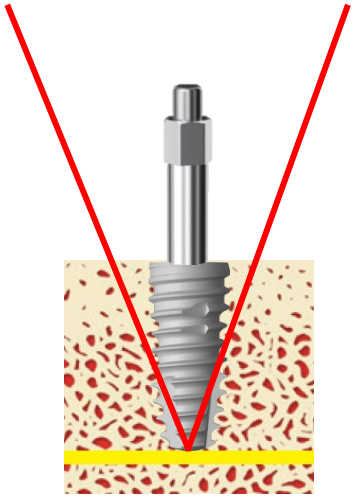


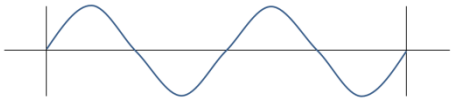


固定力強的植體

震動的幅度小

運作速度快而高的頻率產生





固定力弱的植體

震動的幅度高

運作速度慢而低的頻率產生

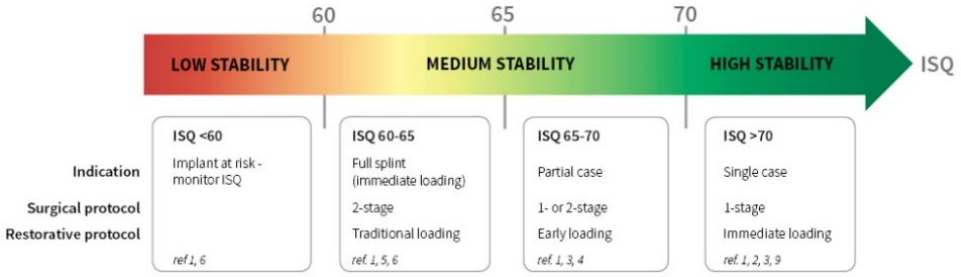
# Anycheck

Anycheck :

- RFA Type

## 優點

✓ 所測量出的數值 “ISQ Value” 已成為測量穩定度的標準指數




## 缺點及極限

✓ 必須移除Healing Abutment

(如還未穩定骨結合的植體,在移除Healing時植體有可能出現脫落)

✓ 需購買Smartpeg等耗材的額外費用

✓ 因需發生磁場的原因一次只能側量一個植體, 多顆植體無法同時測量

✓ 骨質堅硬的情況,ISQ值會變高

✓ BIC (Bone to Implant Contact ratio)與ISQ值沒有關聯性

☞ 因RFA測量方式是分析共振週波的方法,與其說骨骼與植體的關聯性更是由周圍骨量及形狀來決定數值的方式

# Anycheck

Anycheck :

- Damping Type特徵

  ✓ 無須繁瑣過程, 直接敲擊在測量體( Healing or 自然齒)






# Anycheck

Anycheck :

- Damping Type

優點

✓ 無須移除Healing Abutment

(移除Healing時植體有可能被脫落,沒有此危險性)

✓ 同時可測量多顆植體

(因無需移除Healing,可同時測量)

✓ 無須購買其他耗材

✓ 活用性高

(植體外, 可測量自然齒及贋復體的固定力)

缺點及極限

✓ 固定力弱的植體時,在測量可能會產生微動

✓ 敲擊時患者可能產生不適感

# Anycheck

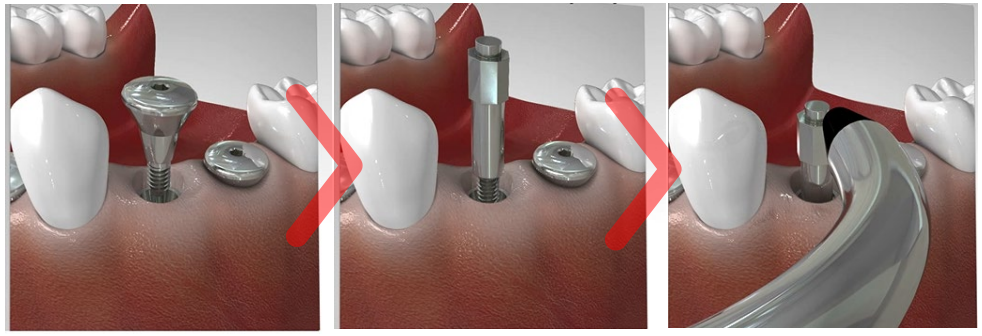
Anycheck的優點：

AnyCheck 是

直接敲擊 Healing 來安全快速的測量穩定度

RFA方式

① 移除Healing ②連接Smartpeg ③ 測量



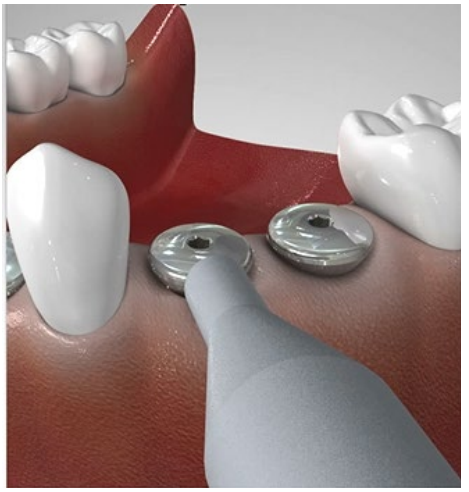
移除Healing時
Fixture可能有脫落
的危險性

需額外加購費用

VS

AnyCheck

直接敲擊Healing測量



# Anycheck

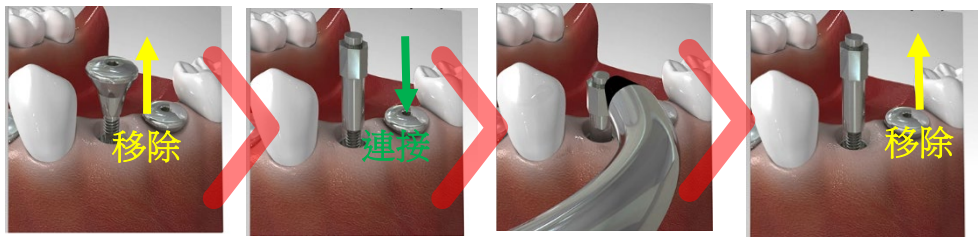
Anycheck的優點：

AnyCheck 是

直接敲擊 Healing 來安全快速的測量穩定度

RFA方式

① 移除Healing ②連接Smartpeg ③ 測量 ④ 移除Smartpeg

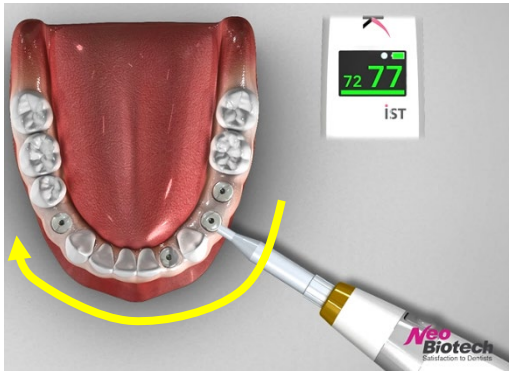



測量多顆需重複上述步驟多次

VS

AnyCheck

單純移動測量



# Anycheck

## Anycheck的優點：

AnyCheck 是

實現ISQ Value數值, 提供牙醫師熟悉的數值



Reliability Verification of Damping Capacity Assessment Through In Vitro Analysis of Implant Micromotion in Peri-implant Bone Loss Model

- 刊登: JOMI論文；**Volume36, Number 1, 2021**
- 概要

AnyCheck與震動頻率分析方式的 RFA方式,以統計上有著有意義的關聯性,測量值有相似性

- IST & ISQ : ρ = 0.99, P <.001
- IST & PTV : ρ = -1.00, P <.001
- ISQ & PTV : ρ = -0.99, P <.001

AnyCheck



# Anycheck

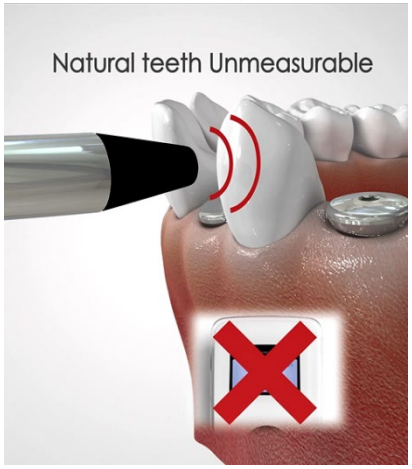
Anycheck的優點：

AnyCheck 是

可直接敲擊測量體(自然齒 or 補綴物)等, 可用來預防的工具,活用性高

RFA方式

* 無法測量




VS

AnyCheck

* 可以測量




① AnyCheck不只能判斷Loading時期
也可以用來診斷早期植體周圍炎的工具

② 追蹤患者植體時
數據可當作安全性指標

# Anycheck

Anycheck的優點：

AnyCheck 是

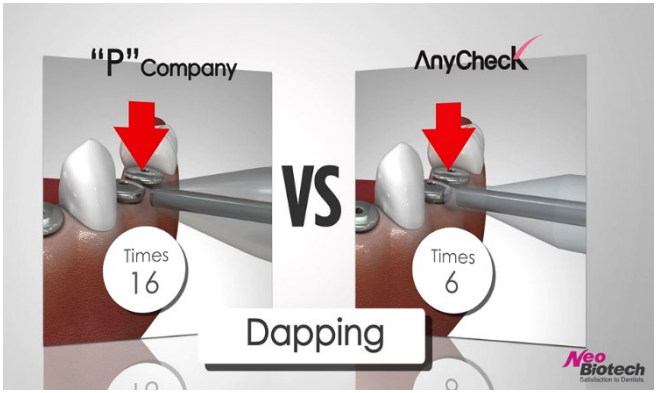
減少了敲擊次數,動搖度低於60時,只敲擊2次,使用上安全

P品牌

AnyCheck

* 敲擊16次

* 正常敲擊6次




* 動搖度未滿60時, 為安全考量只敲擊2次




*參考 : P品牌 在測量時,打擊棒需離測量體一定距離 (0.5~2cm)
這時因角度與測量距離沒有算好,在測量上失誤發生率提高
反觀Anycheck直接接觸測量體測量

# Anycheck

Anycheck規格:

| 項目 | AnyCheck |
| --- | --- |
| 外觀 |  |
| 打擊角度 | 0°~30° |
| 打擊次數 | 6次 |
| 打擊安全裝置 | 2次打擊後停止 |
| 打擊強度 | 1.8N·cm |
| 電池容量 | 760mA |
| 充電方式/支架 | USB C Type / 有支架 |
| 防止感染 | 使用1次性套子 |

# Anycheck

Anycheck測量方式:

## IST (Implant Stability TEST) 1~99 測量




操作開始按鈕後,打擊棒打擊Hraling abutment後測量IST
用Anycheck去測量數值在55的contral Bar
Anycheck 測量3次,測量值都顯示55
比其他牌子,Anychemck有很高的穩定性

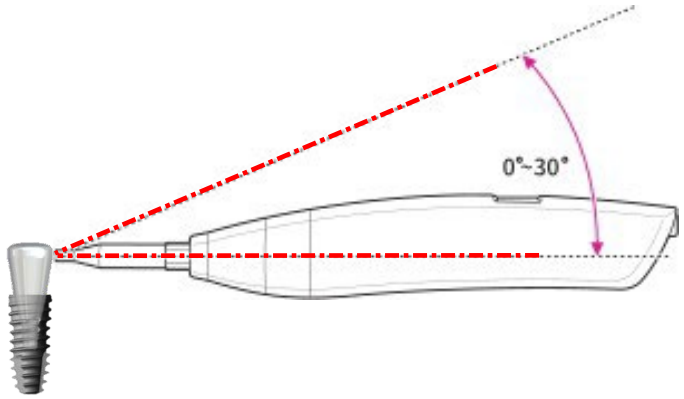
| 測量範圍 | 1~59 | 60~65 | 65~99 |
|---|---|---|---|
| 顯示顏色 | 紅色 | 黃色 | 綠色 |

# Anycheck

## Anycheck測量方式 :

**AnyCheck**

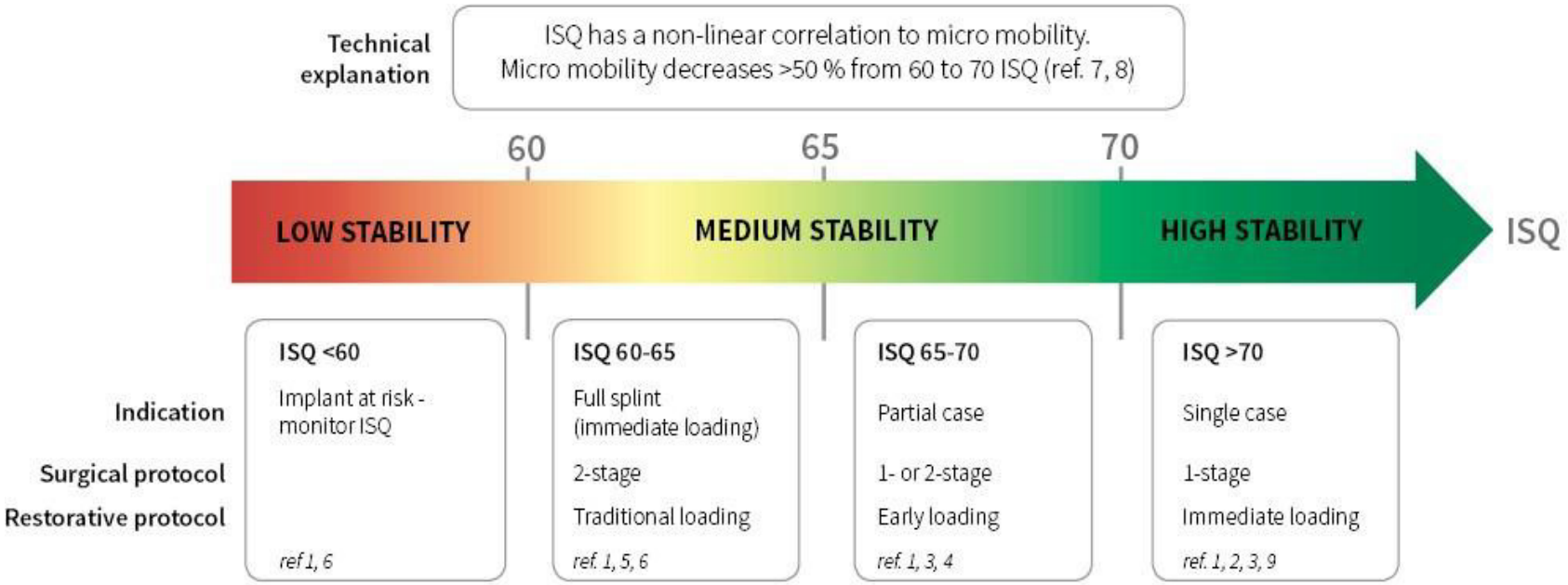
測量時角度以地面基準上仰**0~30 °**,超過此角度會響警示音,超過**30 °**後按開始按鈕,會顯示**"Angle Too High"**的字語,如小於**0°**會顯示**"Angle Too Low"**後,無法操作




- **測量角度超過30°後會響警示音,會顯示警示字語**

# Anycheck

Anycheck數據:





1. Sennerby L Prof. Implantologie 2013;21(1):21-33
2. Kokovic V, Jung R, Feloutzis A, Todorovic V, Jurisic M, Hämmerle C. Clinical Oral Implants Research, 00, 2013, 1-6
3. Michael M. Bornstein, Dr. med. dent.; Christopher N. Hart, DMD; Sandro A. Halbritter, Dr. med. dent.; Dean Morton, BDS, MS; Daniel Buser, Prof. Dr. med. dent. Clin Implant Dent Relat Res 2009
4. Serge Baltayan, Joan Pi-Anfruns, Tara Aghaloo, Peter Moy J Oral Maxillofac Surg 74:1145-1152, 2016
5. Pär-Olov Östman DDS, PhD, MD, Private practitioner, Falun- and Biomaterial group, Sahlgrenska. Academy, Gothenburg, Clinical Implant Dentistry and Related Research, Volume 7, Supplement 1, 2005
6. Daniel Rodrigo, Luis Aracil, Conchita Martin, Mariano Sanz. Clin. Oral Impl. Res. 21, 2010; 255-261
7. Pagliani L, Sennerby L, Petersson A, Verrocchi D, Volpe S & Andersson P. Journal of Oral Rehabilitation 2012
8. Paolo Trisi PhD, Teocrito Carlesi DDS, Marco Colaglovanni DDS, Giorgio Perfetti MD, DDS. Journal of Osteology and Biomaterials, Volume 1, Number 3, 2010
9. Stefan Paul Hicklin, Esther Schneebeli, Vivianne Chappuis, Simone Francesco Marco Janner, Daniel Buser, Urs Brägger Clin. Oral Impl. Res 00, 2015; 1-9


The above is a summary of scientific data and not an official recommendation by Osstell.
To monitor osseointegration measure at placement and before final restoration.

# Anycheck

Anycheck的優點：

- 只需撞擊2~6次
- 當固定力較弱時, 只施加 2次, 以最大限度地減少對植入物穩定性的影響
- 直接碰觸 Healing(撞擊力道低於1.8Ncm)
- 只有2~5%內的偏差
- 不論植體類型,不論多顆皆可測量
- 可以在癒合基台及牙冠上測量，不會影響癒合基台
- 不需要再另外購買耗材
- 無須卸除癒合基台, 植體不會有脫落的危險性

Anycheck 臨床論文：

(Anycheck vs Periotest M)

medicina

MDPI

*Article*

# Clinical Validation of Dental Implant Stability by Newly Designed Damping Capacity Assessment Device during the Healing Period

Ho-Kyung Lim [1,†], Sung-Jae Lee [2,†], Yujin Jeong [3], Jong-Seok Lee [4], Jae-Jun Ryu [4], Ji-Suk Shim [5,*] and In-Seok Song [2,*]

[1] Department of Oral & Maxillofacial Surgery, Korea University Guro Hospital, Seoul 08308, Korea
[2] Department of Oral & Maxillofacial Surgery, Korea University Anam Hospital, Seoul 02841, Korea
[3] Department of Biostatistics, Korea University College of Medicine, Seoul 02841, Korea
[4] Department of Prosthodontics, Korea University Anam Hospital, Seoul 02841, Korea
[5] Department of Prosthodontics, Korea University Guro Hospital, Seoul 08308, Korea
* Correspondence: shoss@hanmail.net (J.-S.S.); densis@korea.ac.kr (I.-S.S.)
† These authors contributed equally to this work.

## Background and Objectives:

To evaluate the stability of a dental implant and the effectiveness of a newly designed damping capacity assessment device by improving the number of blows and strength evaluated by a prospective clinical study.

## Materials and Method:

The stability of dental implants was measured in 50 implants in a total of 38 patients.
Measurements were performed using Anycheck and Periotest M devices, twice in total, divided into buccal and lingual directions.
In addition, measurements were performed on the day of surgery, two weeks, one month, two months, and three months after surgery for a total of five times.
After the standardization of the measured values, the differences and changes over time for each device were observed.

# Anycheck 臨床論文：

## Materials and Method:

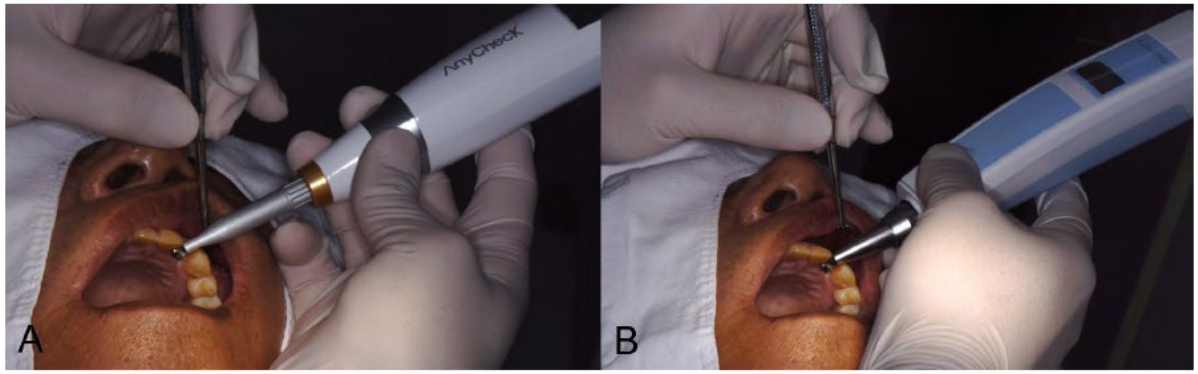
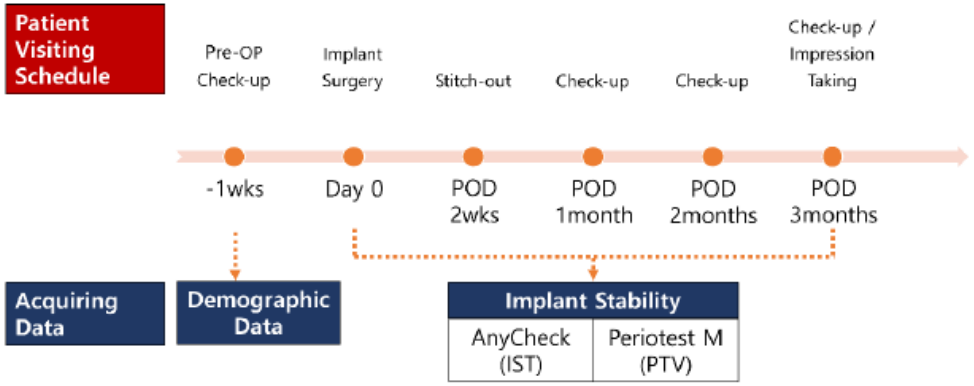



**Figure 1.** Clinical application of Anycheck and Periotest M equipment. **(A)** Anycheck, **(B)** Periotest M).



# Anycheck 臨床論文：

**Result:**

No difference in standardized values between the two devices was observed at any time point.

In both devices, stability decreased at two weeks postoperatively but gradually increased thereafter.

兩台儀器 Periotest M和 Anycheck 之間的標準化值沒有差異 ($p > 0.01$)

使用 Periotest M 測量穩定性時，手術後立即的平均穩定性在兩週內下降，此後逐漸增加 ，在三個月結束時表現出比數後立即測量更高的穩定性。

Anycheck的情況與Periotest M類似，測量值的平均值在術後第二週下降，但此後逐漸增加，並且從1個月起表現出比術後立即測量更高的穩定性。

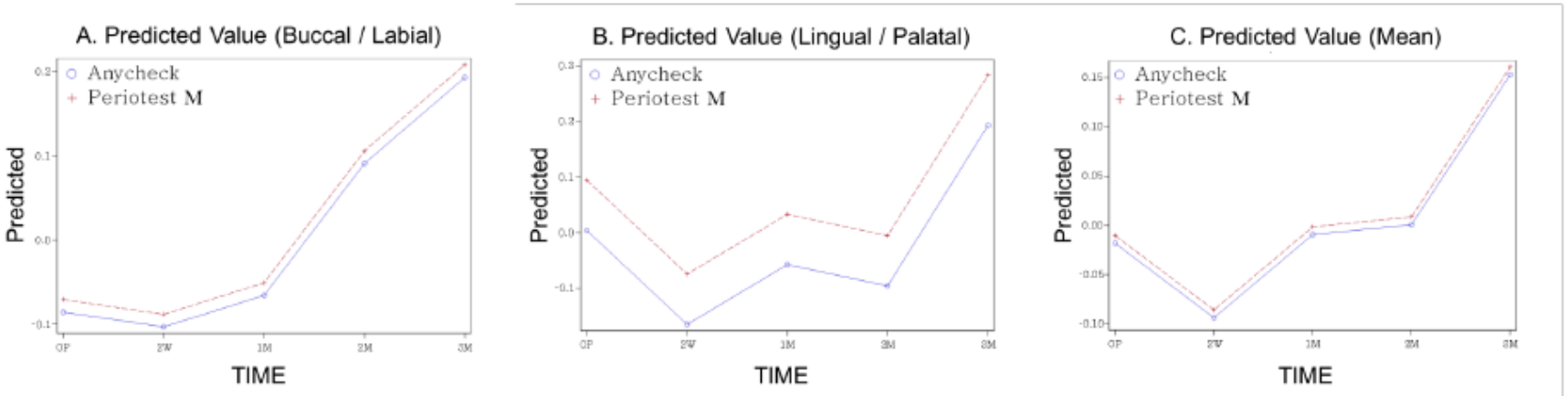



Figure 4. The predicted value over time (Z-score standardized, (A) buccal, (B) lingual, (C) mean).

# Anycheck 臨床論文：

**Discussion:**

目前廣泛使用的測量牙種植體穩定性的設備是 Osstell，可以基於共振頻率分析來測量 ISQ 值， Osstell 的優點是測量過程中無需敲擊種植體；
因此，患者的不適感較少。然而，對於每個植入產品，必須提供具有匹配內表面的智能釘，
並且智能釘固定過程可能會影響初始穩定性較弱的植入物的固定。
在裡面 Periotest M的情況下，沒有這樣的連接過程，但是打擊力很強， 打擊次數較多（16次），會引起患者不適，
且測量值會受到打擊角度的影響。

Anycheck設備是這兩種設備的改進版本。
它不需要如 Osstell 進行測量，以及強度與 Periotest M相比，打擊頻率相對較少。
另外，為了增加用戶的直觀性，以紅色、橙色、 綠色取決於測量值的範圍，以便無需讀取數字即可識別穩定性。
因此，Anycheck 設備可以更輕鬆地與現有設備相比，可以測量種植體的穩定性。
然而，儘管具有比 Periotest M 更寬的有效打擊角度，但只能在打擊角度為距地面 0˚ 到 30˚ 的範圍，最終結果值必須進行修正。

**Conclusions:**

**The damping capacity of Anycheck was similar to that of Periotest M.**
After a slight decrease in stability two weeks after implant placement, implant stability increased over time.

兩台儀器 Periotest M和 Anycheck 之間的標準化值沒有差異 ($p > 0.01$)

Anycheck 臨床論文：

(Anycheck vs Osstell)

Okuhama *et al. BMC Oral Health* (2022) 22:286
https://doi.org/10.1186/s12903-022-02320-0

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RESEARCH Open Access

# Validation of an implant stability measurement device using the percussion response: a clinical research study

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**Background and Objectives:**

This study aimed to determine the correlation between primary and secondary implant stability using the Osstell® and AnyCheck® devices.

**Materials and Method:**

Ten patients (7 women) with partially edentulous jaws who received a total of 15 implants were included.
IST (AnyCheck®) and ISQ (Osstell®) values were measured immediately after implantation and at 1, 2, 3, 4, and 6 weeks post-implantation.
Each measurement was performed three times, and the average value was used as the result.
The correlation between measurements obtained using the two devices was determined using Spearman's rank correlation coefficient.

# Anycheck

## Anycheck 臨床論文：

### Materials and Method:




**Fig. 1** The AnyCheck® implant stability test (IST) device

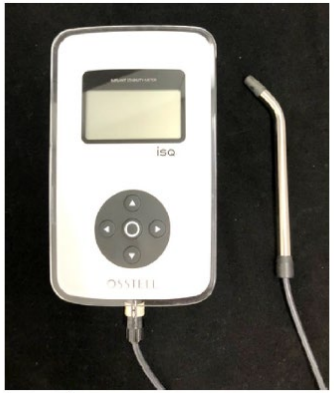



**Fig. 2** The Osstell® implant stability quotient (ISQ) device

### Results:

The IST values ranged from 79.1 ± 2.87 to 82.4 ± 2.65.
The ISQ values ranged from 76.0 ± 2.8 to 80.2 ± 2.35.

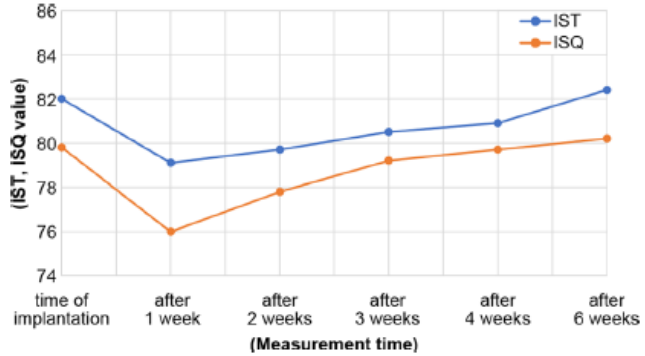



**Fig. 3** Comparison of the mean implant stability test (IST) and implant stability quotient (ISQ) values at different times post-implantation

# Anycheck 臨床論文：

## Results:

Spearman's rank correlation coefficient was r = 0.64 immediately after implantation, r = 0.29 at 1 week, r = 0.68 at 2 weeks, r = 0.53 at 3 weeks, r = 0.68 at 4 weeks, and r = 0.56 at 6 weeks.

A positive correlation was found in all cases, except at week 1 when the correlation was weak; the IST and ISQ values decreased the most during the first postoperative week and increased during the second week.

The IST values were also slightly higher at all measurement points.

除第 1 週相關性較弱外，所有情況均呈正相關；

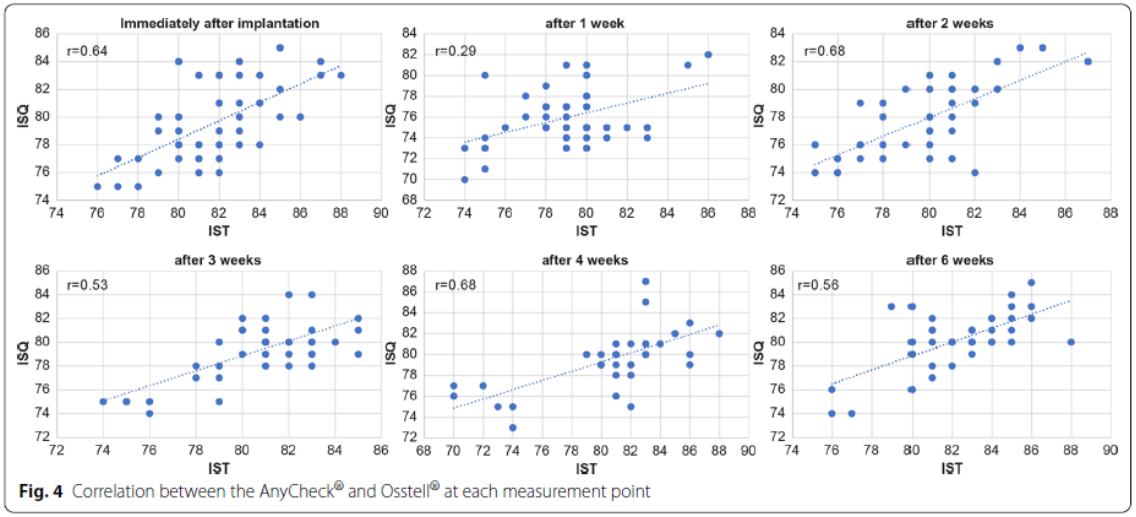



**Fig. 4** Correlation between the AnyCheck® and Osstell® at each measurement point

## Conclusion:

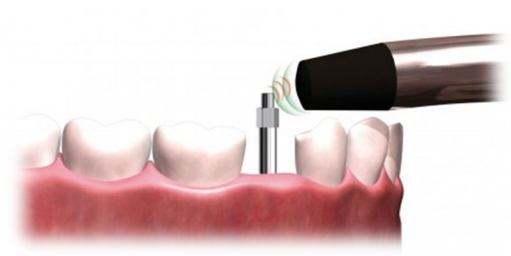
The ability to assess implant stability without removing the abutment during healing is essential for determining the timing of loading without the risk of bone resorption.

The results of this study suggest that AnyCheck® is useful for determining primary and secondary implant stability.

在癒合過程中無需移除支台體即可評估植體穩定性的能力對於確定加載時間且避免骨吸收風險至關重要。

這項研究的結果表明 AnyCheck® 對於確定初期和二期植體穩定性很有用。

# ISQ Value vs IST Value:

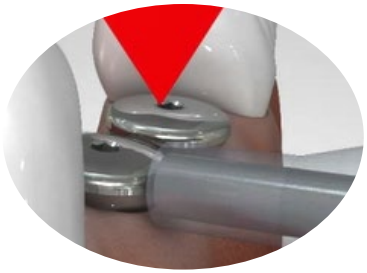


## ISQ- Implant Stability Quotient
## 植體穩定性指數

•使用共振頻率分析 (Resonance Frequency Analysis, RFA)

•利用磁脈衝使植體中的智能探針（Smart Peg）產生共振來量化穩定性。

•測量需要拆卸愈合基台並安裝智能探針。



## IST- Implant Stability Test
## 植體穩定性測試

•使用敲擊法 (Percussion Method)

•透過敲擊愈合基台，記錄接觸時間以計算穩定性。

•不需要拆卸愈合基台，降低手術侵入性。

•以論文證實數值範圍與 ISQ 相似

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# Thank you