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**100% Effective Natural Hormone Treatment**  
**Menopause, Andropause And Other Hormone Imbalances**  
**Impair Healthy Healing In People Over The Age Of 30!**

**Titanium 101.... There is a difference**

**By Tom Erwin**

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Titanium 101... There is a difference

Titanium has taken the world of golf by storm. Manufacturers of some of the world's top golf clubheads have chosen to use titanium as their chief ingredient in assembling space age, state-of-the-art components. But why is this?

There are many materials as strong if not stronger than titanium. So why is titanium the material of choice? Titanium is not only one of the "hardest" metals known to man but unlike these other hard materials, titanium is extremely lightweight. Because of these weight characteristics, manufacturing advances have enabled clubhead designers to build drivers of ever increasing size while not being inhibited by added clubhead weight.

Three different types of titanium are used in the manufacturing of today's clubheads: 9-6AL-4V, 15-3-3-3 and SP700. There are 3 characteristics that are used to gauge the quality of each type of titanium. Tensile strength represents the material's resistance to breaking or cracking. The higher the value the more resistant the clubhead is to cracking. Elongation is the percentage each type of titanium will flex or spring upon impact. The higher the percentage, the more spring each metal will experience. HRC Hardness is fairly self-explanatory, exhibiting values that correspond to the metals hardness. The higher this figure, the less likely the metal will dent or become deformed upon use.

When evaluating the types of titanium and the figures used to do so, clearly noted is the separation between 9-6AL-4V and 15-3-3-3 / SP700. A golfer should avoid the purchase and use of 9-6AL-4V as the minimal cost savings (typically \$20 to \$40) do not warrant the inferior playing characteristics. As one can surmise, a clubhead made with 9-6AL-4V is much more likely to crack or dent through continued use. In addition, the elongation percentage is not nearly as high as the others mentioned therefore, a golfer would not experience the potential gains in distance/yardage that he/she would if using either of the other titanium's.

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Titanium's 15-3-3-3 and SP700 offer tradeoffs when considering which may be better to seek when making your next purchase. 15-3-3-3 has the highest tensile strength of the 2 but a smaller elongation percentage. Meanwhile, SP700 still possesses considerable tensile strength but does add a few percentage points in the category of elongation. How does this translate? SP700, through its' higher elongation figure, can impart more spring upon impact and thus deliver more energy to the golf ball thereby increasing distance.

So what are the trade off's? Simply put—dollars for distance. Though this figure varies widely, the SP700 titanium is typically a bit more expensive than the 15-3-3-3, usually on the order of \$20 – \$40. This amount is oftentimes minimized by using SP700 strictly in the face of the driver head. Also, the higher one's clubhead speed, the more realized benefit that could be realized from the increased spring effect of SP700. Golfers with a lower swing speed may not notice substantial yardage gains when comparing the two and therefore may not wish to pay this premium. Truly though, it is hard to go

wrong with using either titanium as both offer such incredible playing characteristics, such vast improvements over stainless steel

Please feel free to visit TourPureGolf.com (<http://www.tourpuregolf.com>), where we'll be happy to answer any questions you may have regarding clubheads, titanium, golf technology etc. We have a wealth of knowledge obtained from over 20 years of experience in designing and building golf clubs. We specialize in only the best in tour quality golf clubs and equipment and using only the finest in materials. Inferior grades of titanium will never be tolerated with us.

You can visit our website to learn more about our club selection and how selection of clubs can dramatically improve your golf game.

Tom Erwin is President and co-founder of TourPureGolf.com (

). An avid

golfer and club-craftsman for 20+ years, he and the staff at

are strictly focused on

improving the golf game of each customer through technology and the proper fit of each golf club.

### **The Age of Titanium**

**By John Lewis**

Although Titanium is an abundant element on earth it was not discovered until 1791 but it would be another hundred years after that before it was possible to isolate the metal.

In appearance the metal is grey and lustrous and has often been used to make alloys which are light

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and resistant. Titanium has also been detected in meteorites and in the moon rocks brought back from the Apollo 17 mission.

It is because of its desirable properties which make Titanium an ideal metal for this technological age that has led to a huge rise in popularity of this metal.

In industry the uses for titanium are many because of its resistance to corrosion even from salt water, alkalis and acids and even corrosive gases. Because of its corrosion resistance and the fact that it is also physiologically inert and hypoallergenic, Titanium is also used extensively in the field of medicine and in particular for prosthetic implants such as hip and knee replacements.

This wonderful metal has very high strength to weight ratio and it is much utilised in critical and demanding applications such as in the aerospace industry. The use of Titanium has made space exploration possible and the earlier rockets such as Mercury, Apollo and Gemini were all made largely of this metal. The Space Shuttle also has many parts made from Titanium as have many jet fighters, submarines, ships and tanks.

Titanium therefore is used across a broad spectrum of applications making it very much a metal of our modern age.

Aircraft grade titanium is now becoming increasingly popular in the jewellery trade and has found favour particularly in the manufacture of mens jewellery because of its hard wearing properties. Titanium rings have become increasingly popular as wedding rings in part because they will stand up to more wear and tear than precious metals but probably just as much because of the look. Titanium really is a very versatile metal and lends itself very to the making of fine jewellery and a variety of looks can be achieved utilising different finishes and even the application of heat which brings about a change in colour ranging through the whole spectrum.

This property of colouration by heat has been used particularly in the manufacture of ladies jewellery for making eye catching unique designs in earrings, necklaces and modern, trendy titanium rings.

In the making of rings, titanium can also be inlaid with precious metals and set with precious stones and although the material is more difficult to work with because of its strength, once made you will have a beautiful piece of jewellery that will look good and last a lifetime.

The durability, strength and looks of titanium will ensure that it continues to grow in popularity as a metal in the manufacture of jewellery and in particular for the making of titanium rings.

Written by John Lewis of Love2Have. Love2have specialises in quality handcrafted designer

made here in the UK by small independent designers.

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