



能量 ENERGY

THE SOURCE OF ALL LIFE

生命的源头

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Day to day and year to year, we seem to live on an endless source of energy that starts from the time we awake to the time we sleep at night. We say it is food and sleep that give us energy and recharge us, but have you ever wondered how your body actually derives energy? Where does it come from? How is it made?

Our body is an organism that is made up of water, bone, fat, muscle, organs, and other things. Broken down further, we are made up of cells and in the simplest terms, we can think of our body as one big cell that eats, sleeps, and goes to work each day.

We may not notice it, but every ounce of energy we use is manufactured through an amazing processes within the cells of our body. These processes happen every second and they are the source of life that gets us through each day.

So how does this all come together?

Adenosine Triphosphate – more commonly known as ATP – are macromolecules arguably the second most important next to DNA. ATP can be thought of as the energy currency that our cells produce. ATP also functions as transport and does mechanical work such as muscular contractions. Our body requires a sustained and consistent supply of ATP in order to function and survive.

To manufacture ATP effectively our bodies require Coenzyme Q10 or CoQ10. Scientists have found that low CoQ10 levels equals low ATP levels because without sufficient CoQ10, our bodies are unable to manufacture enough ATP. Low ATP levels means, low cellular energy – which means our bodies fatigue and age faster. Knowing this helps us understand why CoQ10 supplementation is so important.

CoQ10 is recognized as an essential nutrient for heart health. Heart failure and poor heart health have been linked to CoQ10 deficiency.

日复一日年复一年，我们体内的能量好像睡醒以后就恢复，似乎用之不尽。我们都说，食物和睡眠让我们身体补充能量。但您可曾想过，您的身体是如何产生能量？它是从何而来？又如何制造的呢？

我们的身体是一个有机体，由水、骨骼、脂肪、肌肉、器官及其它东西组织而成。简单来说，我们是由细胞组织而成，我们的身体犹如一个能每天饮食、睡觉和上班的大细胞。

我们或许没注意到，其实我们使用的每盎司能量，都是通过体内细胞的了不起过程中所制造的。这些过程每一秒都在发生，它们是生命的泉源，让我们度过每一天。

它们是如何结合在一起呢？

三磷酸腺苷 – 简称为ATP，在身体中所占的重要性仅次于脱氧核糖核酸（DNA）。ATP可说是我们细胞产生的能量“货币”，有运输的作用，以及肌肉收缩的“工作”。我们的身体需持续及稳定的ATP供应才可运作和生存。

为了有效地制造ATP，我们的身体必须要有生物吸收性Q10或CoQ10。科学家证实因为缺乏足够的CoQ10，低水平的生物吸收性Q10相等于低水平的ATP。我们的身体是无法制造足够的ATP。低水平的ATP意味着细胞的能量低，导致我们的身体容易疲劳和加速衰老，这有助于我们了解CoQ10的辅助品为何如此重要。

生物吸收性COQ10获得对心脏健康之营养的认可。心脏衰竭和心脏状况不佳已被证实是缺乏生物吸收性COQ10所导致。

Scientific Facts on CoQ10*

What are the characteristics of CoQ10?

CoQ10 exists in two forms, Ubiquinone and Ubiquinol. Both forms are oil-soluble and both are readily converted from one form to the other in the cells, lymph, or blood when their respective functions are needed. The body synthesizes Ubiquinone in all living cells. Even when the Ubiquinol is taken as supplement, it is converted in the stomach to Ubiquinone.

Due to the extra hydroxyl (hydrogen with oxygen) unit, Ubiquinol is two molecules larger (thus heavier) than Ubiquinone. With the help of some surfactant chemicals, Ubiquinol can be made to be dispersible in water; however, this CoQ10 molecule is still oil-soluble and is absorbed in the body as such.

Does water-soluble mean that it is more readily absorbed compared to being oil-soluble?

Water-soluble molecules can rapidly dissolve in water. But water-soluble does not equate or mean high absorption. The larger the size of the molecules, the harder the absorption. If the molecules are very large in size, the body's absorption would be poor.

Water-solubility is of no relevance to CoQ10 because CoQ10 is oil-soluble and cannot be converted into water-soluble molecules.

Does reducing the size of the CoQ10 molecular make it more water-soluble?

Reducing the size of the CoQ10 molecule will make it more water-soluble, however it would have to be reduced to become CoQ9, 8, or 7 and will no longer be CoQ10.

Since CoQ10 (Ubiquinone and Ubiquinol) is oil soluble, how do we improve its absorbability?

The key is in the use of a suitable medium of oil for transport and absorption of CoQ10. Many brands in the market use hydrogenate oil as a medium. Through extensive research, NewLife™ International has developed a special advanced formula of Coenzyme Q10 that is blended with essential fatty acids found in flax seed concentrate to enhance the bioavailability of CoQ10. This essential fatty acid from flax seed concentrate provides the special "transport system" for the CoQ10. With this special advanced formula of CoQ10, you can be assured that it will be fully absorbed and not eliminated from your body. This would mean greater absorption, a higher blood level of CoQ10 and faster results.

In conclusion, hundreds of clinical studies show that Ubiquinone (the form of CoQ10 that NewLife™ uses) is effective and is the choice of cardiologists. Nevertheless, Ubiquinone and Ubiquinol are rapidly inter-converted back and forth as needed, regardless of which form is ingested.



*Natural Products INSIDER, Coenzyme Q10 Facts or Fabrications by William V. Judy, Ph.D., Willis W. Stegessill, M.D., Daniel S. Judy, M.D. and Janet S. Judy, R.N. CRC

生物吸收性COQ10的科学证明*

CoQ10的特点是什么?

CoQ10分为氧化型和还原型两种形式。这两种形式都是油溶性的，当细胞、淋巴或血液有需求时，它们便很容易地从一种形式转换至其他形式。身体中所有的活细胞中都含有氧化型，即使服用还原型的营养辅助品，胃部也会将它转换成氧化型。

由于额外的羟基（氢气与氧气），还原型比氧化型大于两个分子（两个分子重量较重）。在一些活性剂化学品的帮助下，还原型可在水中分解；然而，这CoQ10的分子仍然是油溶性及被人体吸收。

水溶性是否比油溶性更容易被人体所吸收?

水溶性分子可以迅速在水里溶解。但水溶性并不等于容易被吸收。分子越大，越难被吸收。如果分子的尺寸非常大，人体的吸收也会欠佳。

水溶性与生物吸收性Q10是没有任何关联的，因为生物吸收性Q10是油溶性的，并不能转化为水溶性分子。

是否将生物吸收性Q10的分子尺寸缩小，既能将之变得更“水溶性”?

将生物吸收性Q10的分子尺寸缩小是可以使它变得更“水溶性”，但它必须缩小为CoQ9, 8或7，这样一来，它将不再是生物吸收性Q10了。

由于生物吸收性Q10（氧化型及还原型）是油溶性的，我们该如何提高其吸收能力?

关键在于使用一个合适的媒介油以推动生物吸收性Q10的运输及吸收。市场上，许多的品牌使用氢化油作为媒介油。通过广泛的研究，国际新生命已经研发一道特殊的生物吸收性Q10先进配方既混合了在浓缩亚麻籽中所发现的必需脂肪酸，它能提高生物吸收性Q10的生物利用度。这种在浓缩亚麻籽的必需脂肪酸为生物吸收性Q10提供了特殊的“交通运输系统”。有了这项特殊的生物吸收性Q10先进配方，它将被完全吸收，并不会从您的身体排出。这意味着其有着更好的吸收，较高的生物吸收性Q10血液浓度和更快的结果。

总结来说，数以百计的临床实验证明氧化型（新生命所使用的生物吸收性Q10的形式）是有效的，也是心脏专科医生的首选营养辅助品。然而，无论食用的是何种形式，当需要时，氧化型和还原型会在迅速间来回转换。

*天然产品内幕，生物吸收性Q10的事实或证实，威廉·朱迪博士，威利斯·史多斯菲尔医学博士，丹尼尔·朱迪医学博士和珍妮特·朱迪