

# BONITO FISH PEPTIDES maintaining a healthy blood pressure

By Marcus Webb

One of the big problems when it comes to managing common health problems in cases of fibromyalgia (FM) and chronic fatigue syndrome (CFS) is the issue of adverse drug reactions. Many routinely prescribed medications cause unpredictable side effects in FM/CFS sufferers that can baffle and frustrate doctors and patients alike. When it comes to maintaining a healthy blood pressure FM/CFS sufferers often have low pressures but a significant proportion of the FM/CFS population can experience high blood pressure that can't be easily managed by drug therapy because of adverse side effects. In cases like this, when drug therapy is not an option, lifestyle factors become of paramount importance in maintaining a healthy blood pressure.

The dried Bonito fish has been traditionally used as a seasoning in Japanese cooking where it is known as Katsuo-bushi.

Among the complex mixtures of proteins naturally occurring in the fish, a sequence of 9 peptides have been identified and shown to exert a natural regulating and lowering effect on blood pressure. This intriguing ability was the centre of a number of studies that eventually revealed how the fish peptides exerted their action by inhibiting a specific enzyme, known as angiotensin converting enzyme or ACE for short. This enzyme is also the target for a number of drugs commonly prescribed for high blood pressure but also commonly beset by a host of side-effects that include the development of a dry night-time cough, dizziness and light-headedness. ACE-inhibitors also cause an accumulation of potassium that can be related to the development of kidney problems.

However, the successful inhibition of ACE has a very beneficial knock-on effect on high blood pressure because the enzyme plays a critical role in the conversion of angiotensin-I to angiotensin-II. The latter controls our blood volume and the diameter of our blood vessels. A body exposed to lower levels of angiotensin II benefits from more relaxed blood vessels and a lower blood volume, both of which contribute to a drop in blood pressure. In contrast to conventional ACE-inhibitors, the PeptACE fish peptides are free of aforementioned side effects, despite inhibiting the same enzyme. The most probable reason how PeptACE fish peptides achieve their ACE-inhibiting actions with the absence of side-

effects probably lies in their ability to work via a different pathway compared to the drug-based therapies. PeptACE fish peptides interact with ACE in quite a different way to the drug based products that directly block the action of ACE as it converts angiotensin-I to angiotensin-II. ACE reacts directly with the PeptACE fish peptides rather than with the angiotensin-I and in so doing the PeptACE is then transformed into an even more potent inhibitor of ACE.

This action, where one substance is transformed into another that is actually more potent than the first, is known as a 'pro-drug' action and in the case of PeptACE fish peptides the transformed peptides exert an effect some 800% greater than the starting peptides. Interestingly, when PeptACE fish peptides are given to people with normal blood pressure there is no associated excessive lowering effect observed, even when intakes greater than that used by those with high blood pressure are taken.

To date, three human clinical trials have been reported using Bonito fish peptides in subjects with borderline or mild high blood pressure and have shown significant decreases in blood pressure. In the most recent study, researchers used an optimized Bonito fish peptide mixture of 1.5 grams daily. The degree of blood pressure reduction in the studies was quite significant, typically reducing the systolic pressure by at least 10mmHg and the diastolic by 7mmHg in those with borderline and mild high blood pressure, and there were no side-effects noted in any of the studies. In addition to considering the Bonito fish extract, studies are supporting the use of 'super-foods' such as beetroot and pomegranate in the battle to support and maintain a healthy blood pressure. Eating the whole food is always advised but to get an extra boost of beetroot and pomegranate into your diet the fresh juices can be found in good health stores along with supplements if you really don't like the taste!

While it can be seen that blood pressure may be influenced by the use of targeted lifestyle changes, it is strongly recommended that any prescribed medication is not stopped or the dose changed without consulting your doctor, and anyone with self-diagnosed high blood pressure should work in conjunction with their doctor or health professional and not try to manage it on their own. Blood pressure has been called the silent killer because it has no real outward signs or symptoms and its management should be taken lightly.

