



Lipids for life

Tailor-made Akovita® blends for
senior nutrition

AAK



Today's seniors don't see themselves slowing down. They see retirement as a new phase of active life, and they want to take advantage of all its opportunities.

Add vitality to your offering

With lipid expertise from AAK, your products for senior nutrition gain a healthy competitive edge. Our tailor-made Akovita blends help keep memory sharp, metabolism strong and bad cholesterol at bay – while bringing smart advantages to your development and production.

Living long and well

In our younger years, most of us can easily maintain an active life. However, as we reach our fifties, physical changes occur that make this more difficult to achieve. Year by year we lose 1–2% of our muscle mass, and with it some of our strength, mobility and energy. For many, in later life, there may also be a decline in memory and cognitive ability.

The right nutrients are vital in minimizing these changes and in helping us maintain the lifestyle we're used to. In addition, they may help us avoid more serious complications, such as type 2 diabetes and cardiovascular disease.

With Akovita oil blends from AAK, such nutrients not only add value to your senior nutrition products. They can become an integral part of them.

Active development for active seniors

Akovita blends enable you to harness the power of functional fats, whose benefits have been shown, for example, in the Mediterranean diet. Specially formulated to achieve the correct balance of essential lipids, our blends provide the anti-inflammatory and health-promoting properties seniors require.

By 2040, the senior population will likely double, creating a market of 1.5 billion people. Akovita blends add value to your products and enable you to make the most of this growing potential.

140 years of lipid experience

Our Akovita range is an extensive portfolio, built on nearly a century and a half of lipid experience. AAK is the world's leading manufacturer of specialty vegetable oils and fats, which are derived from natural sources and carefully blended for high added value.

Working in close co-development with you, we apply our knowledge, resources and lipid technology to create the right solution for any senior segment, from dynamic early retirees to older seniors looking to extend their well-being.

Achieving the perfect product

Akovita blends are lipid technology with a tailor-made approach. Together we identify your product and production needs, combining multiple oils and fats to create the right solution for you.

Our blends add value to instant powders, enriched liquids and other products with high nutrient density, allowing you to sell them at a premium price – supported by clinically proven benefits on your packaging. In particular, they contribute to cardiovascular health, cognitive function and healthy metabolism.



Satisfy customers with an appetite for life

With AAK's Akovita portfolio, you can create high-value products to help seniors stay alert, active and well. Akovita blends are tailor-made with active ingredients such as essential fatty acids, phytosterols, DHA, choline, MCT and omega-3/6. These are derived from a wide range of nutritional oils, including canola, flaxseed, olive, soybean, sunflower and high-oleic sunflower oils.

Hearts that beat strong



Heart fitness is a cornerstone of active life, and preventing cardiovascular disease is a growing priority. Elevated levels of plasma and LDL cholesterol are a major risk factor when it comes to coronary problems, and Akovita blends can help keep them under control.

Akovita blends may contain plant-derived phytosterols, which are a clinically proven means of lowering bad cholesterol via diet. Several studies since the 1950s have shown that phytosterols, either in the form of plant sterols or stanols esterified to vegetable oil fatty acids, significantly lower both total plasma and LDL cholesterol levels. An average daily consumption of 2 g/day phytosterols or 3.3 g/day sterol esters is required for a 10% lowering effect (Demonty et al., 2009). Therefore, it is optimal to incorporate phytosterols into regularly consumed nutritional products.

In 2008, the EFSA judged that available evidence justifies the following health claim: "Phytosterols have been shown to lower blood cholesterol. Blood cholesterol lowering may reduce the risk of coronary heart disease." In the United States, The FDA has also approved products containing sterols based on their GRAS recognition. Even in other countries, such as Canada and Australia, products containing plant sterols may carry a health claim.

Akovita blends can be tailored to be low in saturated fats, but high in good fats that keep cholesterol in check. One of these is alfa linolenic acid (ALA), a plant-based omega-3 fatty acid precursor of DHA and EPA. Numerous clinical studies have shown the effects of ALA on cardiovascular risk markers, with various studies showing changes in total cholesterol and triglyceride concentrations (Wendland et al., 2006). The EFSA has approved a health claim for ALA in maintaining a normal blood cholesterol level.

Akovita COR

Our Akovita COR blend contains high levels of both phytosterols and ALA, derived from pine oils that are naturally high in phytosterols and from oils like rapeseed and flaxseed, which are high in alpha-linolenic acid (omega-3). Typical applications include:

- Liquid milk
- Drink yoghurts
- Yoghurts
- Powders

Because Akovita COR is supplied as an oil blend, it is easy to use and incorporate into your final application. Low in free sterols, it has a neutral taste and good melting behavior. The blend is GMO-free.

Sharper minds that remember more



Aging is often associated with cognitive decline, especially in the form of memory loss, reduced attention and decreased cognitive function. Certain diseases, such as dementia and Alzheimer's disease, cause a profound interference in seniors' daily lives. According to the WHO, dementia is one of the primary causes of disability later in life (World Health Organization, 2012).

Factors attributed to influencing cognitive decline include apoptosis, inflammation and oxidative stress (Whalley, et al., 2004). Studies show that the brain is 60% comprised of fats, and it can benefit from a diet with active and protective lipids.

One major component of the brain is docosahexaenoic acid, or DHA (Salem et al., 2001). It plays an important role in brain function, which additional DHA in the diet can help to maintain. The EFSA has approved a health claim for DHA to this effect.

Another vital nutrient in maintaining the brain is choline. Phosphatidylcholine is an active part of signal transmission within the nervous system and is essential for the function of cellular membranes in the body. Choline is also linked to the maintenance of lipid metabolism and liver function, as supported by another EFSA-approved health claim.

DHA is mainly found in fish and single-cell oils. Akovita blends also contain DHA from natural, carefully selected egg yolk and feature a combination of DHA and choline in phosphatidyl form. Egg phospholipids differ from those in fish oil

by having the DHA molecule present the SN2 position of the triglyceride, which has been shown to greatly enhance adequate uptake of this important fatty acid. In the human body, most of the DHA is bound the phospholipids.

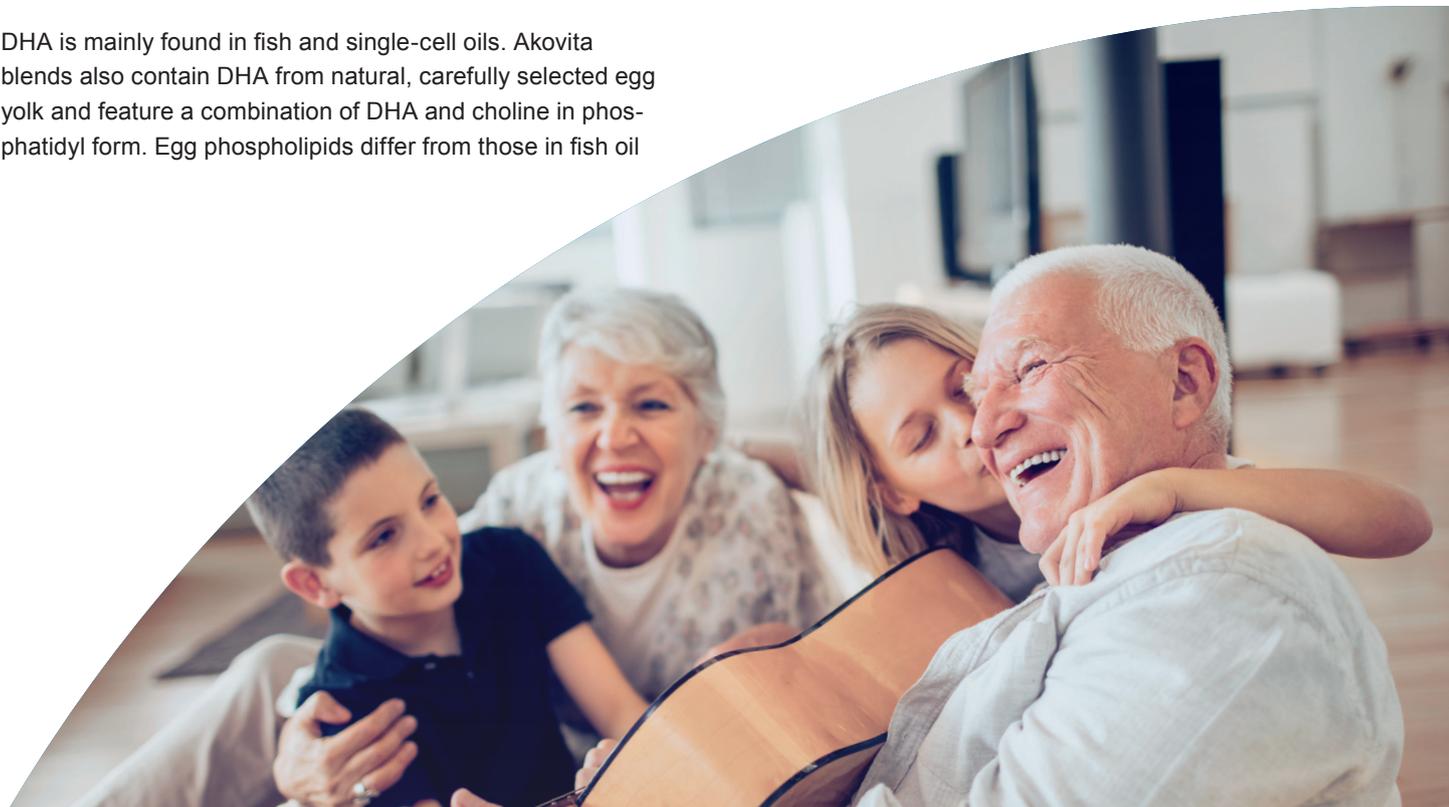
A relationship has been established between DHA and reduced development of Alzheimer's disease. In a study involving 1188 elderly Americans (± 75 years old), serum phosphatidylcholine DHA was analyzed at baseline and 10 years later, with results suggesting that individuals with lower DHA levels were more likely to develop Alzheimer's disease (Kidd, 2007)..

Akovita ELIP

Our Akovita ELIP blend contains highly bioavailable DHA bound to phosphatidylcholine, with the possibility for enrichment with single-cell DHA or fish oil. Typical applications include::

- Liquid milk
- Powders
- Gels (squeeze packs)

Akovita ELIP is unique in its composition of DHA bound to phosphatidylcholine. Thanks to this, it is both oxidation stable and a natural emulsifier. Supplied as an oil blend or a powder, it is also easy to use and incorporate into your final application.





Energy for active life



Metabolism slows with age, which makes recovery after exercise or illness increasingly challenging. Readily available energy products make a difference, especially when they do not contribute to spikes in blood sugar.

Akovita blends aim to reduce pro-inflammatory factors, support faster recovery and contribute to greater endurance. Medium-chain triglycerides (MCT) have a unique ability to provide rapidly metabolized energy directly through the gut. MCT fatty acids are readily digestible and support a low glycemic index, which keeps blood sugar at the desirable level.

Moreover, we structurally combine the MCT fatty acids with natural sources of omega-3 and omega-6, in order to reach a fatty acid balance that is optimal for health. New scientific research suggests that this combination of MCT with long-chain fatty acids supports metabolism better than merely blending different fatty acids (Wu GH et al., 2017). Based on this, we process our blends for a sound nutritional balance and optimal uptake.

The EFSA has approved nutritional claims for high levels of omega-3.

Akovita DIG

Our Akovita DIG blend contains readily digested energy in the form of MCT, structurally combined with long-chain triglycerides rich in omega-3. Typical applications include:

- Liquid milk
- Powders
- Bars
- Gels (squeeze packs)

Akovita DIG has a unique structural composition that supports body metabolism and has a well-balanced omega-3/6 ratio. With its low glycemic index, it provides long-term accessible energy leading to ideal blood sugar levels.

Your partner in doing a healthy business

You can benefit as much from working with AAK as your products can from our Akovita blends. Besides finding the right tailored blend for your offering, we bring greater economy and total peace of mind to your supply chain.

Empowering products together

AAK is an active partner, dedicated to co-development within oils, fats and specialty lipids. We help you achieve high-quality, well differentiated products that stand out from their competitors – and we bring you a greater return on your investment.

From product idea to product launch, our knowledge and our Akovita blends can help you maximize opportunities and overcome your market challenges. Working across the value chain, we provide not just a sounding board, but a complete range of resources to support your product development.

A close partner with global reach

As a global organization with production facilities and customization plants worldwide, AAK is always close by. Our Akovita blends are delivered fresh and ready to use, in amounts that match your rate of consumption. You avoid storage times that lead to oxidation and decreased shelf life, while also lowering costs and simplifying your planning.

At the same time, our global presence means we understand diverse customer needs, as well as processes and regulations worldwide. We collaborate closely with research institutes and government authorities, which means the knowledge we provide goes well beyond lipids themselves.

Naturally sustainable

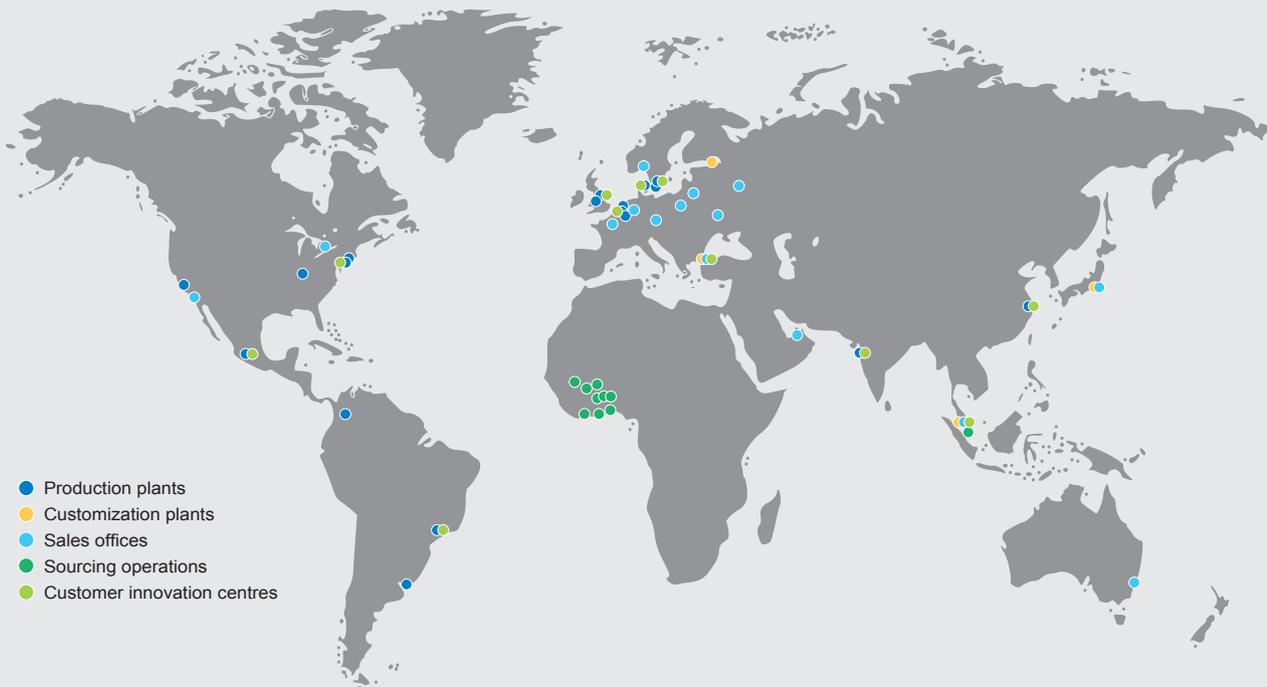
Akovita blends, like all AAK products, are derived from natural oils with assured quality and informed care for the environment. Our raw materials only come from audited and approved suppliers, and all AAK production units are certified to international standards. Through safe and accurate processing, we then ensure neutral taste, oxidation stability and the elimination of contaminants.

These factors are important to us, but also to you. As you market your senior nutrition products, they add further value for an increasingly conscientious market.

AAK ACADEMY™

For more than 140 years, we have worked closely with customers around the world and across industries to share knowledge and create innovative solutions. This led us to create the AAK ACADEMY™, which takes a holistic approach to securing idea creation, development and production success. Customized courses can be hosted at your facilities, or you can attend seminars at AAK with topics including AAK solutions, applications and insights on market dynamics.





We are AAK

AAK is a leading provider of value-adding vegetable oils & fats.

Our expertise in lipid technology within foods and special nutrition applications, our wide range of raw materials and our broad process capabilities enable us to develop innovative and value-adding solutions across many industries – Chocolate & Confectionery, Bakery, Dairy, Special Nutrition, Foodservice, Personal Care, and more.

AAK's proven expertise is based on more than 140 years of experience within oils & fats.

Our unique co-development approach brings our customers' skills and know-how together with our own capabilities and mindset for lasting results.

Listed on the NASDAQ OMX Stockholm and with our headquarters in Malmö, Sweden, AAK has 20 different production facilities, sales offices in more than 25 countries and nearly 3,000 employees.

We are AAK – The Co-Development Company

