

PACKAGE INSERT

SCHEDULING STATUS
To be assigned

PROPRIETARY NAME AND DOSAGE FORM
FLEXI-CAL Tablets and Softgel Capsules

COMPOSITION
FLEXI-CAL is comprised of 3 Components:

Component 1:

Each Yellow Joint Complex Tablet contains:	
Biotin (as Biotin)	50 µg
Chondroitin (derived from Chondroitin Sulphate)	200 mg
Folic Acid (as Folic Acid)	400 µg
L-Glutamine (as L-Glutamine)	20 mg
L-Leucine (as L-Leucine)	20 mg
L-Orotidine (as L-Orotidine)	20 mg
MSM (as Methyl Sulphonyl Methane)	500 mg
Vitamin A (derived from Vitamin A Acetate)	100 IU
Vitamin B1 (derived from Thiamine Hydrochloride)	5 mg
Vitamin B2 (as Riboflavin)	5 mg
Vitamin B3 (as Nicotinamide)	3 mg
Vitamin B5 (derived from Calcium-D-Pantothenate)	5 mg
Vitamin B6 (derived from Pyridoxine Hydrochloride)	5 mg
Vitamin B12 (derived from Cyanocobalamin)	5 µg
Vitamin C (as Ascorbic Acid)	200 mg
Vitamin E (as dL-a-Tocopherol)	10 IU
Excipients: Flexicoat® light yellow, magnesium stearate (vegetable), maize starch, microcrystalline cellulose, povidone, shellac, silicon dioxide	

Component 2:

Each White Calcium & Collagen Tablet contains:	
Calcium (derived from Calcium Carbonate)	500 mg
Collagen (as Collagen Hydrolysed Type I)	150 mg
Copper (derived from Copper Sulphate)	1 mg
Magnesium (derived from Magnesium Oxide)	150 mg
Manganese (derived from Manganese Sulphate)	3 mg
Potassium (derived from Potassium Phosphate Dibasic)	20 mg
Selenium (derived from Selenium Amino Acid Chelate)	30 µg
Silicon (derived from Silica Amino Acid Chelate)	1 mg
Vitamin D3 (as Cholecalciferol)	1 000 IU
Vitamin K2 (as Mena Q7)	45 µg
Zinc (derived from Zinc Oxide)	15 mg
Excipients: Flexicoat® white, magnesium stearate (vegetable), maize starch, povidone, shellac, silicon dioxide	

Component 3:

Each Omega-3 Softgel Capsule contains:	
Omega-3 Fish Oil	1 000 mg
Providing, DHA (Docosahexaenoic acid)	180 mg
EPA (Eicosapentaenoic acid)	120 mg
Excipients: gelatine (bovine), mixed natural tocopherols, refined fish oil, sunflower oil	

PHARMACOLOGICAL CLASSIFICATION
D: 32.2 (Other): Health Supplement

PHARMACOLOGICAL ACTION
Pharmacodynamics:

Biotin: Biotin functions as an integral part of the enzymes that transport carboxyl units and fix carbon dioxide. Biotin enzymes are important in carbohydrate and lipid metabolism, and are involved in gluconeogenesis, fatty acid synthesis, propionate metabolism and the catabolism of amino acids.

Calcium: Calcium plays a structural role in bones and teeth and is essential for cellular structure, blood clotting, muscle contraction, nerve transmission, enzyme activation and hormone function.

Chondroitin: Chondroitin absorbs water, adding to the thickness and elasticity of cartilage and ability to absorb and distribute compressive forces. It also controls the formation of new cartilage matrix, by stimulating chondrocyte metabolism and synthesis of collagen and proteoglycan. Chondroitin also inhibits degradative enzymes (elastase and hyaluronidase), which break down cartilage matrix and synovial fluid, contributing to cartilage destruction and loss of joint function.

Collagen (hydrolysed Type I): Hydrolysed collagen is a source of essential and non-essential amino acids which are involved in protein and collagen synthesis.

Copper: Copper functions as an essential component of several enzymes (e.g. superoxide dismutase) and other proteins. It plays a role in bone formation and mineralisation, and in the integrity of the connective tissue of the cardiovascular system. Copper has pro-oxidant effects in vitro but antioxidant effects in vivo; there is accumulating evidence that adequate copper is required to maintain antioxidant effects within the body.

Folic acid: Folates are involved in a number of single carbon transfer reactions, especially in the synthesis of purines and pyrimidines (and hence the synthesis of deoxyribonucleic acid (DNA), glycine and methionine. They are also involved in some amino acid conversions and the formation and utilisation of formate. Deficiency leads to impaired cell division (effects most noticeable in rapidly regenerating tissues).

L-Glutamine: Like other amino acids, glutamine is biochemically important as a constituent of proteins. Glutamine is also crucial in nitrogen metabolism. Ammonia (formed by nitrogen fixation) is assimilated into organic compounds by converting glutamic acid to glutamine. The enzyme which accomplishes this is called glutamine synthetase. Glutamine can then be used as a nitrogen donor in the biosynthesis of many compounds, including other amino acids, purines, and pyrimidines.

Magnesium: Magnesium is an essential cofactor for enzymes requiring adenosine triphosphate (ATP) (these are involved in glycolysis, fatty acid oxidation and amino acid metabolism). It is also required for the synthesis of ribonucleic acid (RNA) and replication of deoxyribonucleic acid (DNA); neuromuscular transmission; and calcium metabolism.

Manganese: Manganese activates several enzymes, including hydroxylases, kinases, decarboxylases and transferases. It is also a constituent of several metallo-enzymes, such as arginase, pyruvate carboxylase, and also superoxide dismutase, which protects cells from free radical attack. It may have a role in the regulation of glucose homeostasis and in calcium mobilisation.

MSM: Methyl Sulphonyl Methane is a naturally occurring organosulphur molecule and a putative methyl donor.

Omega-3: Fish oil appears to act by the modulation of pro-inflammatory and pro-thrombotic eicosanoid (prostaglandin, thromboxane and leukotriene) production and the reduction of interleukin-1 and other cytokines.

L-Orotidine: A non-essential and non-protein amino acid, orotidine is critical for the production of the body's proteins, enzymes and muscle tissue. Orotidine plays a central role in the urea cycle and is important for the disposal of excess nitrogen (ammonia). Orotidine is the starting point for the synthesis of many polyamines such as putrescine and spermine.

Potassium: Potassium is the principal intracellular cation, and is fundamental to the regulation of acid-base and water balance. It contributes to transmission of nerve impulses, control of skeletal muscle contractility and maintenance of blood pressure.

Selenium: Selenium functions as an integral part of the enzyme glutathione peroxidase and other seleno-proteins. Glutathione peroxidase prevents the generation of oxygen free radicals that cause the destruction of polyunsaturated fatty acids in cell membranes.

Silicon: Silicon is involved in the formation of bones and connective tissues.

Vitamin A: Vitamin A (in the form of retinal) is essential for normal function of the retina, particularly for visual adaption to darkness. Other forms (retinol, retinoic acid) are necessary to maintain the structural and functional integrity of epithelial tissue and immune system, cellular differentiation and proliferation and bone growth. Vitamin A may act as a cofactor in biochemical reactions.

Vitamin B1: Thiamine functions as a coenzyme in the oxidative decarboxylation of alpha ketoacids (involved in energy production) and in the transketolase reaction of the pentose phosphate pathway (involved in carbohydrate metabolism). Thiamine is also important in nerve transmission (independently of coenzyme function).

Vitamin B2: Riboflavin functions as a component of two flavin coenzymes – flavin mononucleotide (FMN) and flavin adenine dinucleotide (FAD). It participates in oxidation-reduction reactions in numerous metabolic pathways and in energy production. Examples include the oxidation of glucose, certain amino acids and fatty acids; reactions with several intermediaries of the Krebs cycle; conversion of pyridoxine to its active coenzyme; and conversion of tryptophan to niacin. Riboflavin has a role as an antioxidant. It may be involved in maintaining the integrity of erythrocytes.

Vitamin B3: As a vitamin, niacin functions as a component of two coenzymes, nicotinamide adenine dinucleotide (NAD) and nicotinamide adenine dinucleotide diphosphate (NADP). These coenzymes participate in many metabolic processes including glycolysis, tissue respiration, lipid, amino acid and purine metabolism.

Vitamin B5: Pantothenic acid functions mainly as a component of coenzyme A and acyl carrier protein. Coenzyme A has a central role as a cofactor for enzymes involved in the metabolism of lipids, carbohydrates and proteins; it is also required for the synthesis of cholesterol, steroid hormones, acetylcholine and porphyrins. As a component of acyl carrier protein, pantothenic acid is involved in various transfer reactions and in the assembly of acetate units into longer-chain fatty acids.

Vitamin B6: Vitamin B6 is converted in erythrocytes to pyridoxal phosphate and, to a lesser extent, pyridoxamine phosphate. It acts as a cofactor for enzymes that are involved in more than 100 reactions affecting protein, lipid and carbohydrate metabolism. Pyridoxal phosphate is also involved in the synthesis of several neurotransmitters; the metabolism of several vitamins (e.g. the conversion of tryptophan to niacin); and haemoglobin and sphingosine formation.

Vitamin B12: Vitamin B12 is involved in the recycling of folate coenzymes and the degradation of valine. It is also required for nerve myelination, cell replication, haematopoiesis and nucleoprotein synthesis.

Vitamin C: The functions of vitamin C are based mainly on its properties as a reducing agent. It is required for the formation of collagen and other organic constituents of the intercellular matrix in bone, teeth and capillaries; and the optimal activity of several enzymes. Vitamin C also acts as an antioxidant (reacting directly with aqueous free radicals), which is important in the protection of cellular function and to enhance the intestinal absorption of non-haem iron.

Vitamin D: Vitamin D is essential for promoting the absorption and utilisation of calcium and phosphorus and normal calcification of the skeleton. Along with parathyroid hormone (PTH) and calcitonin, it regulates serum calcium concentration by altering serum calcium and phosphate blood levels as needed, and mobilising calcium from bone. It maintains neuromuscular function and various other cellular processes, including the immune system and insulin production.

Vitamin E: Vitamin E is an antioxidant, protecting polyunsaturated fatty acids in membranes and other critical cellular structures from free radicals and products of oxidation. It works in conjunction with dietary selenium (a cofactor for glutathione peroxidase), and also with vitamin C and other enzymes, including superoxide dismutase and catalase.

Vitamin K2: Vitamin K is responsible for the carboxylation of the bone protein, osteocalcin, to its active form. Osteocalcin regulates the function of calcium in bone turnover and mineralisation.

Zinc: Zinc is an essential component of over 200 enzymes. It plays an important role in the metabolism of proteins, carbohydrates, lipids and nucleic acids. It is a cofactor in a range of biochemical processes, including the synthesis of DNA, RNA and protein.

INDICATIONS
Helps build, strengthen and maintain healthy bones, joints and muscles. May help to reduce joint pain and improve flexibility.

CONTRAINDICATIONS

Hypersensitivity to any of the ingredients, including excipients.

Not for use in children and adolescents below the age of 18 years.

FLEXI-CAL should not be used by persons suffering from:

- conditions associated with hypercalcaemia and hypercalcuria, and in renal impairment (chronic);
- renal osteodystrophy with hyperphosphataemia (risk of metastatic calcification);
- Wilson's disease (the disorder may be exacerbated);
- hepatic and biliary disease.

WARNINGS AND SPECIAL PRECAUTIONS

Take 2 hours before or after taking other medications.

Consult your healthcare professional if:

- you are taking blood thinners;
- your symptoms worsen;
- you are following a low protein diet.

Use for a minimum of 1 month to see beneficial results.

INTERACTIONS

Bisphosphonates: calcium may reduce absorption of etidronate.

4-Quinolones: calcium and magnesium may reduce absorption of 4-quinolones.

Tamoxifen: calcium supplements may increase the risk of hypercalcaemia (a rare side-effect of tamoxifen therapy).

Tetracyclines: calcium and magnesium may reduce absorption of tetracyclines.

Iron: calcium carbonate or calcium phosphate may reduce absorption of iron.

Zinc: calcium may reduce absorption of zinc.

Calcitonin: effect of calcitonin may be antagonised by vitamin D.

Digoxin: caution because hypercalcaemia caused by vitamin D may potentiate effects of digoxin, resulting in cardiac arrhythmias.

Thiazide diuretics: vitamin D may increase risk of hypercalcaemia.

Vitamin D analogues (alfacalcidol, calcitriol, dihydrotachysterol): increased risk of toxicity with vitamin D supplements.

PREGNANCY AND LACTATION

Safety during pregnancy and lactation has not been established.

The use of FLEXI-CAL during pregnancy and lactation is not recommended.

DOSAGE AND DIRECTIONS FOR USE

For oral use.

Morning: Take one Yellow Joint Complex Tablet with Breakfast.

Evening: Take one White Calcium & Collagen Tablet and one Omega-3 Softgel Capsule with Dinner.

Take 2 hours before or after taking other medications.

SIDE EFFECTS

May cause mild gastrointestinal disturbances e.g. nausea, diarrhoea, constipation, indigestion, bloating and flatulence.

Zinc supplementation may cause a copper deficiency.

KNOWN SYMPTOMS OF OVERDOSEAGE AND PARTICULARS OF ITS TREATMENT

Vitamin D could (in exceptional circumstances) cause toxicity; the margin of safety is very narrow. There is a wide variation tolerance to vitamin D.

Excessive intake leads to hypercalcaemia and its associated effects. These include apathy, anorexia, constipation, diarrhoea, dry mouth, fatigue, headache, nausea and vomiting, thirst and weakness. Later symptoms are often associated with calcification of soft tissues and include bone pain, cardiac arrhythmias, hypertension, renal damage (increased urinary frequency, decreased urinary concentrating ability; nocturia, proteinuria), psychosis (rare) and weight loss. If an overdose is suspected, the medicine should be stopped immediately.

IDENTIFICATION

Component 1: Yellow Oval Film-coated Tablet.

Component 2: White Oval Film-coated Tablet.

Component 3: Clear Yellow Softgel Capsule filled with a clear yellow oil.

PRESENTATION

A cardboard carton containing blister strips of 30 Yellow Joint Complex Tablets, 30 White Calcium & Collagen Tablets and 30 Omega-3 Softgel Capsules.

STORAGE INSTRUCTIONS

Store at or below 25 °C.

Protect from light and moisture.

Keep the blister strips in the outer carton.

KEEP OUT OF REACH OF CHILDREN

REGISTRATION NUMBER

To be assigned

NAME AND BUSINESS ADDRESS OF THE HOLDER OF THE CERTIFICATE OF REGISTRATION

AnaStellar Brands (Pty) Ltd
Boskruin Business Park,

VOUBILJET

SKEDULERINGSTATUS
Moet toegewys word

EIENDOMSNAAM EN DOSERINGSVORM
FLEXI-CAL Tablette en Sagtejel Kapsules

SAMESTELLING
FLEXI-CAL bestaan uit 3 Komponente:

Komponent 1:

Elke Geel-gekleurde Gewrig-kompleks Tablet bevat:
Biotien (as Biotien) 50 µg
Chondroitin (verkry van Chondroitiensulfaat) 200 mg
Folensiuur (as Follensiuur) 400 µg
L-Glutamien (as L-Glutamien) 20 mg
L-Leusien (as L-Leusien) 20 mg
L-Ornitien (as L-Ornitien) 20 mg
MSM (as Metielsulfonielfmetaan) 500 mg
Vitamien A (verkry van Vitamien A Asetaat) 100 IE
Vitamien B1 (as Tiamienhidrochloried) 5 mg
Vitamien B2 (as Riboflavien) 5 mg
Vitamien B3 (verkry van Nikotienamied) 3 mg
Vitamien B5 (verkry van Kalsium-D-Pantotenaat) 5 mg
Vitamien B6 (verkry van Pridoksienshidrochloried) 5 mg
Vitamien B12 (verkry van Sianokobalamien) 5 µg
Vitamien C (as Askorbiensiuur) 200 mg
Vitamien E (as dl-a-Tokoferol) 10 IE
Bindmiddels: Flexicoat®liggee, magnesiumstearaat (plant), mielietysel, mikrokristallynse sellulose, skellak, silikondioksied

Komponent 2:

Elke Wit Kalsium & Kollageen Tablet bevat:
Kalsium (verkry van Kalsiumkarbonaat) 500 mg
Kollageen (as Kollageen Gehidroliseer Tipe 1) 150 mg
Koper (verkry van Kopersulfaat) 1 mg
Magnesium (verkry van Magnesiumoksied) 150 mg
Mangaan (verkry van Mangaansulfaat) 3 mg
Kalium (verkry van Kaliumfosfaat Dibasies) 20 mg
Selen (verkry van Selenaminosuurchelaat) 30 µg
Silikon (verkry van Silika-aminosuurchelaat) 1mg
Vitamien D3 (as Cholekalsifero) 1000 IE
Vitamien K2 (as Mena Q7) 45 µg
Sink (verkry van Sinkoksied) 15 mg
Bindmiddels: Flexicoat®wit, magnesiumstearaat(plant), mielietysel, mikrokristallynse sellulose, povidoon, skellak, silikondioksied

Komponent 3:

Elke Omega-3 Sagtejel Kapsule bevat:
Omega-3 Visolie 1 000 mg
Voorsien, DHA (Dokosaheksaenoësuur) 180 mg
EPA (Eikosapentaenoësuur) 120 mg
Bindmiddels: gelatien (bees), gemengde natuuurlike tokoferols, geraffineerde visolie, sonneblomolie

FARMAKOLOGIESE KLASIFIKASIE
D: 32.2 (Ander): Gesondheidsaanvulling

FARMAKOLOGIESE WERKING
Farmakodinamika:

Biotien: Biotien funksioneer as 'n integrale deel van die ensieme wat karboksieleenheid vervoer en koolstofdioksied bind. Biotiensieme is belangrik in koolhidraat- en lipiedemetabolisme, en is betrokke by glukoneogenese, vetsuursintese, propionaatmetabolisme en die katabolisme van aminosure.

Kalsium: Kalsium speel 'n strukturele rol in bene en tandie en is noodsaklik vir sellulêre strukture, bloedstolling, spiersametrekking, senuwee-oordrag, ensiemarkting en hormoonfunksie.

Chondroitien: Chondroitien absorbeer water, wat bydra tot die dikte en elastisiteit van kraakbeen en sy vermoë om drukningskratte te absorber en te versprei. Dit beheer ook die vorming van nuwe kraakbeenmatrys deur chondrosietmetabolisme en sintese van kolagen en proteoglykanaat te stimuleer. Chondroitien inhibeer ook afbrekende ensieme (elastase en hialuronidase), wat kraakbeenmatrys en sinoviale vloeistof afbreek en tot kraakbeenvernietiging en verlies van gewigsfunksie bydra.

Kollagen (gehidroliseer Tipe 1): Gehidroliseerde kollagen is 'n bron van essensiële en nie-essensiële aminosure wat by proteinē- en kollageensintese betrokke is.

Koper: Koper funksioneer as 'n essensiële komponent van 'n aantal ensieme (bv. superoksieddismutase) en ander proteinē. Dit speel 'n rol in beenvorming en mineralisasie, en in die integriteit van die bindweefsel van die kardiovaskulêre stelsel. Koper het pro-oksidant effekte in vitro maar antioksidant-effekte in vivo; daar is toekennende bewyse dat voldoende koper nodig is om antioksidant-effekte in die liggaam in stand tehou.

Folensiuur: Folensiuur is by 'n aantal enkelkoolstofoordreakeksies betrokke, veral in die sintese van puriene en primitiediene (en gevvolglike sintese van deoksiribonukleïensuur (DNA)), glicien en metionien. Hulle is ook by sommige aminosuuroomsettings en die vorming en benutting van formaat betrokke. 'n Tekort lei tot belemmerde selverdeling (die uitwerkings is mees merkbaar by weefsel wat vinnig regenerere).

L-Glutamien: Soos ander aminosure is glutamien biochemies belangrik as 'n bestanddeel van proteinē. Glutamien is ook deurslagwend by stikstofmetabolisme. Ammoniaak (gevorm deur stikstofbinding) word in organiese verbindings geassimileer deur glutamien suur in glutamien om te sit. Die ensiem wat dit teweegbring, word glutaminsintetase genoem. Glutamien kan dan as 'n stikstofskenker gebruik word in die biosintese van talle verbindings, insluitend ander aminosure, puriene, en primitiediene.

L-Leusien: L-Leusien is 'n vertakteketting-aminosuur wat 'n essensiële aminosuur is. Die primêre funkcie van vertakteketting-aminosuur is as voorlopers vir die sintese van proteinē. Daarby kan hulle afgebreek word indien nodig om as 'n energiebron te dien.

Magnesium: Magnesium is 'n essensiële kofaktor vir ensieme wat adenosintrifosfaat (ATP) nodig het (hulle is betrokke by glikolise, vetsuuroksidase en aminosuurnetabolisme). Dit is ook nodig vir die sintese van ribonukleïensuur (RNA) en replasie van deoksiribonukleïensuur (DNA); neuromuskulêre oordrag; en kalsiummetabolisme.

Mangaan: Mangaan aktiewe 'n aantal ensieme, insluitend hidrosilases, kinases, dekarboksilases en transferases. Dit is ook 'n bestanddeel van etlike metalloënsieme, soos arginase, pîruvaatkarboksilase, en ook superoksieddismutase, wat selfe teen vryradikalalaanval beskerm. Dit mag 'n rol in die regulerung van glukosehomeostase en in kalsiummobilisasie he.

MSM: Metielsulfonielfmetaan is 'n organoswaelmolekule wat natuurlik vorkom en is 'n veronderstelde metielskenker.

Omega-3: Visolie werk blybaar deur die modulering van pro-inflammatoriese en pro-trombiese eikosanoied (prostaglandien-, tromboksaan- en leukotrieen-) produksie en die verminderung van interleukin-1 en ander sitokine.

L-Ornitien: Ornition is 'n nie-essensiële en nie-proteinē aminosuur en is van kritieke belang vir die produktie van die liggaam se proteïene, ensieme en spierweefsel. Ornition speel 'n sentrale rol in die ureumsiklus en is belangrik vir die opruiming van 'n oormaat stikstof (ammoniaak). Ornition is die beginpunt vir die sintese van talle poliamine soos putressien en spermien.

Kalium: Kalium is die hoof-intrasellulêre kation, en is fundamenteel tot die regulerung van suurbasis en waterbalans. Dit dra by tot die oordrag van senu-impulse, beheer van skeletspier-saamtrekbaarheid en instandhouding van bloeddruk.

Selen: Selen funksioneer as 'n integrale deel van die ensien glutatioonperoksidase en ander selenoproteïene. Glutatioonperoksidase voorkom die ontwikkeling van suurstof-vryradikale wat die vernietiging van poli-onversadigde vesture in selmembrane veroorsaak.

Silikon: Silikon is by die vorming van bene en bindweefels betrokke.

Vitamien A: Vitamien A (in die vorm van retinal) is noodsaklik vir normale funkcie van die retina, veral vir visuele aanpassing by donkerte. Ander vorms (retinol, retinoësuur) is nodig om die strukturele en funkcionale integriteit van epiteelweefsel en die immuunstelsel, sellulêre differensiasie en proliferasié en beengroei in stand tehou. Vitamien A mag as 'n kofaktor in biochemiese reaksies optree.

Vitamien B1: Tiamien funksioneer as 'n koënsiem in die oksidatiële dekarboksilasie van alfa-ketosure (betrokke by energieproduksie) en in die transketolaseraksie van die pentosefosaatstroke (betrokke by karbonaatmetabolisme). Tiamien is ook belangrik by senuweeoordrag (onaftanklik van koënsiemfunksie).

Vitamien B2: Riboflavien funksioneer as 'n komponent van twee flavienkoënsieme – flavienmonokleotid (FMN) en flavienadenindinukleotid (FAD). Dit neem deel aan oksidasie-reduksiereaksies in talle metaboliese roetes en in energieproduksie. Voorbeeld sluit in die oksidasie van glukose, sekere aminosure en vetersure; reaksies met etlike tussengangers van die Krebs-siklus; omsetting van piridoksin tot sy aktiewe koënsiem; en omsetting van triptofaan in niasier. Riboflavien het 'n rol as 'n antioksidant. Dit mag betrokke wees by die instandhouding van die integriteit van eritrosit.

Vitamien B3: As 'n vitamien funksioneer niasier as 'n komponent van twee koënsieme, nikotienamidenadenindinukleotid (NAD) en nikotienamidenadenindinukleotidodifosfaat (NADP). Hierdie koënsieme neem aan talle metabole prosesse deel, insluitend glikolise, weefselrespirasie, lipied-, aminosuur- en purinemetabolisme.

Vitamien B5: Pantoteensuur funksioneer hoofsaaklik as 'n komponent van koënsiem A en asieldraerprotein. Koënsiem A het 'n sentrale rol as 'n kofaktor vir ensieme wat by die metabolisme van lipiede, koolhidraat en proteine betrokke is; dit is ook nodig vir die sintese van cholesterol, steroidhormone, asetielcholien en porfiriene. As 'n komponent van asieldraerprotein is pantoteensuur by verskeie oordreakeksies en by die samestelling van asetaateenhede in langer-ketting vesture betrokke.

Vitamien B6: Vitamien B6 word in eritrosit omgesit. Dit tree as 'n kofaktor op vir ensieme wat by meer as 100 reaksies betrokke is wat proteinē, lipiede- en koolhidraatmetabolisme beïnvloed. Paraksoalkafosfaat is ook teenwoordig in die sintese van etlike senuoerdragstowwe; die metabolisme van 'n aantal vitamien (bv. die omsetting van triptofaan in niasier); en hemoglobien- en sungsienvorming.

Vitamien B12: Vitamien B12 is aktief in die herbenutting van folatoekoënsieme en die afbreking van valien. Dit is ook nodig vir senuweemielining, selreplikasie, hematopoiese en nukleoproteïnsintese.

Vitamien C: Die funksies van vitamien C is hoofsaaklik op sy eienskappe as 'n reduseermiddel gebaseerd. Dit is nodig vir die vorming van kolagen en ander organiese bestanddele van die intersellulêre matrys in been, tandie en haarsaat; en die optimale werking van etlike ensieme. Vitamien C werk ook as 'n antioksidant (reageer direk met watterige vry radikale), wat belangrik is in die beskerming van sellulêre funkcie en om die intestinale opname van nieheemster te bevorder.

Vitamien D: Vitamien D is noodsaklik om die opname en benutting van kalsium en fosfor te reguleer. Dit speel 'n belangrike rol in die metabolisme van proteinē, koolhidraat en lipiedevlaklette (PTH) en kalsitonien reguleer die serumkalsiumkonstansie deur serumkalsium- en fosfat-bloedvlaklette te wissig soos nodig, en kalsium uitteen om te mobiliseer. Dit hou neuromuskulêre funkcie en verskeie ander sellulêre prosesse in stand, insluitend die immuunstelsel en insulienproduksie.

Vitamien E: Vitamien E is 'n antioksidant wat poli-onversadigde vesture in membraan en ander kritieke sellulêre strukture teen vry radikale en produkte van oksidasië beskerm. Dit werk tesame met dieteenselein ('n kofaktor vir glutatioonperoksidase) en ook met vitamien C en ander ensieme, insluitend superoksieddismutase en katalase.

Vitamien K2: Vitamien K2 is verantwoordelik vir die karboksilasie van die beenproteinē, osteokalsien, tot sy aktiewe vorm. Osteokalsien reguleer die funkcie van kalsium in beenomset in mineralisering.

Sink: Sink is 'n essensiële komponent van meer as 200 ensieme. Dit speel 'n belangrike rol in die metabolisme van proteinē, koolhidraat, lipiede en nukleienure. Dit is 'n kofaktor in 'n reeks biochemiese prosesse, insluitend die sintese van DNA, RNA en proteinē.

INDIKASIES
Help om gesonde bene, gewrigte en spiere te bou, te versterk en in stand tehou. Mag help om gewrigtyn te verminder en soepelheid en buigsaamheid te verbeter.

KONTRAKLINDERSKESIES
Hipersensitiviteit vir enige van die bestanddele, insluitend bindmiddels. Nie vir gebruik in kinders en jeugdiges onder 18 jaar nie.

FLEXI-CAL moet nie gebruik word deur persone wat ly aan:
• enige aandoening geassosieer met hiperkalemie en hiperkalsiurie, asook by nierontorekendheid (chronies);
• nier-osteodistrofie met hiperfosfatemie (risiko van metastatiese kalsifisering);
• Wilson se siekte (die aandoening mag vererger word);
• lewer- en gal-sklerose.

WAARSKUWINGS EN SPESIALE VOORSORG
Neem 2 uur voor of na ander medikasies.
Raadpleeg jou gesondheidskundige indien:
• jy bloedverdunners neem;
• simptome erger word;
• jy 'n lae-proteïne diete volg.
Gebruik vir ten minste 1 maand om voordele resultate te sien.

INTERAKSIES
Bisfosfonate: kalsium mag die opname van etidronate verminder.
4-Kinolone: kalsium en magnesium mag die opname van 4-kinolone verminder.
Tamoksifeen: kalsiumaanvullings mag die risiko van hiperkalemie ('n seldsame newe-effek van tamoksifeenbehandeling) verhoog.
Tetrasikliene: kalsium en magnesium mag die opname van tetrasikliene verminder.
Yster: kalsiumkarbonaat of kalsiumfosfaat mag die opname van yster verminder.
Kalsitonien: die effek van kalsitonien mag deur vitamien D teengewerp word.
Digoksiën: wees versigtig want hiperkalemie wat deur vitamien D veroorsaak word, mag die uitwerkings van digoksiën versterk, wat hartritmestoornisse tot gevolg kan hé.
Trasieddiureтика: vitamien D mag die risiko van hiperkalemie verhoog.
Vitamien D analoë (alfakalsidol, kalsitriol, dihidrotagisterol): verhoogde risiko van toksisiteit met vitamien D aanvullings.

SWANGERSKAP EN LAKTASIE
Velligheid tydens swangerskap en laktasie is nie vasgestel nie.
Die gebruik van FLEXI-CAL tydens swangerskap en laktasie word nie aanbevele nie.

DOSERING EN GEBRUIKSAAWENYSINGS
Vir mondlike gebruik.
Soggens: Neem een Geel-gekleurde Gewrig-kompleks Tablet met ontbyt.
Saans: Neem een Wit Kalsium & Kollageen Tablet en een Omega-3 Sagtejel Kapsule met Aandete. Neem 2 uur voor of na ander medikasies.

NEWE-EFFEKTE
Mag ligte gastrointestinale versteurings, bv. naarheid, diarree, hardlywigheid, slegte spysvertering, opgeblaasde maag en winderigheid veroorsaak.
Sinkaanvulling mag 'n gebrek aan koper veroorsaak.

BEKENDE SIMPTOME VAN OORDOSERING EN BESONDERHEDE OOR DIE BEHANDELING DAARVAN
Vitamien D kan (in buitengewone omstandighede) toksisiteit veroorsaak; die veiligheidsgrens is baie gering. Daar bestaan 'n wye verskil in verdraagsaamheid vir vitamien D.
Oormatige innname lei tot hiperkalemie en die geplaaslike uitwerkings. Dit sluit lusteloosheid, anoreksie, hardlywigheid, diarree, droë mond, uitputting, hoofpyn, naarheid en brakking, dors en swakheid in.

Later simptome is dikwels met kalsifisering van sagteweefels geassosieer en sluit in beenpyn, hartritmestoornisse, hoë bloeddruk, nierskade (verhoogde urineringstrekfrequentie, verminderde urinenkonsentr