

GENDECODE

The future in skin improvement

Sepai

Pioneers of customized skincare

- 2009 Sepai brought a new revolution to the world: customized skincare
- Our basic values: SEPAI
- S=Safety
- E= Efficacy
- P= Practical
- A=Advanced Skin Awakening; The causes of aging and the effect of aging treated from the root
- I= Individual Customization

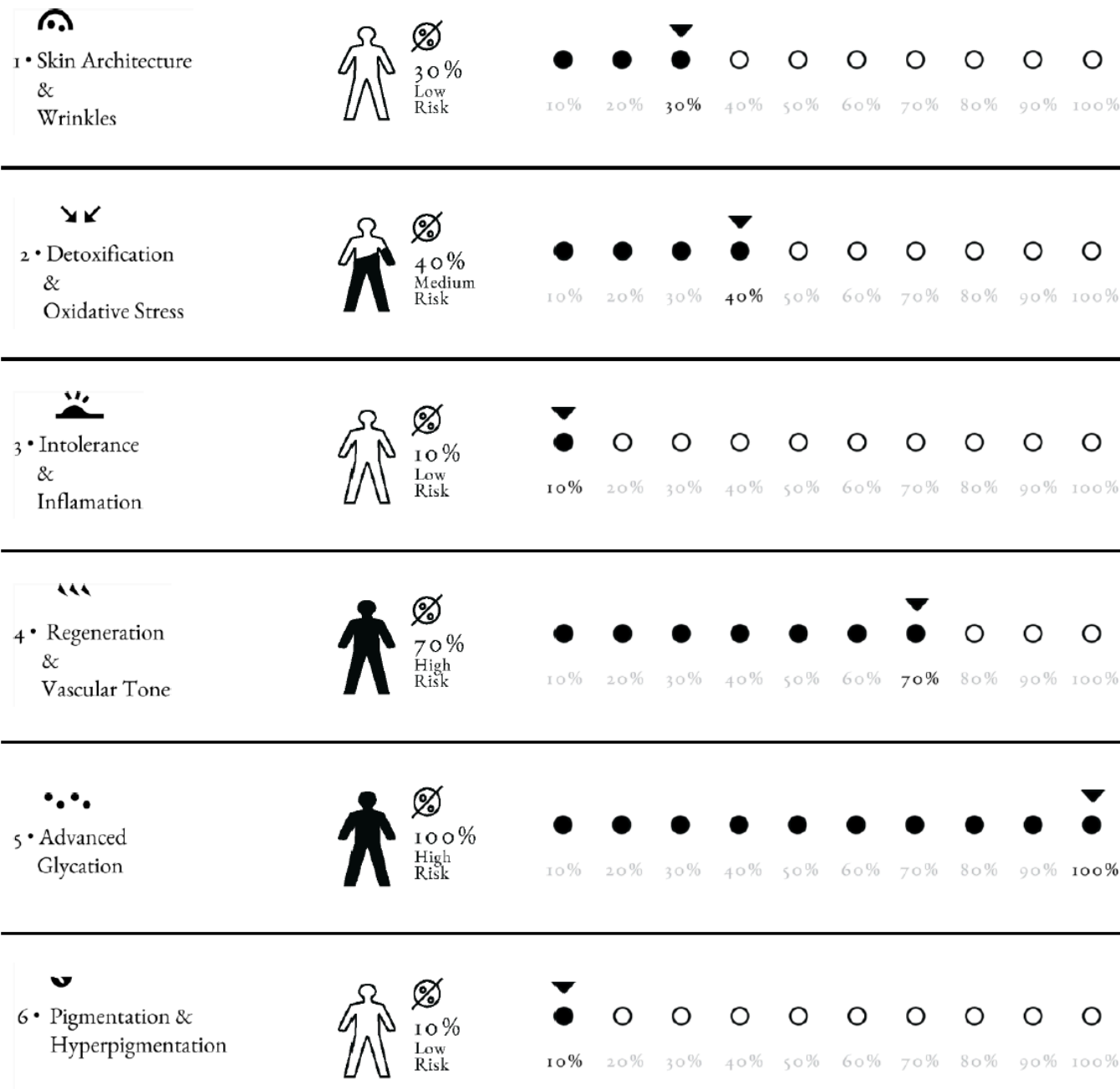
NOW Sepai brings customization to a next level

- Causes and effect on the next level

Genes and SNP's

- What are genes and what is SNP's
- It is like a spelling error
- How are your genes expressed?
- Why is environment an influence on the expression of genes?

*the
categories:*



Reading your Gendecode Report

*the gen :the
misspelling*

● ● ● optimum

Both copies of the gene are well written:
the gen has a 100% probabilities to
perform in optimum conditions.

● ● ○ below normal

One of the copies of the gene is well
written : the gen has a 50% probabilities to
perform in optimum conditions. Is the
majority of the cases.

○ ○ ○ deficient

Both the copies of the gene are misspelled :
the gen has a a high amount of
probabilities to missperform.

Important facts about genome and SNPs

- Thousands of scientifics are currently investigating the connection between SNPs and possible expressions.
- Studies might be contradictory at some point until more research is made on a specific SNP.
- This information is updated daily, and subject to new interpretations.
- This information is public, is a Cultural Heritage of Humanity and everybody has access to it.

Reading your Gendecode Report

Skin Architecture & Wrinkles:

COL1A1

● ● ● optimum
collagen production

ELN

● ● ○ below normal
elastin production

MMP3

● ● ○ below normal
extracellular matrix degradation

MMP1

● ● ○ below normal
tissue remodeling



This risk percentage implies that you may have a moderate risk of breakdown of collagen fibres, with a normal skin structure function.

Skin Architecture & Wrinkles:

COL1A1: Affects the quantity and quality of collagen fibers type I, fibril-forming collagen found in most connective tissues and is abundant in bone, cornea, dermis and tendon.

ELN: Affects the quantity and quality of fibers of Elastin, one of the two components of elastic fibers.

MMP1: Involved in the breakdown of the collagen in extracellular matrix in normal physiological processes, such as embryonic development, reproduction, and tissue remodeling. MMP is the trigger of the production of toxic residues that promote inflammation, spots and slows down cellular detoxification.

MMP3: encodes an enzyme which degrades fibronectin, laminin, collagens III, IV, IX, and X, and cartilage proteoglycans. The enzyme is thought to be involved in wound repair, progression of atherosclerosis, and tumor initiation.

Skin Architecture & Wrinkles

advices:

COL1A1 and/or ELN

○○○ deficient

BUT.....

If MMP1 and/or MMP3

○○○ deficient

Collagen induction therapies:
Topical treatments + RF, Light-
therapy, LED, Laser

- More degradation than production is a probability as light therapies also trigger MMPs.
- Higher risk of dermatitis and rosacea. If the VASCULAR category is affected, then higher chance. Thus avoid laser. Prefer IPL.
- If the DETOX category is affected is a double threat for patient. No light therapies.
- CHOOSE: topical treatments to downregulate the expression of MMPs.

Reading your Gendecode Report

Detoxification & Oxidative stress:

SOD₂

○○○ deficient

clear mitochondrial free radicals

CAT

●●● optimum

toxic substances degradation

GPX

●●● optimum

detoxificate hydrogen peroxide

NQO₁

●●○ below normal

coenzyme Q₁₀ reduction

EPHX₁

●●○ below normal

activation of detoxification

GSTM₁

○○○ deficient

detoxification of oxidative stress

GSTT₁

●●● optimum

detoxification of toxins



This risk percentage implies that you may have a susceptibility or a moderate risk of oxidative stress damage and the internal detoxification process of your cells.

Detoxification & Oxidative stress:

MsSOD: Encodes for the prod. of SOD, enzyme that acts as an anti-inflammatory neutralizing oxygen free radicals to protect the mitochondria. Free radicals can generate wrinkles.

CAT: encodes for the production of its enzyme that protects from oxidation of the hydrogen peroxide triggered by UV radiation and other sources, known to be responsible of the appearance of White hair, and irregular pigmentation. Catalase enzyme also breaks down alcohol (drinks), fenol and formaldehyde (sweeteners). A study proposes the crucial role of CAT and its allelic variants in oxidative stress-mediated pathogenesis of vitiligo.

NQO1: Regulates the reduction of the quinones to coenzyme Q10. Also degrades vitamin K3 and E. Has been associated to risk of hematotoxicity after exposure to benzene, susceptibility to various forms of cancer, AD, low stability of p53 (tumor suppressor proteins), that indicates resistance to chemotherapy.

Detoxification & Oxidative stress:

EHPX1: Encodes for a critical biotransformation enzyme that destroys EPOXY to be excreted from the body. Also associated with precalmpsia.

GPX: Encodes for the glutathione peroxidase that takes place in the detoxification of hydrogen peroxide, its main role is to recycle the glutathione once has already detoxified.

GSTT and GSTM: These genetic variations can change an individual's susceptibility to carcinogens and toxins as well as affect the toxicity and efficacy of certain drugs. Null mutations of this have been linked with an increase in a number of cancers, likely due to an increased susceptibility to environmental toxins and carcinogens.

Detoxification & Oxidative stress

advices:



- A weak category implies a difficulty to protect itself from radiation. Not recommended the sun exposure without SPF, do not expose to the whole sun spectrum (UVA, UVB, VISIBLE, IR, XR, etc). Not recommended exposure to pollutants, as they are all triggers of free radicals.
- Food intake plays an important role on this category .
- Problems on DETOX are an impairment for the PIGMENTATION category. In the presence of hyperpigmentation, together with this category, Lasers may cause pigmentation rebound.

Detoxification & Oxidative stress

advices:

SOD, CAT or NQO₁

○○○ deficient

- Increase topical and oral supplementation of the deficient enzyme.

GSTT and GSTM

○○○ deficient

- Detox phase II needs to be reinforced by the consumption of the BRASSICA family: the root ([rutabaga](#), [turnip](#)), stems ([kohlrabi](#)), leaves ([cabbage](#), [collard greens](#), [kale](#)), flowers ([cauliflower](#), [broccoli](#)), buds ([Brussels sprouts](#), [cabbage](#)), and seeds (many, including [mustard seed](#), and oil-producing [rapeseed](#)).
- Increase topical protection against phase II detox.

Detoxification & Oxidative stress

advices:

GPX, GSTs

○○○ deficient

HPX₁:

○○○ deficient

- Avoid radiation (RF, Laser, US) or increase oral and topical dose of de glutathione
- Avoid exposure to epoxides: painted plastic or metal surface, some hair dyes, some clothes, recently painted room.

Reading your Gendecode Report

Intolerance & Inflammation:

IL6



optimum

acute phase response mediator

TNF



optimum

regulation of immune cells



This percentage implies a reduced risk of over-inflammation, so your risk of accelerated skin ageing due to the inflammation response is low.

Intolerance & Inflammation:

IL6: This gene encodes a cytokine that functions in inflammation and the maturation of B cells. Capable of inducing fever in people with autoimmune diseases or infections. The protein is primarily produced at sites of acute and chronic inflammation, where it is secreted into the serum and induces a transcriptional inflammatory response through interleukin 6 receptor, alpha. The functioning of this gene is implicated in a wide variety of inflammation-associated disease states, including susceptibility to diabetes mellitus and systemic juvenile rheumatoid arthritis. Is a marker for emergency.

TNF: encodes a multifunctional proinflammatory cytokine involved in the regulation of a wide spectrum of biological processes including cell proliferation, differentiation, apoptosis, lipid metabolism, and coagulation. This cytokine has been implicated in a variety of diseases, including autoimmune diseases, insulin resistance, and cancer. Is the mediator of tolerance.

Intolerance & Inflammation

advices:



- Weakness of the category shows a skin with auto-immune acute responses. IL6 might indicate psoriasis or seborreic dermatitis. SNP in TNFa suggests to avoid treatments on fibroblasts regeneration.
- Problems on INTOLERANCE are an impairment for the PIGMENTATION category.
- Possible signs of skin redness can be mistaken with problems in the inflammation or oxygenation category.
- Increase the topical dose of anti-inflammatory substances not only to reduce intolerance but to reduce spots or uneven pigmentation.
- In the presence of hyperpigmentation, together with this category, Lasers may cause pigmentation rebound.

Reading your Gendecode Report

Regeneration & Vascular Tone:

ACE

● ● ● optimum

blood vasoconstriction control

AGT

○ ○ ○ deficient

constriction of arteries and veins

NOS₃

○ ○ ○ deficient

vascular muscle relaxation

BDKRB₂

○ ○ ○ deficient

blood vasodilatation control



This risk percentage implies that you may have a susceptibility or an augmented risk of a deficient oxygen supply to the skin and poor microcirculation

Regeneration & Vascular Tone:

ACE: encodes an enzyme involved in catalyzing the conversion of angiotensin I into a physiologically active peptide angiotensin II. Angiotensin II is a potent vasopressor and aldosterone-stimulating peptide that controls blood pressure and fluid-electrolyte balance. This enzyme plays a key role in the renin-angiotensin system. Cardiovascular pathophysiologies.

NOS: A family of enzymes catalyzing the production of nitric oxide (NO) from L-arginine. NO is an important cellular signaling molecule. It helps modulate vascular tone, insulin secretion, airway tone, and peristalsis, and is involved in angiogenesis and neural development. It may function as a retrograde neurotransmitter. The SNP has 2 readings:

NEGATIVE: preeclampsia, ischemic heart disease, less sperm motility, less protection to environmental aggressions.

POSITIVE: less hyperpigmentation under UV stress, lower melanogenesis.

Regeneration & Vascular Tone:

AGT: involved in maintaining blood pressure and in the pathogenesis of essential hypertension and preeclampsia. Mutations in this gene are associated with susceptibility to essential hypertension, and can cause renal tubular dysgenesis, a severe disorder of renal tubular development. Defects in this gene have also been associated with non-familial structural atrial fibrillation, and inflammatory bowel disease.

Mechanism that controls pressure drops. · Therefore Higher plasma angiotensin levels, and ultimately higher blood pressure leading to increased risk for hypertension associated disorders.

· Increased risk of pre-eclampsia during pregnancy.

BDKRB2: The B2 receptor is a G protein-coupled receptor, increases intracellular free calcium and Gi inhibits adenylate cyclase. Furthermore, the receptor stimulates the mitogen-activated protein kinase pathways expressed in healthy tissues.

Regeneration & Vascular Tone

advices:



- Water and oxygen are transported to the skin through capillaries vessels that act as a membrane that permeates electrolytes to the dermis. A minimum fraction penetrates inside the cells (intracellular water) Other link to protein fibres and glycosaminoglycans creating a water reservoir (NMF) that accounts for 20-40% of the total body water. Just an infinitesimal amount of water passes through the dermis and finds a brick and mortar cell layered structure.
- Need to boost circulation to improve skin moisture
- Risk for varicous veins and problems in return circulation.

Reading your Gendecode Report

Advanced Glycation:

ACE

○○○ deficient
glycemic control

TCF7L2

○○○ deficient
affects insulin sensitivity

PPARG

○○○ deficient
glucose metabolism regulation



This risk percentage implies that you may have a maximum risk of advanced glycation of collagen and elastin, with more rigid and less elastic fibers and an imbalanced hydrophobic film.

Advanced Glycation :

PPARG: regulates storage of fatty acids and glucose metabolism. Stimulates adipogenesis. SNP indicates: weight rebound after strict dieting, Genome-wide association analysis identifies C allele as a risk for type 2 diabetes and triglyceride levels.

TCF7L2: strongly predicted future type-2 diabetes. The risk T allele was associated with impaired insulin secretion, incretin effects, and enhanced rate of hepatic glucose production.

Advanced Glycation :



- AVOID: Foods of animal origin, cook with high temperatures: fried or grilled, as it increases the AGES (glycating substances) in food. Sugars in its natural form or either cooked /baked, sugars that become of “dark color”, included glucose, fructose, honey.
- Choose: Carbs of low digestion, vegetables, leguminose, raw food, low temperature cooking, coconut fat to sweeten, stevia.
- Increase the amount of topical anti-glycating products.

Reading your Gendecode Report

Pigmentation:

MC1R

● ● ● optimum

control of melanin production

SLC24A5

● ● ● optimum

skin pigmentation



This risk percentage implies a lower genetic risk for hyperpigmentation phenomena.

Pigmentation:

MC1R: major stimulator of eumelanin pigmentation.
SNP associated with more responsive to some anesthetics and increased risk for melanoma in red hair.
Higher inflammation processes Laser or light therapies.
Prefer the use of chemical peelings.

SLC24A5: if you have asian ancestors, Sequence variation in this gene has been associated with differences in skin pigmentation.

Reading your Gendecode Report

*Pigmentation
now related to
the other
CATEGORIES*

:

MC1R



optimum

control of melanin production

SLC24A5



optimum

skin pigmentation



This risk percentage implies a lower genetic risk for hyperpigmentation phenomena.

MMPS below normal:triggers spots

DETOX below normal triggers age spots by accumulation of toxicity in the body

NOS deficient = induces a lower melanogenesis

CONCLUSION: greater risk of spots and pigmentary rebound after light therapy treatments. Choose anti-inflammatory options.

Nutrition

What can we do?

- Every Gen Decode Rapport comes with nutrition advise
- This will be extended with Supplement Advise in the next training

Skin architecture & Wrinkles	Dosis	Actus en/ACTS ON	num	Detoxification & Oxidative stress	Dosis	Actus en/ACTS ON	num	Insurence & Inflammation	Dosis	Actus en/ACTS ON	num	Regeneration & Vascular tone	Dosis	
Acido alpha-lipoico	100-300 mg/d		1	Acido alpha-lipoico	100-300 mg/d	Induce fase II del proceso de detox	13	Quercetina	1,2-1,5 g/d	Control inflamacion y prevencion alergica	1	Acido alpha-lipoico	100-300 mg/d	36
Beta-Caroteno (Vitamina A)	1-3 mg/d	antesis colageno	33	Preparado de papaya fermentada	3-6 g/d	Reduce estres oxidativo en la piel	10	Vitamina D	20-50 µg/d		2	Beta-Caroteno (Vitamina A)	1-3 mg/d	35
Ruscus aculeatus	7-11 mg/d de ruscogenina	Anticelulitico	5	Ginkgo biloba "Ginkgo"	120-240 mg/d típico	Reduce estres oxidativo en la piel	12	Allium sativum Ajo envejecido	1-1,2 g/d	Control inflamacion y prevencion alergica	3	Ruscus aculeatus	7-11mg/d de ruscogenina	
Coenzima Q10	60-300 mg/d		34	Acido L-glutámico	0,2-2g/d	Induce fase II del proceso de detox	3	Ruscus aculeatus	7-11 mg/d de ruscogenina		5	Ginkgo biloba "Ginkgo"	120-240 mg/d	
Ginkgo biloba "Ginkgo"	120-240 mg/d		7	L-glicina	2-3 g/d	Induce fase II del proceso de detox	4	Coenzima Q10	60-300 mg/d		28	Quarana	0,8-3 g/d	
Aesculus hippocastanum "Castagno de India" L-glicina	300-600 mg/d	Anticelulitico	8	L-metionina	0,5-2 g/d		5	Ginkgo biloba	120-240 mg/d		6	Aesculus hippocastanum "Castagno de India"	300-600 mg/d	
L-metionina	0,5-2 g/d		35	Silybum marianum "cardo mariano"	200-400 mg/d		23	Extracto de te verde/blanco (55% EGCG & 90% polyphenol)	400 mg/d		41	Lycopeno	25 mg/d	
Vitamina C	0,1-1 g/d	antesis colageno	37	Selenio	55-200 µg/d	Induce fase II del proceso de detox	11	Vitamina E	15-300 mg/d		10	Vitamina D	20-50 µg/d	
Vitamina D	20-50 µg/d	antesis colageno	9	Vitamina C	0,1-1 g/d	Reduce estres oxidativo en la piel	26	emodina	oral		11	Vitamina E	15-300 mg/d	
Vitamina E	15-300 mg/d	antesis colageno	38	Spirulina	max 50g/d		40	Curcuma	oral	Control inflamacion y prevencion alergica	12	Allium sativum Ajo envejecido	1-1,2 g/d	
Allium sativum	1-1,2 g/d		39	Zinc	10-25 mg/d		50	Estrema japonicum usabi	oral	Control inflamacion y prevencion alergica	40	Curcuma	1,2-2,5 g/d	
Ajo envejecido														
Spirulina	max 50g/d		25	Extracto de te verde/blanco (55% EGCG & 90% polyphenol)	400 mg/d		51	Zingiber officinalis jengibre	oral	Control inflamacion y prevencion alergica	13	Spirulina	max 50g/d	
Zinc	10-25 mg/d		15	Quercetina	1,2-1,5 g/d		52	Cruciferas (Brucoli)	oral	Control inflamacion y prevencion alergica	53	Cumarina	0,1 mg/kgpeso/d	
Quercetina	1,2-1,5 g/d		12	Allium sativum Ajo envejecido	1-1,2 g/d		53	Cumarina	0,1 mg/kgpeso/d	Control inflamacion y prevencion alergica	15	Quercetina	1,2-1,5 g/d	
Aloe vera	tópico	antesis colageno	40	Curcuma + Piperina	1,2-2,5 g/d		54	Reveratrol	oral	Control inflamacion y prevencion alergica				
Aloe														
Centella asiatica	tópico	antesis colageno Anticelulitico	41	Lycopeno	25 mg/d		55	Juglans regia nuez	oral	Control inflamacion y prevencion alergica				
Gotu kola														
Camellia japonica aceite de camelia	tópico	antesis colageno	11	Vitamina E	15-300 mg/d	Reduce estres oxidativo en la piel	56	Corylus avellana Avellana	oral	Control inflamacion y prevencion alergica				
Oenothera sp.	tópico	antesis colageno	42	acido ferulico	oral	Reduce estres oxidativo en la piel	2	Beta-Caroteno (Vitamina A)	1-3 mg/d	Control inflamacion y prevencion alergica				
Onagra														
phosphatidylserina	tópico	Evita nitura colageno por UV	43	Citrus x paradisi Pomelo	oral (zumo)	Reduce estres oxidativo en la piel	44	Antocyanidinas	oral	Control inflamacion y prevencion alergica				
estradiol	tópico	Evita nitura colageno por UV	4	Coenzima Q10	oral: 60-300 mg/d típico	Reduce estres oxidativo en la piel	7	L-glicina	2-5 g/d	Control inflamacion y prevencion alergica				
extracto de Chlorella	tópico	Evita nitura colageno por UV	44	Antocyanidinas	oral	Reduce estres oxidativo en la piel	16	Aloe vera Aloe	tópico	Control inflamacion y prevencion alergica				
acido eicosapentaenoico (tipo de Omega-3)	tópico	Evita nitura colageno por UV	45	Euterpe oleracea Bayas de acai	oral	Reduce estres oxidativo en la piel	57	Mentha chamomilla manzanilla dulce	tópico	Control inflamacion y prevencion alergica				
Erythronine	oral	Evita nitura colageno por UV	46	Hieremteca insoluble	tópico	Reduce estres oxidativo en la piel	58	Amica montana	tópico	Control inflamacion y prevencion alergica				

*And after 1 year
using my
gendecode
program?*

readaptation

- We need to reassess:
 - Take pictures again
 - Review formulas one by one, is the time to order for improvements- changes.
 - Make a complete report of all the additional treatments that the customer have been taking during the year to check for positive or negative interactions
 - Analyze the process to improve the results
 - Restart the process and the follow up of each customer to

*And after 1 year
using my
gendecode
program?*

- New questionnaire
- New pictures
- Try New fragrances
- Try New textures

tools

*And after 1 year
using my
gendecode
program?*

- New adapted protocol
- New product formulations: different active ingredients, different textures and fragrances

delivery

Remember our commitment

- With Gendecode is impossible to have unsatisfied customers because:
- WE MODIFY THE PRODUCTS AS MANY TIMES AS POSSIBLE UNTIL WE FIND THE RIGHT FIT FOR THE CUSTOMER.

*BOOK NOW
YOUR NEXT
TRAINING
FOR SEPAI
AND
GENDECODE*

SEPTEMBER

27

2018

