



**FREQUENTLY
ASKED
QUESTIONS**

**on the CDED/
ModuLife**

**FOR HEALTHCARE
PROFESSIONALS ONLY**

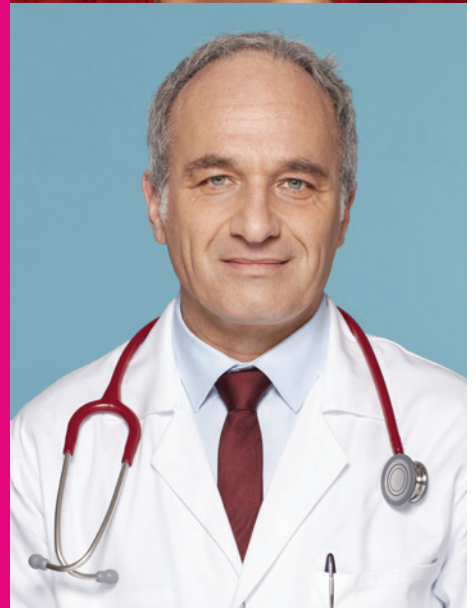


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VEGETABLES

1

Can the potatoes be reheated?

Yes, potatoes can be reheated for consumption after they have been cooked and cooled completely.

2

How do the potatoes have to be cooked?

Potatoes serve as a source of resistant starch, which is beneficial to the gut. For more resistant starch to form, potatoes should be cooled completely after they are cooked.

1. Wash and peel the potatoes
2. Cook them
3. Let them cool to room temperature, then refrigerate until completely chilled. During this time, the beneficial starch is developing
4. Enjoy chilled dishes such as potato salad or reheat prior to serving

For some specific recipes e.g. Chips, French fries, potatoes can be consumed right after cooking.

3

Why are the vegetables kale, leeks, asparagus, celery and artichokes restricted?

The goal of phase 1 and 2 of the diet is to limit high level of fiber intake, hence kale, leeks, asparagus, celery and artichokes are disallowed in phase 1 and 2. These vegetables can be reintroduced in Phase 3 (maintenance), except for large amount of kale, leek and raw celery.

VEGETABLES

4

Are vegetables with moderate fibers content (carrots, pumpkins, zucchinis) allowed along with the potatoes in the phase 1 or 2?

The recommendation for the allowed vegetables was designed for a moderate level of fiber intake. Carrots are permitted in phase 1, zucchinis in phase 2 and pumpkins are only introduced in the maintenance phase.

5

Are frozen fruits and vegetables allowed?

Store-bought frozen fruits and vegetables are disallowed as they might contain preservatives and other food additives. For convenience, it is permitted to freeze fresh fruits and vegetables at home.

6

Are jarred foods better than canned foods and are they allowed?

Neither is recommended as they most likely both contain preservatives.

VEGETABLES

7

In phase 3 it says: “All vegetables are allowed if no stricture is present except: leek, celery, large amount of kale.” What is the specific recommendation if the patient does have a stricture?

It depends on how severe the stricture is:

- If a stricture is present but asymptomatic, patients would stay on the list of vegetables allowed until week 9 (no cabbage, corn, sprouts, etc.)
- If symptomatic, patients have to peel potatoes, cucumbers, apples and soluble fibers should be preferred such as spinach, lettuce, zucchini, pumpkin but in small quantities and no nuts

The patient should drink after eating vegetables and fruits.

Some patients will be intolerant to even small amounts of fiber and Partial Enteral Nutrition (PEN) would be increased in that case.

8

**Is the amount of vegetables and fruits unlimited in Phase 3?
For example, can you have more than 2 medium tomatoes or more than 1 carrot?**

Yes, patients can go back to consuming all vegetables if no stricture is present except leek, celery and a large amount of kale.

FRUITS

9

Are all fruits allowed?

In phase 1

In addition to the mandatory foods (apples and bananas) you can have 5 strawberries, 1 slice of cantaloupe or honeydew, and 1 avocado per day.

In phase 2

In addition to the mandatory foods (apples and bananas) you can have 5 strawberries or 10 blueberries, 1 slice of cantaloupe or honeydew melon, 1 avocado, and 1 peach OR pear OR kiwi per day. From week 10, other fruits that contain more fibers may be consumed in small quantities such as ½ cup mango, pineapple cubes, or orange slices.

In phase 3

You can gradually go back to eating all fruits except, persimmon, pomegranate, cactus fruit and passion fruit.

10

Why passion fruit, pomegranate and persimmon are disallowed for all phases?

These fruits are characterized by a high amount of large seeds. It is recommended to exclude them to avoid possible problems to the patient such as obstruction, abdominal pain, or if there is inflammation or strictures, as these may exacerbate the condition.

11

Some dieticians advise to avoid fruits like strawberry because of its small seeds. However, in the diet strawberries are allowed. What is the best recommendation?

5 Strawberries per day are allowed in phase 1 and 2 but are not a mandatory food. If a dietitian or patient would prefer to exclude them from the diet, it is possible.

12

Are there any other fruits that are recommended if a patient does not like apple or banana?

Consumption of fruits and vegetables is encouraged to ensure appropriate intake of fibers and resistant starch, and in the case of apple, pectin. Apple and banana were selected because they are widely available in various seasons. Patients who do not like apples and banana can try blending them in smoothies with other allowed fruits and vegetables, and other unique preparations such as banana muffins and apple chips to improve palatability. If it is not possible, they should eat more potatoes and other allowed fruits, such as melon and strawberries. Such mild adaptation of the regimen should however be guided by an expert dietitian since we should be careful and adjust the amount to each patient based on his condition.

FRUITS

13

In some Eastern European countries, strawberry, avocado and melon are difficult to acquire. Is it possible to use other fruits?

There are no substitutions for the allowed fruits in phase 1 and 2 of the diet. Strawberries, melons and avocado are not mandatory, so they may be omitted from the diet if they are too difficult to acquire.

14

During phase 2, why are apricot and pineapple not allowed?

In phase 2 the diet is designed to limit high level of fiber and sugar intake. In addition to the mandatory foods (apples and bananas) you can have 5 strawberries or 10 blueberries, 1 slice of cantaloupe or honeydew melon, 1 avocado per day, 1 peach OR pear OR kiwi per day.

From week 10 (phase 3) all fruits may be consumed in small quantities such as 1/2 cup mango, pineapple cubes, apricot or orange slices except: persimmon, pomegranate, cactus fruit and passion fruit.

15

Are home-squizzed juice from fruits other than orange allowed?

Yes, as per the fruits allowed in each phase. Provided we ensure elimination of seeds from these drinks and we avoid any additives.

16

If you only use the juice of pomegranate, is it ok, even if pomegranate is not allowed?

Yes, only the juice is acceptable.

MEAT & FISH

17

Can I freeze fresh chicken?

Yes, you can freeze chicken that you bought fresh.

18

Can I use chicken broth?

No, you cannot use other parts of the chicken except white breast so traditional chicken broth is not allowed.

19

Can we use turkey breast instead of chicken breast?

No, turkey breast is richer in taurine which is one of the components we try to reduce in phase 1 and 2. That is why chicken is recommended.

20

Why frozen fish (not processed) are not allowed?

Most, if not all, fresh fish may be treated with some sort of preservative agent before being frozen, and it is very difficult for the patient to identify them in the packaging. However, patients can freeze fresh fish at home for later use.

21

Can I use wild red fish in phase 1 or 2?

Only fresh lean white fish is permitted in phase 1 and 2. Other types of fish would be permitted during the phase 3 free days.

MEAT & FISH

22

In a non-agricultural country, “fresh unprocessed meat, fish or poultry” on the markets is often frozen. It is impossible to transport fish or meat from the sea or from slaughterhouses without first freezing it. In this case, can frozen meat, fish or poultry be used in all three phases of CDED?

The reason why frozen products is limited is due to processing. Usually, it contains preservatives which should be avoided. If this is the only option, it could be used, but if possible, it should be avoided.

23

**“Red meat is not recommended, and its consumption should be avoided if possible. However, in phase 2 and 3, patients who want to eat meat, should be advised to limit to 200 g per week of fresh unprocessed lean beef steak consisting of lean meat such as sirloin steak or ground beef from ground sirloin.”
Why are pork and wild beef not included in this restriction?**

Pork is a high fat meat as well as high in taurine and should be avoided as high fat meat and high level of taurine is excluded in the CDED.

Wild beef has not been scientifically tested and a conservative approach is taken for ingredients that have not been tested.

24

If I cannot have beef for religious reasons, can I have a small amount of lean lamb instead of beef in phase 2?

Yes, you can have a small portion. You can eat up to 200 g in phase 2. The aim is to avoid high animal fat.

CORNS, BEANS & SEEDS

25

Can I eat beans?

From phase 2, you can have a ½ cup serving of dry beans per day. Beans cannot be canned or frozen.

26

When can I have nut butter? What kind of types?

Nuts can be reintroduced starting phase 2. You can have 8 almonds or walnuts per day during phase 2 and 3. You can prepare home-made nut butters from these allowed nuts, but be mindful of the portion sizes, since it is only for 8 nuts.

27

Can I eat bread and pita bread?

Phase 1 is gluten-free. You can use rice flour for home-made baking preparations such as pancakes or pita wrap. Bread, baker's yeast and wheat-based products are disallowed.

In phase 2 whole grain bread is allowed. This bread should be home-made or bought from bakery (avoid commercial pre-packed products that may contain preservatives). In phase 3, same as in phase 2, whole grain bread is allowed. In addition, regular bread can be consumed during free meals.

28

Can I have rice products like rice cakes, rice krispies or rice pasta?

Yes, you can have white rice based products without any preservatives. You may use white rice flour and other allowed ingredients to make baked goods fresh at home.

CORNS, BEANS & SEEDS

29

Why corn, buckwheat or millet are not allowed? Can I use rye and barley-based foods?

Beyond being gluten-free, rice was selected for the diet because it is widely available. The science around the diet, including clinical substantiation, was thus developed with rice.

Other grains such as buckwheat and millet were not scientifically tested. They are not staple foods across the world and the diet has been designed to be universal.

Corn, gluten-containing grains and other foods are reintroduced slowly throughout the phases as the gut heals.

Rye and barley should be avoided in phase 1 and limited in phase 2. One slice of bread per day is allowed in phase 2 and can be based on rye or barley as well.

30

Are other seeds like pumpkinseed, sunflower seed or linseed allowed in any phase?

Not in phase 1. They can be reintroduced slowly and in moderate amounts throughout the phases 2 and 3.

31

Are pine nuts allowed in phase 3?

Yes, as well as almonds, walnuts, pumpkin seeds and sunflower seeds.

32

Why is yeast not allowed?

Yeast can create a disturbance in the microbiota's metabolism that could be unwanted in Crohn's Disease patients.

CORNS, BEANS & SEEDS

33

Is corn allowed in phase 3?

Yes, corn is allowed during phase 3.

34

Can we have 1 cup of cooked pasta instead of 1 or 2 slices of bread twice per week in phase 3?

Yes, it is possible to have 1 cup of cooked pasta instead of 2 slices of bread, twice a week.

35

Why are wheat products excluded but we can still have a slice of whole wheat bread per day during phase 2?

As the main mechanism of the diet is to avoid all potential pro-inflammatory ingredients, gluten and wheat are excluded in the active phase. However, we do not know if gluten is responsible and the cause or if in small amounts it is safe and acceptable. Therefore, the idea of the second phase is to reintroduce a small amount of these ingredients such as bread and red meat, because patients are not in active disease and in most cases one portion is acceptable. The idea is to create a gradual process of reintroducing these ingredients.

DAIRY

36

Can we use alternative products to dairy products such as products from sour milk, low-fat and low-lactose products like cottage cheese?

The key dietary approach with CDED is the exclusion of foods, ingredients, and components that trigger inflammation. The restriction of dairy is not linked to lactose or fat content, and these alternative products usually have more additives and emulsifiers so cannot be used during the critical induction phase.

37

Why CDED does not allow dairy but Modulen contains dairy and is consumed in large amounts in phase 1 and 2?

The reasons why exposure to dairy is limited are due to:

- The limited amount of animal fat in the diet
- The choice of low-fat products will expose patients to additives, including emulsifiers, in order to mimic the texture of fat, which are excluded in the diet

It is important to remember that it is not a matter of ingredient but the amount we are exposed to. It is scientifically proven that Exclusive Enteral Nutrition works and reduces inflammation when using Modulen formula.

38

Is coconut milk allowed for cooking in phase 1 and 2?

No.

39

In the maintenance phase, can we use canned coconut milk in home-made curries on free days? Is it acceptable or should it be counted as a restaurant meal?

Canned products should be avoided as they most likely contain preservatives. If the curry is home-made, it can be eaten on free days.

40

Can Modulen be used for cooking?

Yes, we can cook with Modulen and there are various recipes proposed on the ModuLife platform. The use of Modulen for meal preparation as convenience and food diversity CDED-compliant has to be distinguished vs. the use of Modulen as therapeutic product (EEN or PEN). When used for food preparation, energetic value will be maintained but key nutritional components such as vitamins will be altered. Therefore, it is important to check with a dietician that your nutritional goals are well matched.

CONDIMENTS, SEASONING & OIL

41

Are onions limited in the diet?

Onions are limited and should be used only as a seasoning. They can be used in small quantity to add flavor to food (e.g. for cooking or salad).

42

Because of omega-3, which oil is preferable?

Olive oil and canola oil are recommended for all phases. They should be cold pressed.

43

Why is sunflower oil disallowed?

Two oils are recommended, these are olive and canola oil, they should be cold pressed. The fatty acid composition of these oils is good with a low amount of saturated fatty acids. These oils are also available everywhere and can be used cold, for cooking and baking. It is better from a patient perspective to keep these two good quality oils.

With respect to sunflower oil:

- High in Omega-6 fatty acids
 - As an example, according to AFSSA (Agence française de sécurité sanitaire des aliments), poor Omega-6/Omega-3 ratio of approx. 1000 while recommendation to support health is 5
 - Regular sunflower oil is rich in linoleic acid (polyunsaturated fat), low in Omega-3, moderate content of oleic acid (Omega-9)
 - There is a refined sunflower oil enriched in oleic acid with a level reaching 82%, which makes it very close to olive oil. But this is not easily available in the market or accessible to patients, therefore it is not recommended.
-

44

Is natural vanilla allowed in the diet?

Whole vanilla beans are allowed to use for flavoring. Vanilla extract is not allowed.

CONDIMENTS, SEASONING & OIL

45

During the maintenance phase of CDED, are all the different types of chilli (normal chilli, green chilli, Thai chilli/bird eye chilli and, jalepeno) allowed, whether fresh or in dried powdered form?

It can be used during the maintenance phase as long as it is occasional. It would be better to use chilli in fresh form all the time and chilli in dried form over weekend and free meals.

46

Mustard seeds, star anise, cardamom, cloves, fenugreek, fennel seeds and coriander seeds, whether whole or powdered, are not mentioned in the CDED. Can they be used in the maintenance phase of the diet, as they are essential ingredients in the cuisines of Indian and Southeast Asia, even for home-cooked foods?

Yes, as long as the seeds are used and grinded without any unknown processing. It is even allowed in the first phase as long as it is fresh.

47

Can curry powder, which is a mixture of chilli powder with many variations of powdered spices, be used in the maintenance phase?

Yes, as part of the free meals as it is a processed mix. If the curry powder is home-made from known ingredients, it will be acceptable during all phases.

DIET IN PRACTICE & PEN

48

Can I eat more than the recommended amounts of the mandatory foods?

We recommend using the indicated amounts of apples, bananas and potatoes. Extra chicken and eggs can be consumed if needed to meet protein needs.

49

Can I eat less than the recommended amounts of the mandatory foods?

We recommend using the amount of apples, bananas and potatoes provided. Chicken and eggs can be decreased for smaller children who have lower protein needs.

50

The diet would be very difficult for vegetarians to follow, what sort of advice do you give to patients who wish to follow a vegetarian diet?

With vegetarian patients it is important to ensure they are consuming enough protein. We can estimate protein needs of at least 1 g of protein/kg of body weight depending on patient's condition, and even 1.5 g/kg BW in several cases. The options are to add more Modulen, or to concentrate the Modulen and to add egg whites to the diet (each egg white will provide additional 6 grams of proteins). Each portion of Modulen provides 9 g of protein (Modulen concentration at 1.25 = 11.25 grams of protein and Modulen concentration at 1.5 = 13.5 grams of protein). In the second phase patients can include quinoa and legumes to their diet as additional sources of protein. In phase 3, yogurt can also be added to the diet.

51

How is the phase 3 diet designed to maintain remission?

This phase was thought as a continuum of phase 1 & 2. It is based on practice and experience with exit strategy for patients that will allow them to follow the principles of the CDED but with more freedom to introduce foods to allow them to follow the diet. The suggested program for phase 3 was not proven yet in published studies. However, there are promising indicators in Levine study 2019 of deep remission suggesting a support for remission (reduction of inflammation, improved healing & rebalanced microbiota) as well as some clinical case reports of patients in remission for several months. The effect of CDED+PEN on maintenance of remission is now being investigated in several clinical trials.

52

What is your opinion about soya lecithin (or egg lecithin) as emulsifier? Is it “artificial” or “natural”? What happens if it is consumed?

As a general principle, if a food or an ingredient has a potential to be ‘harmful’ it has been excluded, therefore emulsifiers are not allowed in the CDED diet. That said, not all emulsifiers are the same, such as soya or egg lecithin. These can be seen as ‘natural emulsifiers’ and thus, in very small quantities may not affect the positive health outcome of the diet. However, polysorbate 80, carboxymethylcellulose and glycerol monolaurate emulsifiers should definitively be avoided.

53

Can I mix Modulen with other products?

Yes, use Modulen in preparations and recipes from the mandatory and allowed food list. You can mix Modulen into smoothies with the mandatory and allowed fruits and vegetables. You can also add Modulen to allowed cold or hot cereals and or use it to prepare cookies or pancakes.

54

Modulen contains ingredients that are not part of the CDED principles, including soy lecithin, is it compliant?

Modulen® IBD has extensive clinical evidence on symptom relief and mucosal healing in Crohn's Disease.

It is effective in inducing remission as an exclusive enteral nutrition and is a nutritionally complete formula with good taste, free of artificial flavours, colours and sweeteners. Hence the presence of animal fat, from cow's milk (12,7% of lipids), maltodextrin/glucose syrup (28DE) and 1% soy lecithin (a plant derived emulsifier) is likely not affecting the success of CDED + PEN dietary intervention.

55

Do patients get enough calcium when following CDED + PEN/ModuLife program?

The diet is designed to ensure that patients meet their nutritional needs. Modulen is formulated at 1 kcal/ml and provides 89 mg Ca/100 ml. Modulen will be used at 50% of daily energy requirement (DER) in phase 1 and thus the patient will receive quite significant Ca. In phase 2, still substantial amount of Ca will be provided by Modulen at 25% of DER and patient will be able to consume spinach, zucchini, broccoli, lettuce and cauliflower (all allowed in phase 2) that are sources of Ca (99 mg, 16 mg, 47 mg, 35 mg & 22 mg per 100 g respectively). During maintenance phase, in addition to Modulen 25% and vegetables mentioned above, milk and cheese are allowed.

56

Can ModuLife program be undertaken with a patient who has Crohn's with small bowel stricture?

The diet can be used in patients presenting stricture, indeed the first stage diet was designed with this in mind with low to moderate fibers and specific selection of fruit & vegetables. However the diet should not be initiated without the supervision of a physician.

57

Why is Modulen preferably used with CDED?

Modulen had a long standing history of use and clinical research demonstrating its efficacy in inducing remission in CD patients at the time CDED was elaborated, so this is what guided the investigators to select the product to complement the dietary therapy. The efficacy of CDED+Modulen as a new first-line dietary therapy was clinically demonstrated. Which is not yet the case with other formula. Although we cannot exclude that other formula could eventually work, we cannot extrapolate the data obtained with Modulen to other formula. The efficacy of other potential formula has yet to be demonstrated.

58

Can you please explain the difference between Modulen versus Peptamen Junior?

Modulen is a polymeric casein based formula while Peptamen is a semi elemental whey based formula. Current evidence does not show that using peptide based product formula, in the management of CD, works better compared to polymeric product.

59

Vitamins and/or mineral supplements, whether in syrup, tablet capsule or powder form are not on the list of mandatory or allowed food. However, vitamins and/or mineral supplements may need to be prescribed for lacto-vegetarians or vegans. Are vitamins and/or mineral supplements allowed?

Yes, of course. Many patients need some, especially if they do not use formula or if the amount is not sufficient to meet their needs. You can use multi vitamins or specific vitamins.

60

In phase 2 patients will definitely require a calcium and vitamin D supplement. Which products are recommended since we are trying to eliminate all additives?

You can use calcium and vitamin D supplement without additives.

61

Can Salovum and SPC flakes be used in CDED?

Salovum is made of egg yolk in powder, it is difficult to provide a firm recommendation on whether it can be used in conjunction with CDED. Same for SPC flakes, if natural and without preservatives this could be compliant with CDED only from phase 2.

62

Does CDED have an effect on patients with colostomy and/or bowel resections?

Yes, CDED can be used under medical supervision after resection surgery. Clinical practice showed that it can prevent recurrences. Depending on his or her condition, the patient can start either on phase 1 or phase 2 of the diet.

63

Can we use CDED after resection surgery?

Yes, it is a perfect opportunity, the diet has been used in clinical practice as prevention and even before surgery.

