

Have you kissed your cow lately?



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CLA Conjugated Linoleic Acid

Very Potent
Natural
CANCER FIGHTER

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Conjugated Linoleic Acid = CLA

- Found naturally in ruminant products
 - Result of rumen bacterial action on linoleic acid, an Omega-6 PUFA
 - CLA is also called *rumenic acid*
- Not found in significant quantities in any non-ruminant products

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CLA is a Fat

- CLA is a modified Omega-6 polyunsaturated fatty acid (PUFA)
- CLA is a very special fat
- Linoleic acid is one of two essential polyunsaturated fatty acids for humans

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Rumen Bacteria Make CLA

- Linoleic acid(cis-9, cis-12 18:2) + rumen bacteria → CLA
- 75-90% of milk CLA is cis-9, trans-11 CLA
- CLA is **NOT** one of the *harmful trans fats*

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We Humans can make CLA !

- Humans can make CLA from vaccenic acid
- Vaccenic acid (trans-11, 18:1) + human → CLA
- Vaccenic acid is in ruminant fat as a bacteria-changed precursor to CLA

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CLA Major Sources

- Beef and Dairy Products
 - Milk fat and anything that contains milk fat
 - Beef fat and anything that contains beef fat
- Lamb, mutton, goat fats
 - Meat and milk
- Wild Game Ruminant meat fats
 - elk, deer, antelope, buffalo, mountain goats, big horn sheep, moose, etc

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CLA in small quantities

- Turkey and chicken fat
- Pork fat
- Rabbit fat

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CLA is NOT Found in :

- Tofu burgers, soy drinks, fruit juice
- Vegetable spreads masquerading as butter
- "No Fat" foods of any origin
- Vegan diets

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CLA is a FAT

- CLA is a fat, therefore it is found only in fat
- Eat no beef or milk fat, get no CLA
- Eat too little beef fat or milk fat, get too little CLA

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Average American CLA Intake

- Currently, the average American eats 20-33% of the research proven cancer preventing dose of CLA
- Our diet intake of CLA is about 70% from dairy, 25% from beef

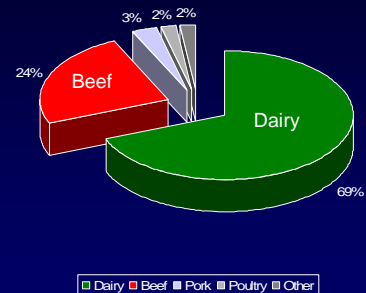
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CLA Diet Sources : U.S.

Ritzenthaler, et.al.(2001)



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Change Average American CLA Intake to Research Proven Intake Levels ?

- Choices...
 - Eat 3-5x the current level of beef and dairy fat
- OR
- Eat foods with 3-5x the normal content of CLA at the same intake

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To Increase Your CLA Intake

- Eat more fat of same CLA content ↑
- Eat same amount of fat with higher CLA content ↑
- Eat more fat of higher CLA content ↑↑

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CLA is a FAT

- CLA is not harmed by pasteurization, cheese making, packaging, cooking, refrigeration, barbecuing..
- CLA level in meat and milk is significantly affected by the diet the animal eats

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CLA and Animal Diet Interaction

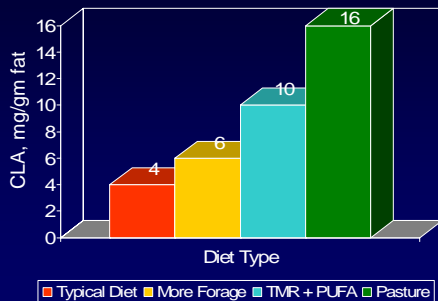
- More greens (forage) means more CLA
- Pasture means more CLA
- More grain, no pasture means less CLA

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Milk Cow Diet and Milk CLA Output - from Research



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We are Proud of the Food We Produce

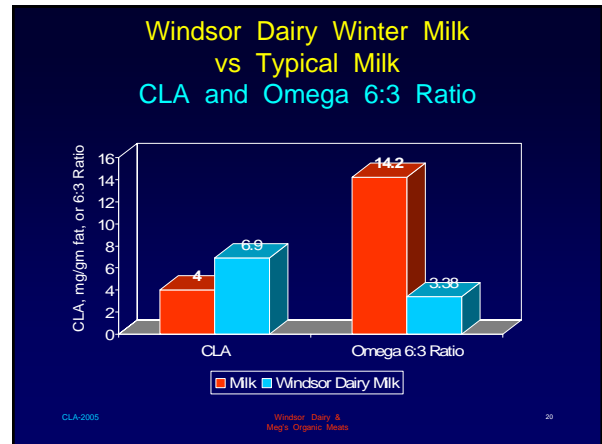


Milk, Cheese, Beef, Eggs

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CLA : Cancer Fighter

- Among the MOST POTENT of naturally occurring anticarcinogens
- "CLA is only fatty acid shown unequivocally to inhibit carcinogenesis in experimental animals" (National Research Council, 1996)
- Level of intake used in cancer models is attainable from natural foods

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CLA and Cancer Prevention

- Many human cancers have animal models, e.g. rat model for breast cancer
- This is mainly how CLA has been investigated as an anticarcinogen

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CLA and Cancer Suppression

- Cell line cancer model studies show suppressed proliferation of cancer cells
 - Breast
 - Ovarian
 - Prostate
 - Colon
 - Liver
 - Melanoma
 - Mesothelioma
 - Glioblastoma
 - Leukemia
 - Lung

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Breast Cancer Facts - 1

from the
National Breast Cancer Foundation, Inc.

- A woman is diagnosed with breast cancer every 2.5 minutes in the U.S.
- 1 of every 7 women alive in the U.S. either has or will have breast cancer

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Breast Cancer Facts - 2 from the National Breast Cancer Foundation, Inc.

- 211,000 U.S. women diagnosed yearly
- 43,300 U.S. women die of breast cancer yearly

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CLA and Mammary Cancer

- Mammary cancer is the number one female cancer killer in the world (Parkin, 2001)
- CLA is particularly effective against chemically induced mammary gland cancer
- CLA gives dose-dependent reduction in incidence and number of tumors (Ip, 1991 & 1994)

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CLA and Rat Mammary Cancer Model

- CLA added to diet only from weaning to peripuberal period gives protection against tumors even when carcinogen was administered at a later time! (Thompson & Ip, 1997)
- CLA may be especially effective against mammary tumors due to it being a fat that accumulates in the adipocytes during development of the glands

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CLA and Rat Mammary Cancer Model

- CLA in diet given to prepuberal children *may* protect against mammary cancer later in life!
- These are *only animal models*, but much of what we know about cancer comes from these models.....you can decide.

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Do you want your daughters to receive adequate CLA ?



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CLA and Human Epidemiological Studies on Mammary Cancer

- Finnish women showed a decreased cancer rate if diet had higher CLA content if post-menopausal
- Highest quintile of CLA intake had 3-5x lower risk of breast cancer
- But not reduced cancer in pre-menopausal women (Aro, 2000)

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CLA Summary

- No known bad effects
- Natural sources in well known foods
- Eaten by humans for millions of years
- Major research proven cancer inhibitor
- Also atherosclerosis inhibitor

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CLA = Rumenic Acid

A
Fat
with
POWER !

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Cows
give
us
CLA.



CLA
prevents
and
fights
cancer.

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We Thank You and We Thank our Cows !



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