

Feel the chum!

THE ONLY FITNESS SYSTEM THAT BURNS FAT AS YOU MAKE FAT!

illustrations by Audrey Anderson



prep

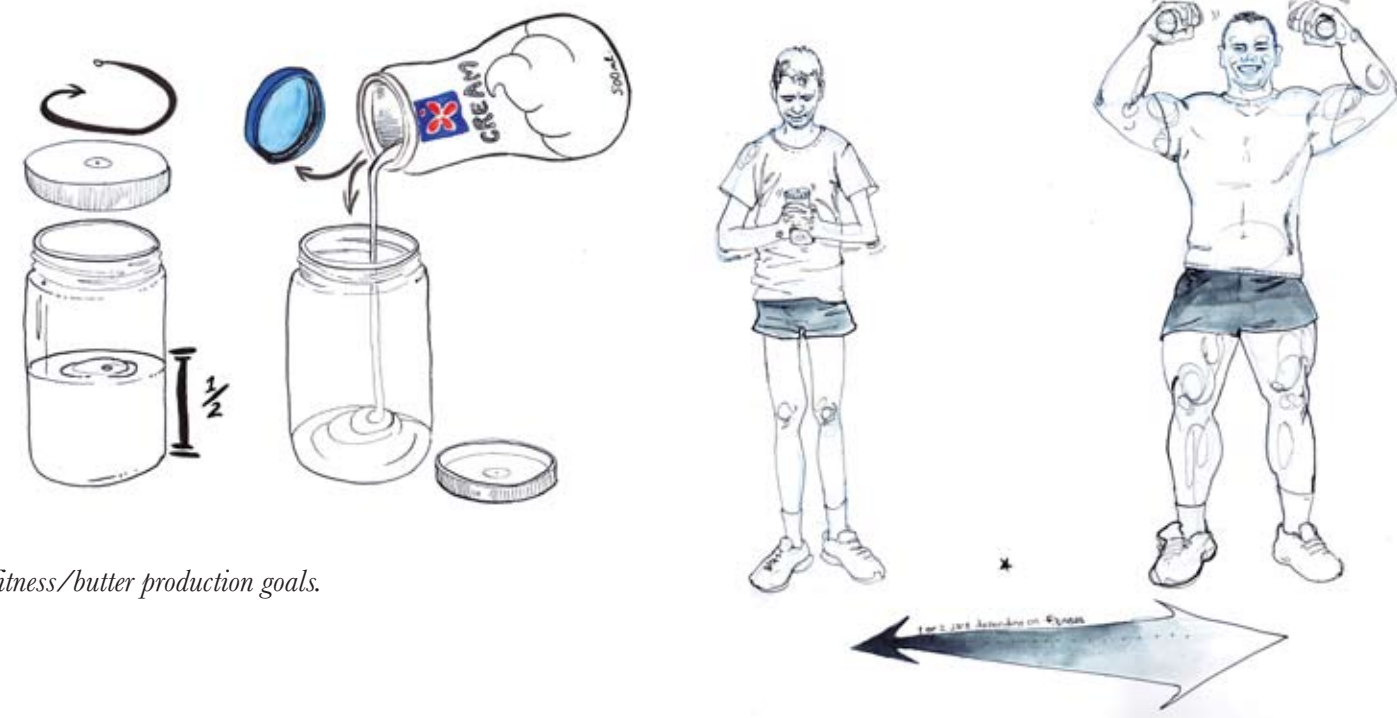
INGREDIENTS

- 16oz or 500 mL of heavy cream (40% + milkfat)
- salt
- herbs/spices to taste
- water

EQUIPMENT

- (2) screw-top 16oz or 500 mL jars
- (2) large bowls
- fine mesh strainer/chinois or cheesecloth
- wooden spoon or spatula
- cling wrap
- wax paper
- a butter press
- an aerobics instructor
- butter jamz (see sidebar)
- a butter knife

- Decide whether you'll be using one jar or two, depending on your fitness/butter production goals.
- Pour 8oz of cream into each jar.
- Screw the lid tightly onto the jar.
- Check that the lid is screwed tightly onto the jar.



science

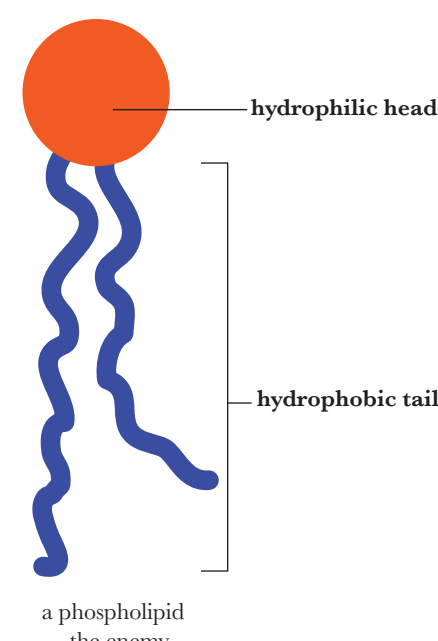
Cream is an oil-in-water emulsion: microscopic globules of fat (0.1 to 10 microns in diameter) encased in phospholipid and lipoprotein membranes floating in a watery solution. While fat and water don't usually come together, the exterior of the little protein barriers that surround the milk fat in cream is hydrophilic, meaning that it allows the fat to peacefully coexist with water.

Churning is the action of reversing this emulsion, creating butter: a water-in-oil emulsion. Through the application of kinetic energy, the fat globules are made to collide into each other, breaking their phospholipid walls, liberating the fat and allowing it to combine with other liberated fat particles, agglomerating into a mass of butter. Buttermilk is a byproduct of this process.

Butter is usually about 80% milkfat, 18% water and 2% milk solids (proteins and sugars). Milk fat is made up of triglycerides, which are composed of fatty acids. Butyric acid, also known as butanoic acid, makes up 3-4 percent of butter, and is principally responsible for its flavor.

Cultured butter, more common in Europe, is produced by introducing bacterial cultures to the cream during churning. The most common butter cultures are Streptococcus diacetylactis, which produces diacetyl, and Streptococcus lactis, which produces lactic acid. Diacetyl lends a yellow color to milk products, as well as its characteristic rich flavor.

This and other methyl ketones and lactones are flavor compounds which are activated by heat and are credited with the baked butter flavors common to pastries and caramels.



shake shake shake shake shake shake shake shake



Stretch: Make no mistake; churning is strenuous. The last thing you want to tell the nurse at the clinic is that you injured yourself making butter.

March, then Run: Turn up the butter jamz and start marching the long road to butterdom. Remember to move your arms; they're connected to your hands, which are connected to the jars that are filled with the cream you're trying to agitate. Once you're warmed up and softened like a stick of butter left on the kitchen counter, move on to a steady stationary jog. Remember to breathe.

Side to Side: Start with holding your jars up at head level. Take a sidestep to the left with your left foot, and swing your forearms down. Take a sidestep to the left with your right foot so that it meets your left foot and swing your forearms back up. Take a sidestep to the right with your right foot, and swing your forearms down. Take a sidestep to the right with your left foot so that it meets your right foot and swing your forearms back up. Repeat. It's simpler than it looks.



Salt & Pepper Shaker: Keep your feet moving in the same manner as in the "Side to Side" exercise, and shake the jars like maracas. If you don't know what maracas are, shake the jars like spraypaint cans, you vandal!

Party Hard: With feet firmly planted in a wide rock stance and eyes squeezed shut with hardcore intensity, pump your fist and jar from your hip to full arm extension. Do this rhythmically to the music. Then switch off and do it with the other arm. Remember, this is the greatest moment of your life.

The Contender: While jogging in place, throw some jabs and pummel that cream into submission. Show no mercy!

I'm a Plane: While jogging in place, stretch your arms out, nice and straight. Look! You're a plane! Hold this for as long as your shoulders can take it.



Cross-country Skiing: With your feet together, bend your knees slowly as you swing your arms up and down, imitating a cross-country skier. Once you've gone as low as you can, straighten your legs while continuing the arm strokes. Feel the burn!

The Pete Townsend: With your feet shoulder-width apart, hold your left arm straight out with the jar at head level, while your right arm becomes a clockwise windmill of Rock & Roll fury. Look out for exploding bass drums.

The Jimi Hendrix: With your feet shoulder-width apart, hold your right arm straight out with the jar at head level, while your left arm becomes a counter-clockwise whirlwind of psychedelic power. Congratulations. You've revolutionized the electric guitar.

Victory: While jogging in place, raise your arms and pump them in celebration.

strain

Now that you've strained yourself and wrung the sweat out of your body, it's time to strain the buttermilk out of your freshly churned butter.

• Pour the contents of the jars through a fine mesh strainer, collecting the liquid buttermilk in a bowl. Using a wooden spoon, press the butter against the mesh strainer to extract more buttermilk. The more buttermilk you strain out of the butter, the better, as buttermilk will spoil and give the butter a rancid taste. If you don't have a fine mesh strainer or chinois, wrap the butter in cheese cloth and wring it.

• Drink the collected buttermilk, or set it aside to make pancakes, biscuits or other things to enjoy with butter.

• Over a clean bowl, pour salted water over the butter in the fine mesh strainer, rinsing out more buttermilk. The salted water will barely flavor the butter, but will help preserve it.

• Empty the bowl of salted water, and transfer the butter curds to it. Salt and season your butter to taste and use the wooden spoon to knead the seasoning into the butter. This action will also give the butter a smoother texture.

• If you happen to possess an antique butter press, line it with cling wrap, transfer the butter ball to it, press it into a block over a sheet of wax paper and discard the cling wrap. If you do not have access to a butter press, you can shape your butter on a cutting board using a spatula.



enjoy



"No one should eat great amounts of fat, but fat carries flavor; just a bit can vastly improve a dish's taste. Like sugar, it should be used sparingly but not eliminated. Vegetable oils are generally healthier than butter, but for certain foods only butter will do."

Joël Robuchon