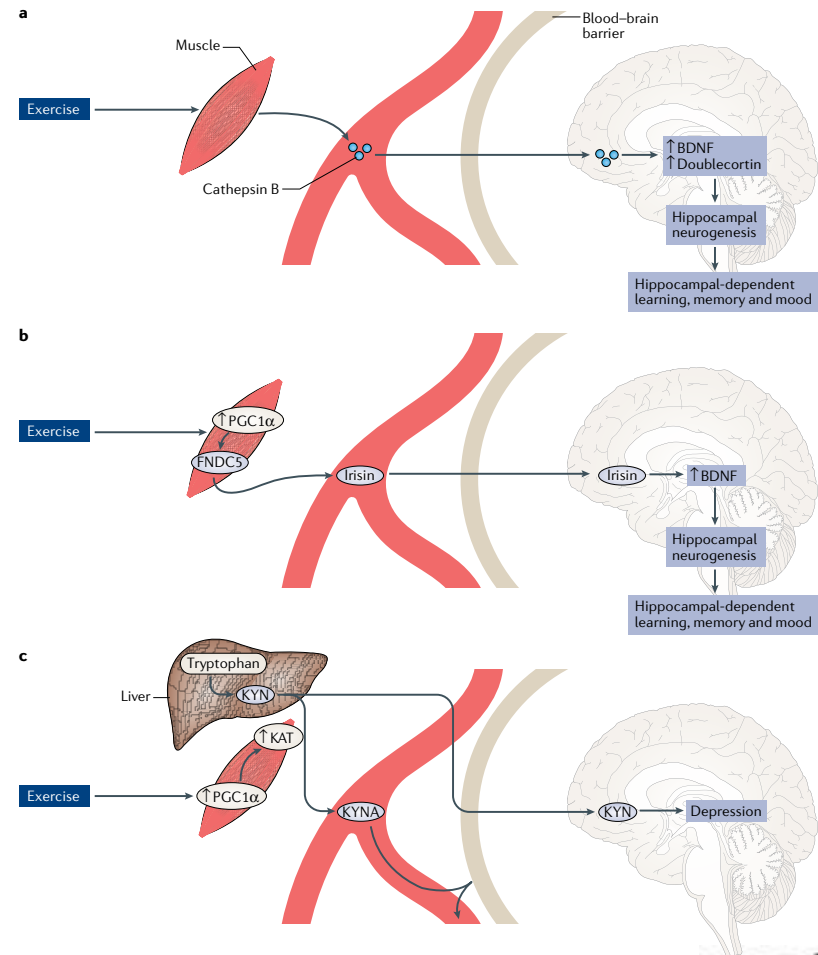
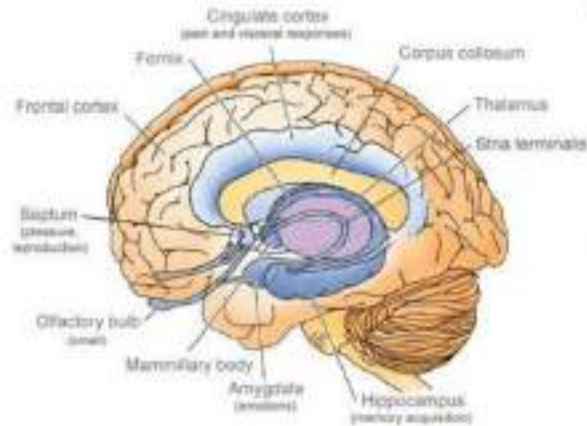
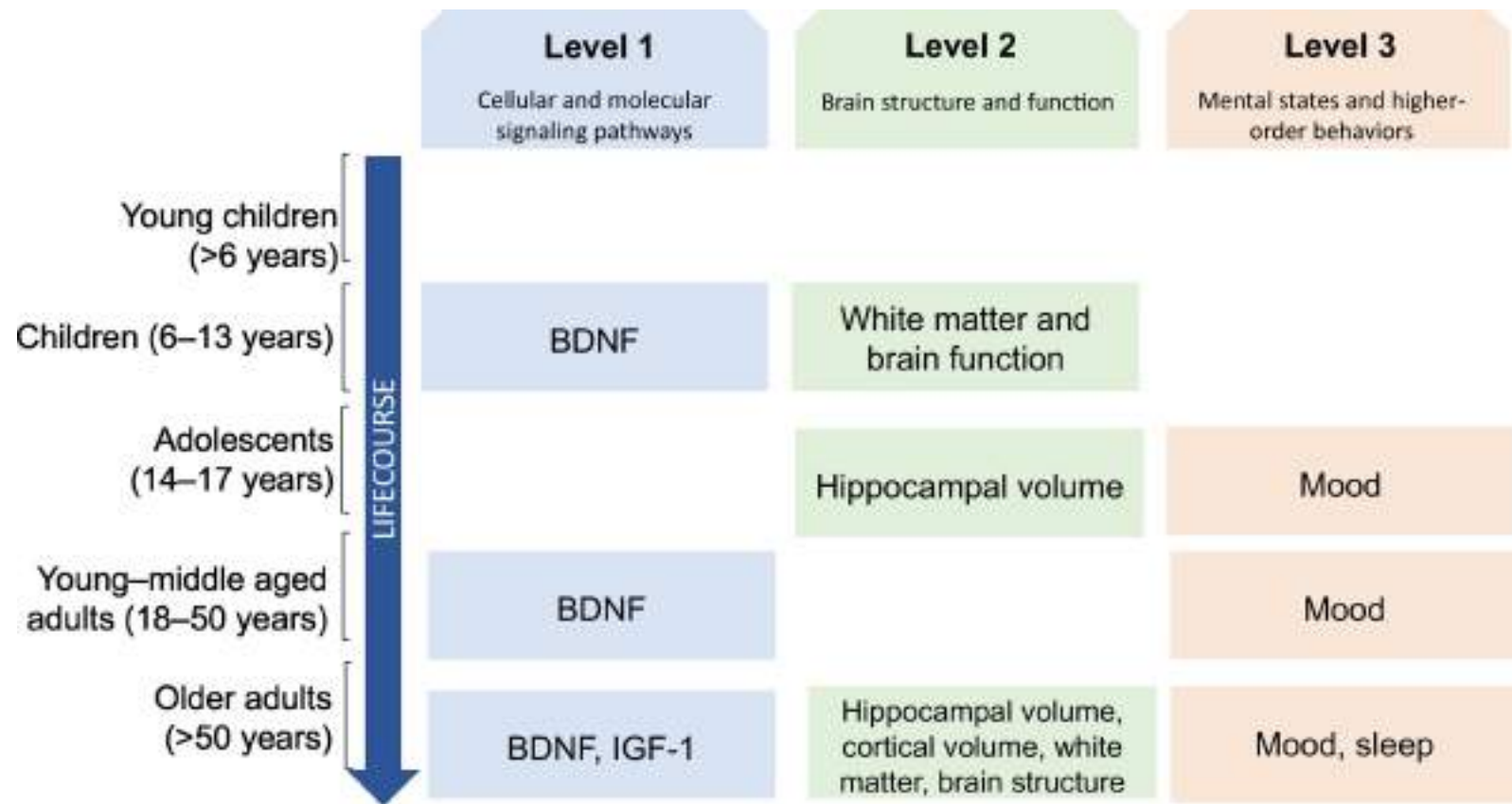


Effetti su cervello ma non solo...

The hippocampus is the most important (i.e., most obvious and interesting looking) structure in the limbic system, a collection of brain structures located on the inner border of the neocortex that process olfactory information, regulate emotion and encode memory.



Effetti su cervello ma non solo...



Trends in Neurosciences





UNIVERSITÀ
DEGLI STUDI
DI PADOVA

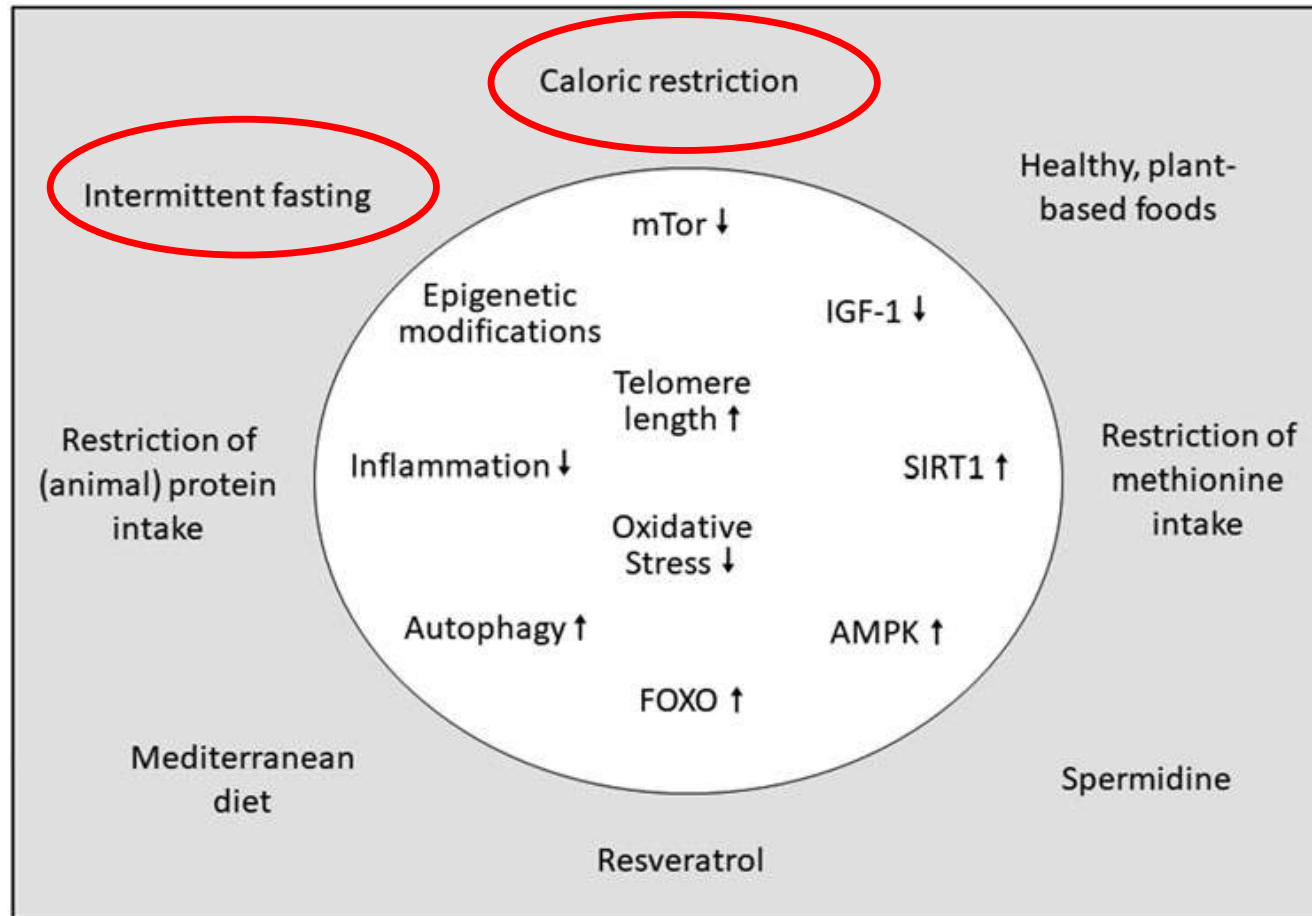
UN PO' DI ALIMENTAZIONE...



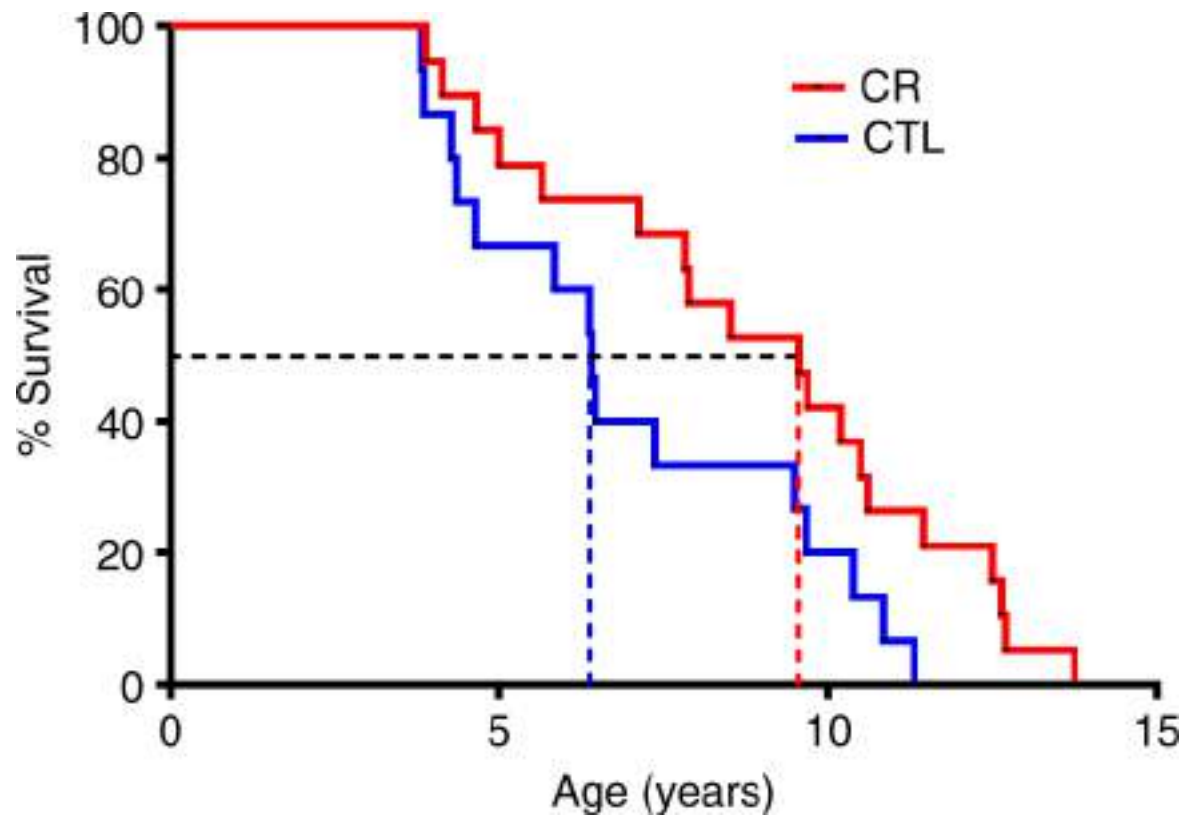
Paoli A.

nutex^{LAB}

CR, TRE e invecchiamento



Caloric restriction e invecchiamento



Caloric restriction e invecchiamento

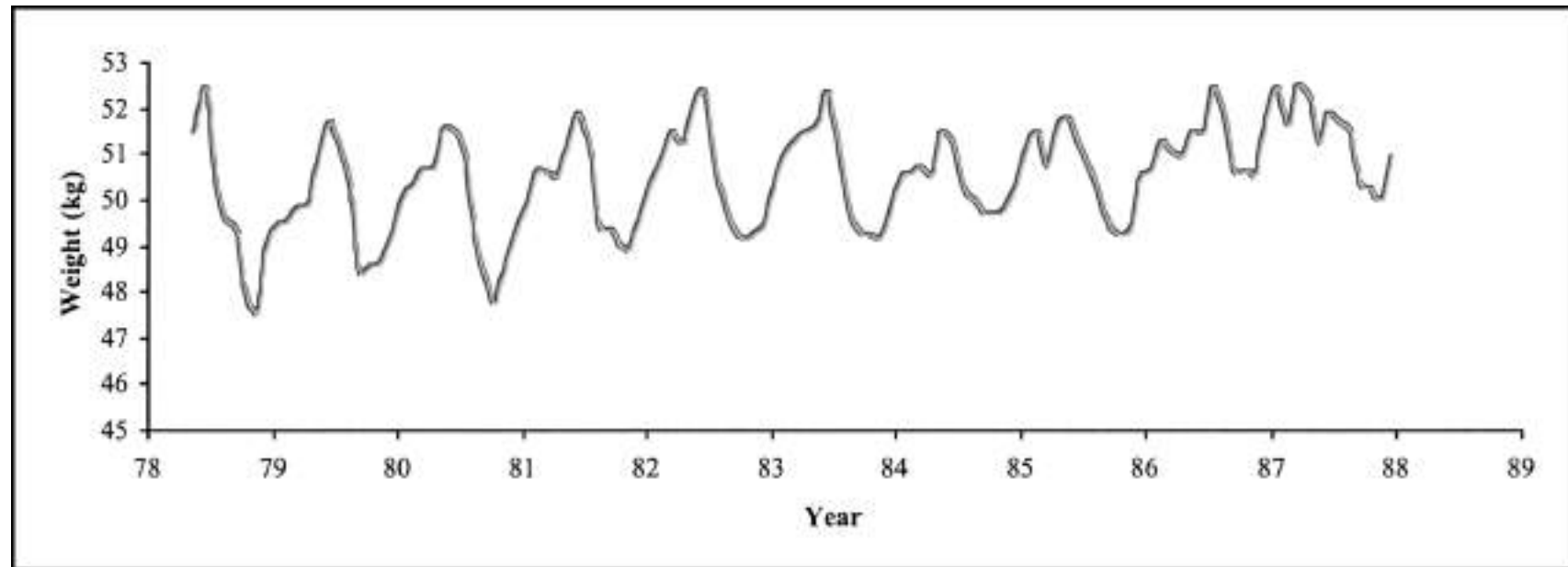


Figure 2. Annual cycles of weight loss and regain in rural Gambian women. Data from 11,000 anthropometric measurements in over 200 women. The severity of each year's weight loss depends on the adequacy of the previous year's harvest and varies with climate.

Caloric restriction e invecchiamento



Caloric restriction e invecchiamento

Although there is extensive evidence that caloric restriction (CR) extends lifespan in several species the evidence base for humans is weak. We are still at the stage of applying inductive reasoning and of framing hypotheses to be tested. It is known that a genetic background contributes about 25% to the variation in human longevity, but thought unlikely that any genes conferring longer lifespan have been positively selected to do so.

Table 2
Biological strategies for surviving famine

Metabolic rate	'Energy sparing' super-efficient metabolism
Physiological compensation	Ability to switch-off non-essential processes
Reproduction	Down-regulation of the reproductive axis in both males and females
Food intake	Gluttony: tendency to gorge when food is available
Physical activity	Slothfulness: tendency to conserve energy through inactivity
Behavioural mechanisms	Hoarding, meanness, theft, etc.



Digiuno intermittente e invecchiamento



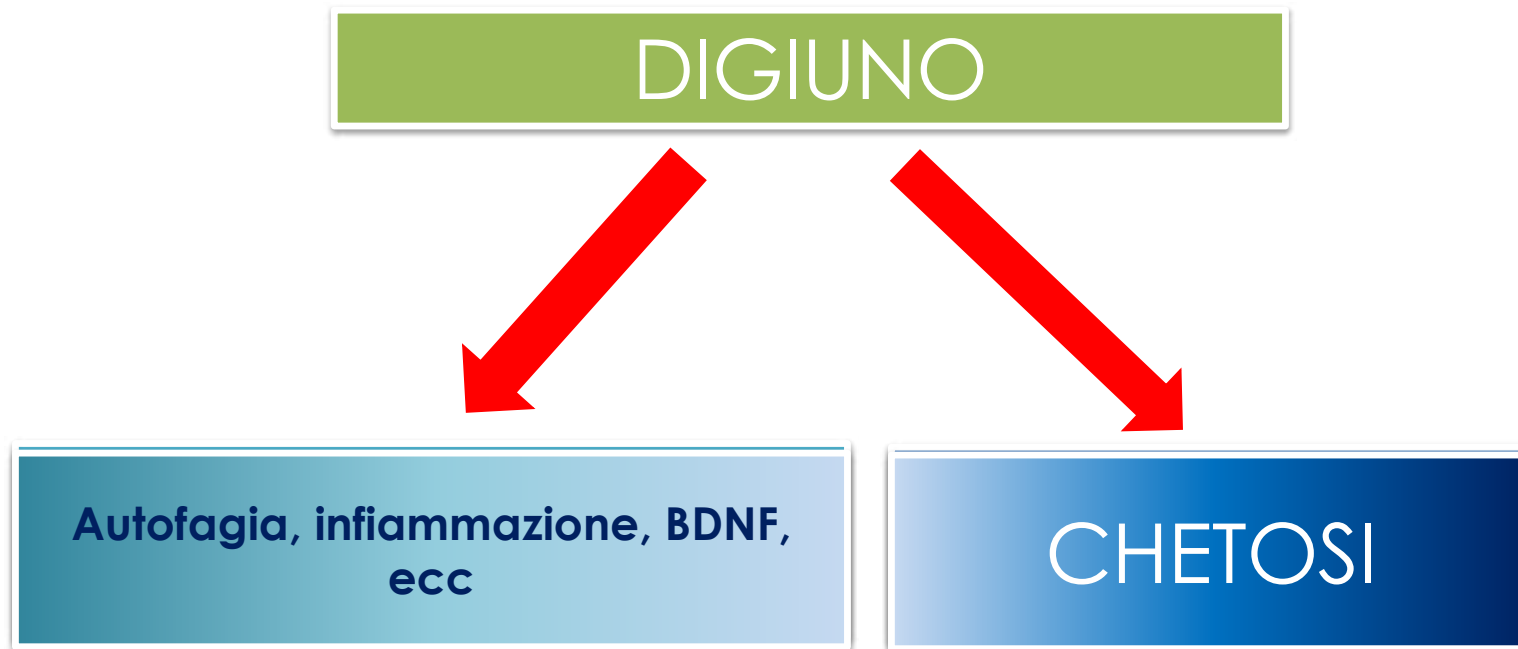
I meccanismi del digiuno sono ben conservati in moltissimi organismi viventi e sono collegati ad aspetti di riproduzione, sviluppo, ibernazione, estivazione, migrazione e scarsità di cibo o comportamenti di pasti molto poco frequenti.

È UNA SFIDA!

E come sfida gli animali hanno messo in campo una serie di adattamenti fisiologici, biochimici e comportamentali per sopravvivere

Digiuno intermittente e invecchiamento

La lunghezza del digiuno determina I suoi effetti metabolici e fisiologici



Digiuno intermittente e invecchiamento

Alternate day fasting (ADF)

↓ Body weight and FM
= FFM
↓ tot CHOL, LDL and TGs
= HDL

Whole-day fasting (WDF)

↓ Body weight and FM
(with CR)

Time-Restricted Eating (TRE)

↓ Body weight and FM
= FFM
↓ tot CHOL, LDL ,TGs and insulin
↓ inflammatory markers

Table 1 Examples of food intake schedules of different categories of intermittent fasting protocols

Type of protocol	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Alternate day fasting	<i>Ad libitum</i>	25% kcal	<i>Ad libitum</i>	25% kcal	<i>Ad libitum</i>	25% kcal	<i>Ad libitum</i>
Time-restricted feeding	16–20 h of fasting, 4–8 h of feeding	16–20 h of fasting, 4–8 h of feeding	16–20 h of fasting, 4–8 h of feeding	16–20 h of fasting, 4–8 h of feeding	16–20 h of fasting, 4–8 h of feeding	16–20 h of fasting, 4–8 h of feeding	16–20 h of fasting, 4–8 h of feeding
Whole-day fasts	<i>Ad libitum</i>	<i>Ad libitum</i>	<i>Ad libitum</i>	<i>Ad libitum</i> or 24-h fast ^a	<i>Ad libitum</i>	<i>Ad libitum</i>	24-h fast

^aSome programs utilize nonconsecutive fasting days, while others place multiple fasting days in succession.

