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The image features the MasterCard logo, which consists of two overlapping circles, one red and one orange, set against a dark blue background. A white horizontal bar is superimposed across the center of the circles, containing the word "Priceless" in a bold, black, sans-serif font. A small registered trademark symbol (®) is located at the bottom right of the orange circle.

**Priceless**

SEPTEMBER 8, 2008

www.time.com AOL Keyword: TIME

CHINESE CYBERSPIES  
COOL NEW SEARCH ENGINES

# HOW TO STOP A HEART ATTACK BEFORE IT HAPPENS

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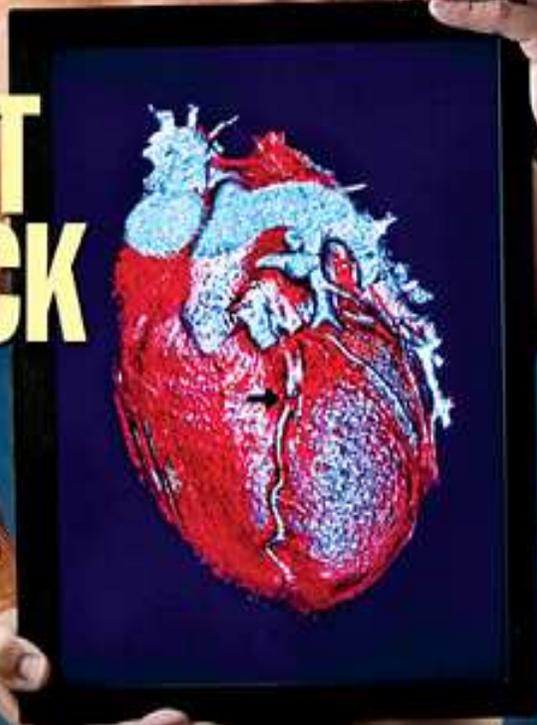
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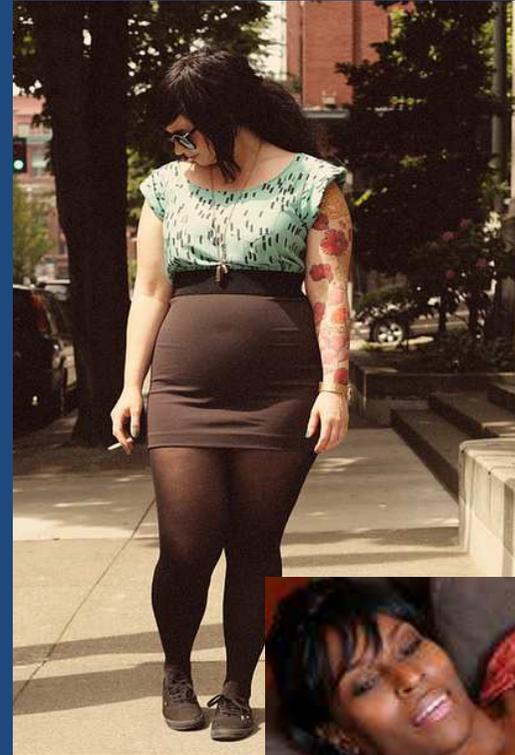
# TIME

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# The Diabetes Prevention Program

A Randomized Clinical Trial  
to Prevent Type 2 Diabetes  
in Persons at High Risk

The DPP Research Group



# Modifiable Risk Factors for Type 2 Diabetes

- Obesity
- Body fat distribution
- Physical inactivity
- Elevated fasting and 2 hr glucose levels

# Study Interventions

Eligible participants



Randomized



Standard lifestyle recommendations



Intensive  
Lifestyle  
(n = 1079)



Metformin  
(n = 1073)



Placebo  
(n = 1082)

# Lifestyle Intervention

An intensive program with the following specific goals:

- $\geq 7\%$  loss of body weight and maintenance of weight loss
  - Dietary fat goal --  $<25\%$  of calories from fat
  - Calorie intake goal -- 1200-1800 kcal/day
- $\geq 150$  minutes per week of physical activity

# Effect of Treatment on Incidence of Diabetes

	<u>Placebo</u>	<u>Metformin</u>	<u>Lifestyle</u>
<u>Incidence of diabetes</u> (percent per year)	11.0%	7.8%	4.8%
<u>Reduction in incidence</u> compared with placebo	----	31%	58%
<u>Number needed to treat</u>	----	13.9	6.9

to prevent 1 case in 3 years

# iPrep

illness

Prevention

rehabilitation

program

# iPrep pilot

## Program components

- risk identification
- assessment of choice to “change”
- weekly/biweekly visits
- weight/log checks/structured program

# The 9 essentials

## National Weight Control Registry

- Always eat breakfast
- 3 meals and 3 snacks per day
- Exercise daily
- Measure portions
- LOG everything
- Weigh daily

- 
- EAT at or from home 90% of the time
  - Water 2 liters per day
  - 5 before 5 ----- 8 before 8



# iPrep : structured program

- Physical/hormonal/biological
- exercise
- cycle of aberrant eating:
  - emotional eating
  - changing neurologic pathways  
for behavior
  - divorcing “evil” twins

# Neuro-hormonal

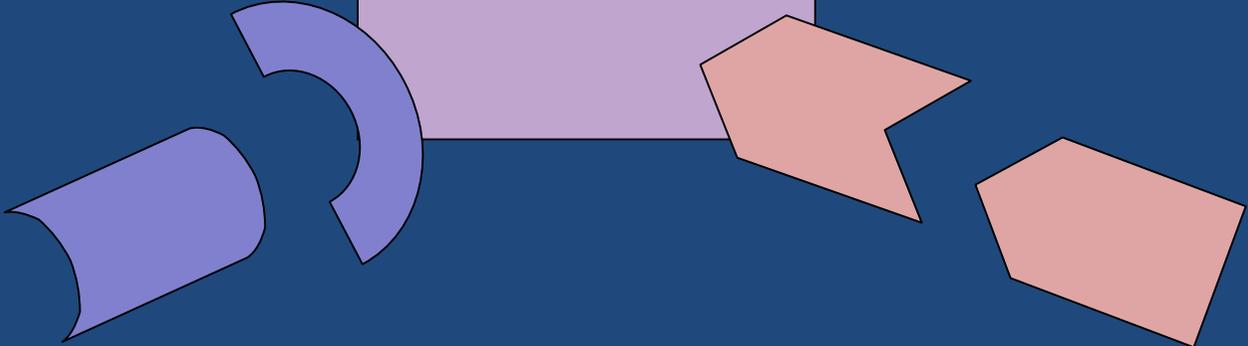
**Role of  
Neuro hormones**



**FEEDING**

**SATIETY**

**Hypothalamus**



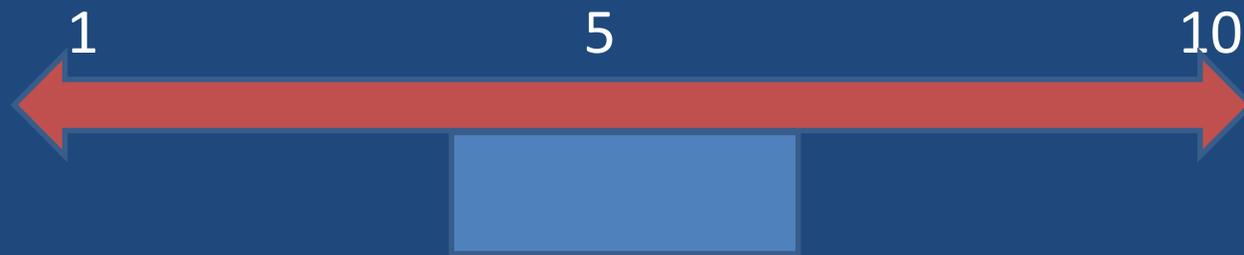
Hormonal Controls:  
Ghrelin  
Dopamine  
NPY

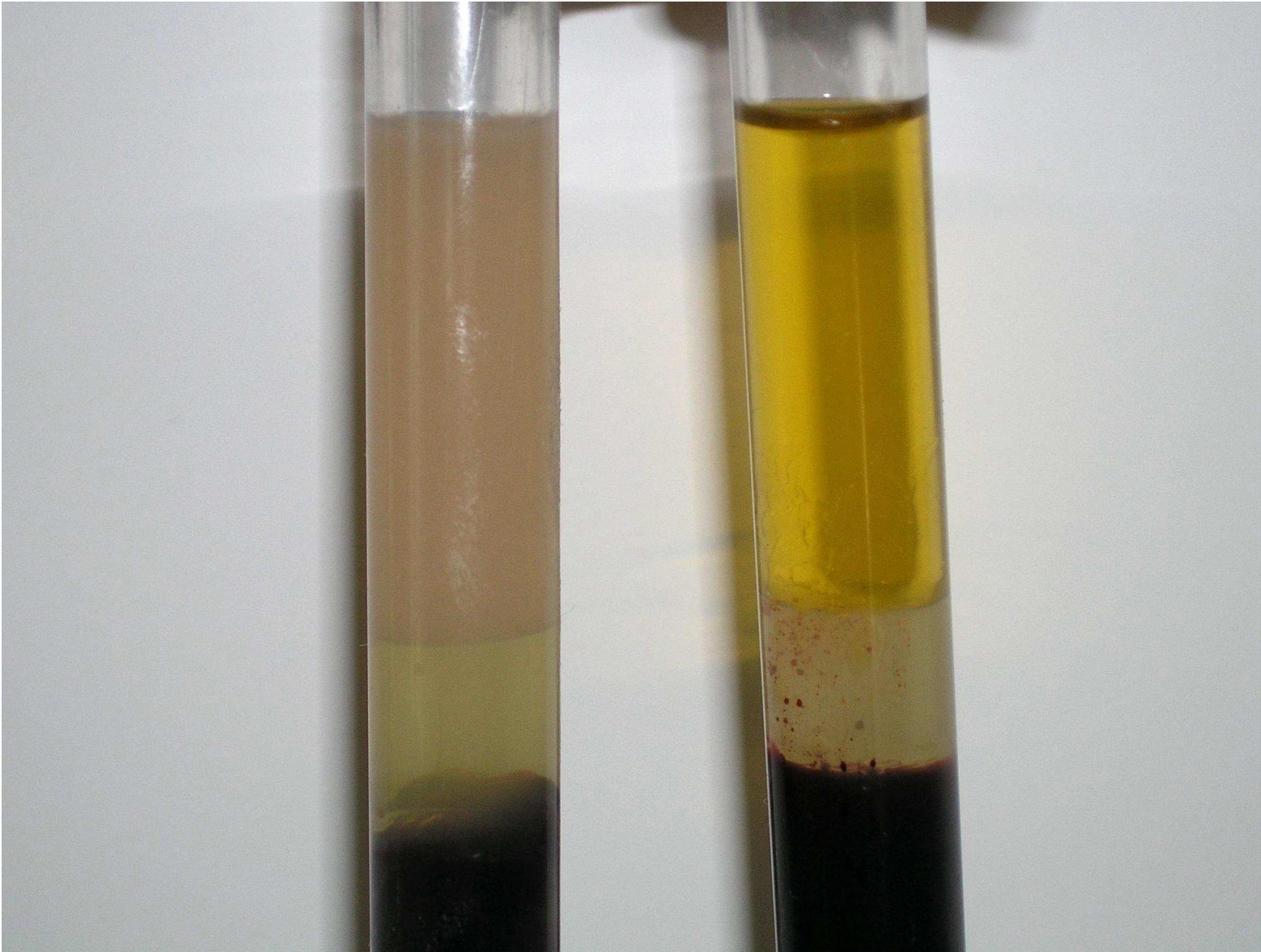
**Brain Receptor**  
**? HYPERSENSITIVITY**

Hormonal Controls:  
Leptin  
Insulin (centrally acting)  
CCK

**Brain Receptor**  
**? INSENSITIVITY or RESISTANCE**

# Appetite and Satiety





# Spend 150 mins on top of your zone: 30 mins x 5 days/week

AGE	ZONE @ 70%
30	133
35	130
40	126
45	122
50	119
55	115
60	112
65	109

# RISK FACTORS: Women

Physical **inactivity** poses the same risk as:

High cholesterol

Hypertension

Obesity

And approaches the same risk as

Smoking

Blair SN, JAMA 276 1996

- ▶ SENSUAL  
eyes/nose/mouth
- ▶ EMOTIONAL  
H.A.L.F.
- ▶ TWINNING  
habit/default

*Physiological  
Hunger*

- ▶ NO PLAN
- ▶ NO PAUSE

*Mindful  
what  
when  
where  
with whom  
how much*

**trigger**

**plan**

**ABERRANT  
EATING  
CYCLE**

**reinforce**

**eat**

- ▶ SELF RECRIMINATION
- ▶ LESS PAIN

*Pleasure and/or Satiety*

- ▶ "LAPSE"  
wrong food  
wrong time  
wrong place  
wrong pace  
wrong amount

*Eat by Choice*

# Emotional “Triggers”

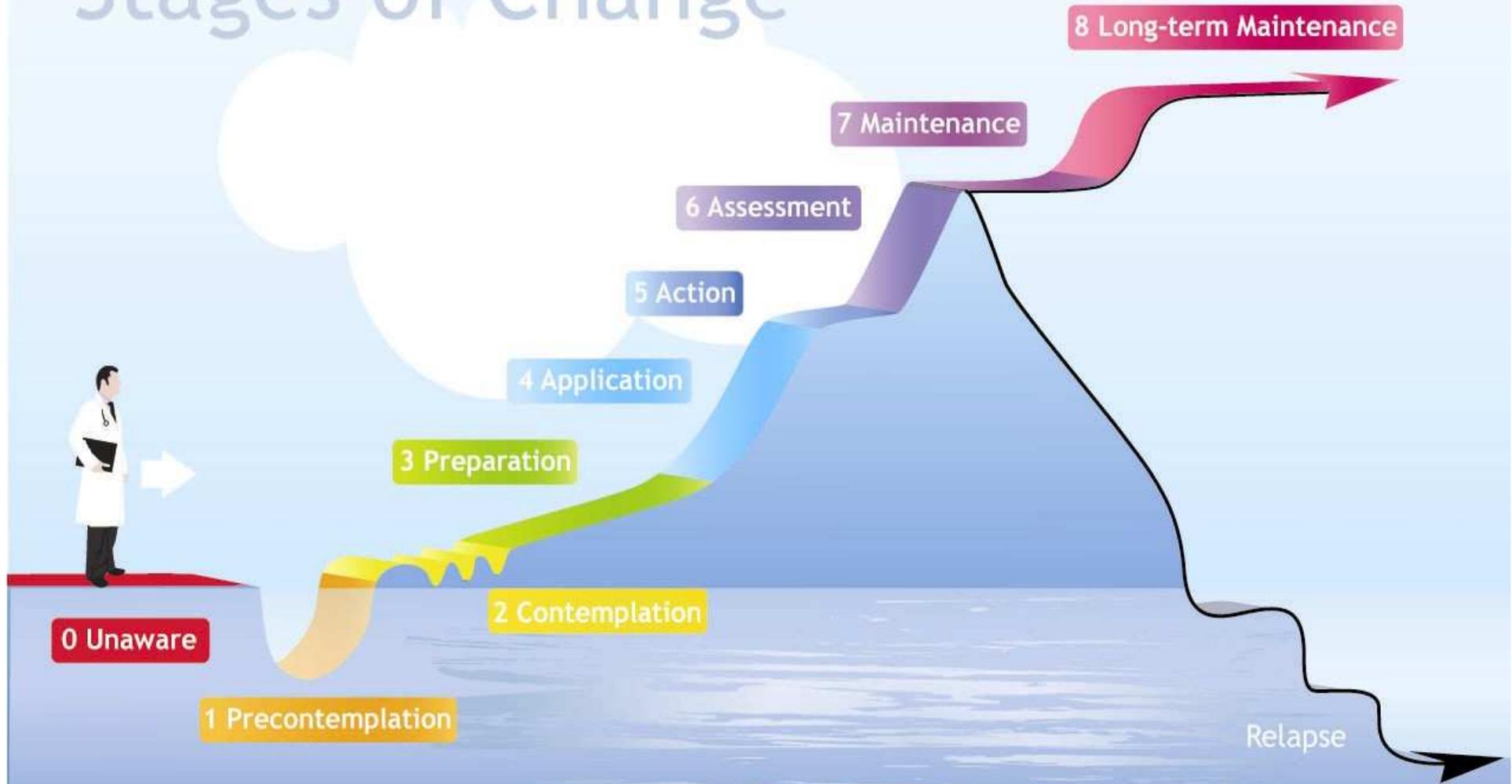
Emotion takes reason hostage

&

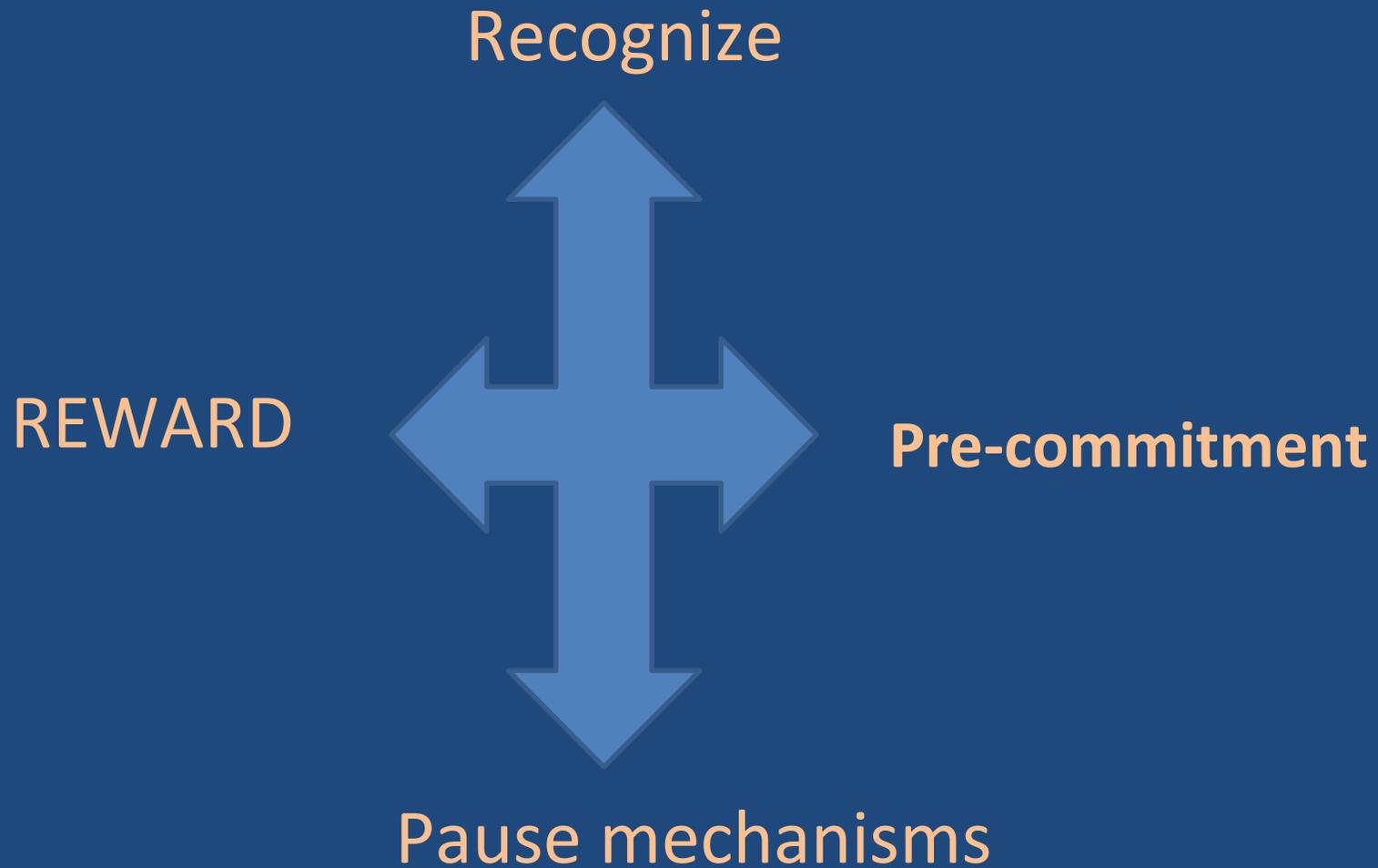
the ransom is

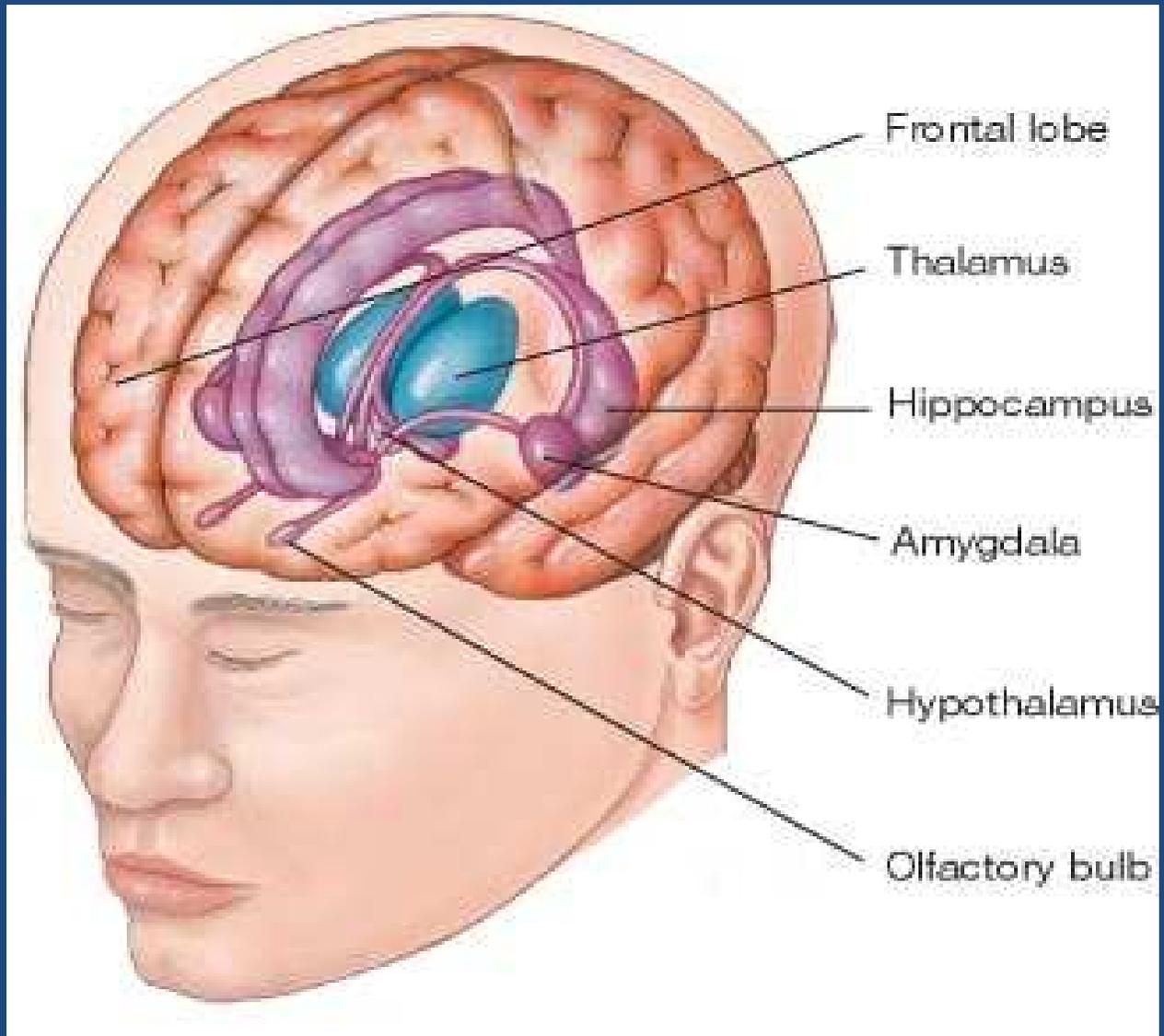
FOOD

# Stages of Change

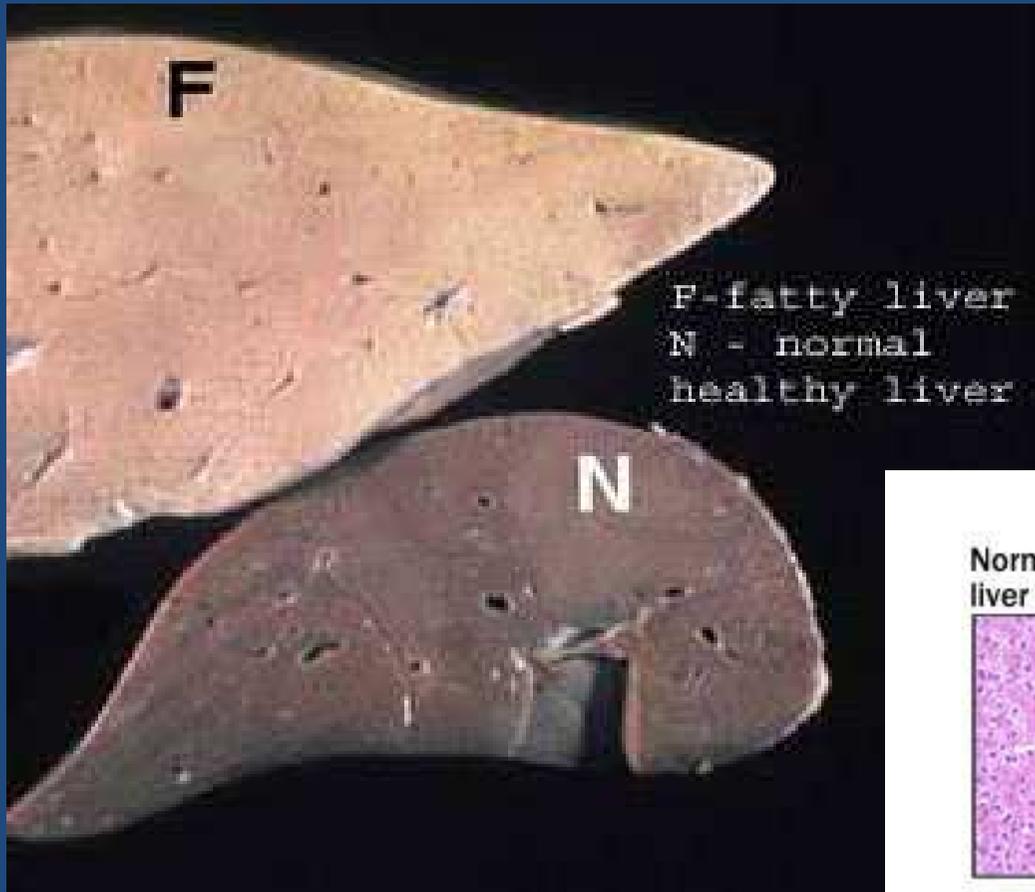


# “Plan & Pause”

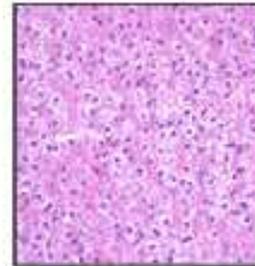




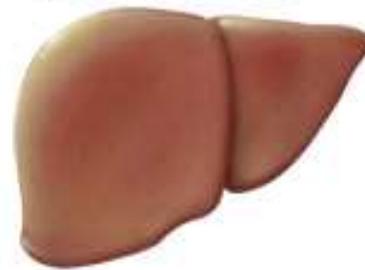
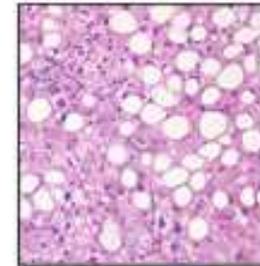
# SUCCESS



Normal  
liver



Fatty  
liver



# Pilot Results to date:

Fatty liver: 207 to 154 lbs (10 months): liver to normal

Diabetes a) 250 to 196 – off metformin A1c 0.67 (12 mos)

Diabetes b) 278 to 235 – off glyburide A1c 0.66 (6 mos)

Diabetes c) 220 to 105 – A1c from 0.77 to 0.69 (4 mos)

Diabetes d) 210 to 195 – A1c pending

Mood disorder: 214 to 196 – no anti depressants (8 mos)

Pre diabetes – drop out

PCOD – pregnant

Pre diabetes – treating for depression instead

# Time magazine: Physician vs Weight Watchers for weight loss:

“weight watchers twice as successful”

10 lbs lost in study – WW’s

5 lbs lost in study – Physician

CAN PEOPLE change....?

