

[연수강좌]

비만과 관련된 만성피로의 해독치료

이 동 환

연세가정의원

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Prevalence of Chronic Fatigue

- 5~15% of Primary Care
- 1~10% of Population
- Organic Cause : 39%
- Psychologic Cause : 41%
- Mixed : 12%
- Unknown Cause : 8%

Jason LA, Richardman JA, Rademaker AW, Jordan KM, Pilowsky AV, Taylor RH et al. A community-based study of chronic fatigue syndrome Arch Intern Med 1999;159:2129-37
 Bates D, Schnitt W, Buchwald D, Ware N, Lee J, Thayer E, et al. Prevalence of chronic fatigue syndrome in a primary care practice. Arch Intern Med 1993;153:729-65
 Kroenke K, Wood D, Mangisdarff A, Moler N, Powell J. Chronic fatigue in primary care: prevalence, patient characteristics and outcome. JAMA 1988;260:929-34
 Morrison JD. Fatigue as presenting complaint in family practice. J Fam pract 1980;10:795

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Multiple Medically Unexplained Symptoms (MMUS)

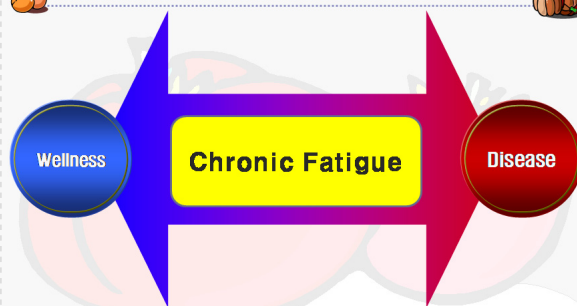
-의학적으로 설명할 수 없는 증상들-

- ◆ Medically unexplained symptoms(MUS), which include fatigue, low back pain, abdominal upset, headache, dizziness, or feelings of weakness, account for a substantial proportion of all consultations in primary care

Kroenke K. Am J Med 1989;86:262-6.

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Functional Medicine

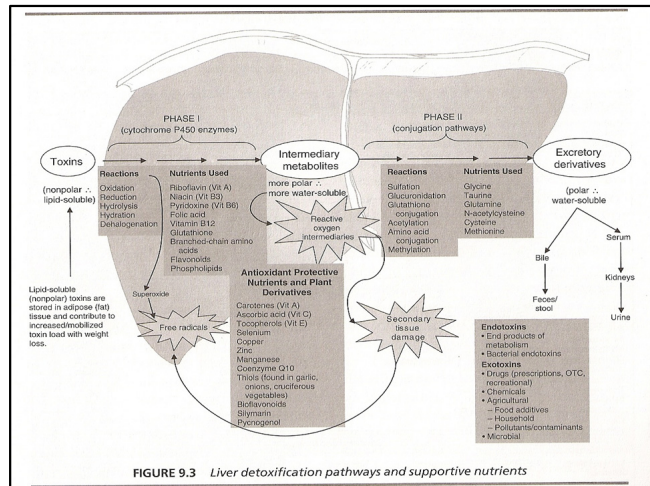


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Causes of Chronic Fatigue in Functional Medicine

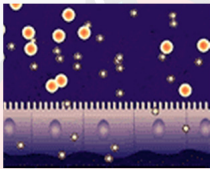
- Subclinical Deficiency of Nutrition
→ decreased ATP synthesis
- Mitochondrial Myopathy
or Genetic defect in MT function
- Under-Functioning Detoxification pathway → increased oxidative stress
- Functional Imbalance of Hormone
- Psycho-neuro-immunology

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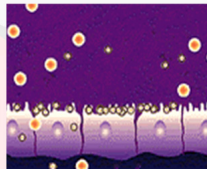


Leaky Gut Syndrome

건강한 사람의 장



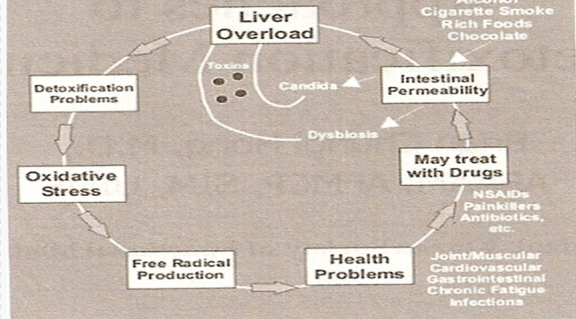
장누수증후군 사람의 장



보통 사람들은 장벽이 튼튼하여 음식물의 미립자가 빠져나가지 못하고 변으로 나오게 되는데 아토피 환자들은 소화기관과 장벽이 약하여 완전 소화되지 않은 음식물 찌꺼기가 새나오게 되고 이 과정에서 항원 형체 반응(알레르기 반응)이 일어나 가려움과 염증을 일으키게 되는 것이다

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The vicious circle of chronic toxic overload



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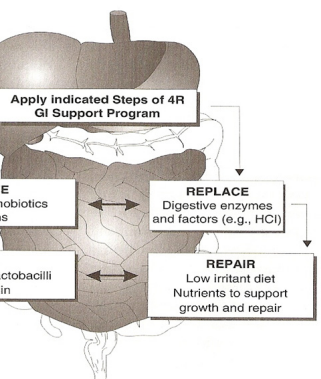


FIGURE 7.5 4R GI support program

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Ch. Fatigue & Obesity

- ◆ Obstructive Sleep Apnea
: daytime fatigue and sleepiness
- ◆ Sleep evaluation pt. : 60%가 overweight
- ◆ BMI >25 : 58% Obstructive Sleep Apnea
- ◆ Pathophysiology
 1. parapharyngeal fat diposition
 2. alteration in neural conpaensatory mechanism
 3. respiratory control system instability

Naresh M. Punjabi The epidemiology of adult obstructive sleep apnea
Proc Am Thorac Soc 2008 vol 5:136-143

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Ch. Fatigue & Obesity

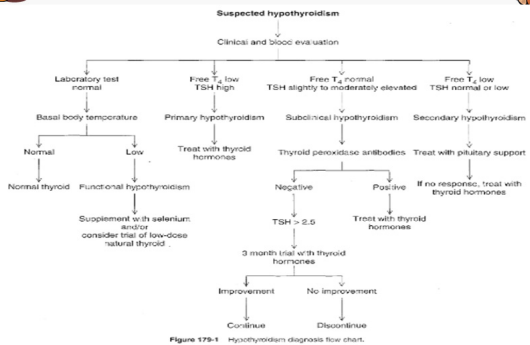


Figure 179-1 Hypothyroidism diagnosis flow chart.

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Ch. Fatigue & Obesity



WTS (Wilson's Temperature Syndrome)

FATIGUE • HEADACHES & MIGRAINES • PMS • IRRITABILITY
FLUID RETENTION • ANXIETY & PANIC ATTACKS • HAIR LOSS
DEPRESSION • DECREASED MEMORY & CONCENTRATION • ACNE

96 98 100

LOW SEX DRIVE • UNHEALTHY NAILS • LOW MOTIVATION & AMBITION • CONSTIPATION • IRRITABLE BOWEL SYNDROME
EASY WEIGHT GAIN • DRY HAIR • INSOMNIA & NARCOLEPSY
HIVES • ASTHMA • ALLERGIES • DRY SKIN • ACID INDIGESTION
ITCHINESS • ELEVATED CHOLESTEROL • LIGHTEADEDNESS
SWEATING ABNORMALITIES • HEAT AND/OR COLD INTOLERANCE
LOW SELF ESTEEM • IRREGULAR PERIODS • MENSTRUAL CRAMPS • LOW BLOOD PRESSURE • FREQUENT COLDS & SORE THROATS • FREQUENT URINARY TRACT INFECTIONS

The low body temperature has everything to do with the symptoms

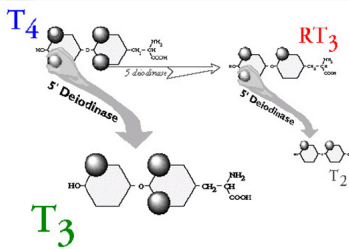
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Ch. Fatigue & Obesity



WTS (Wilson's Temperature Syndrome)



5' deiodinase (5 "prime" deiodinase) plucks the iodine atom off the 5' position of T4 to make T3. It also converts RT3 to T2. T3 is 4 times more potent than T4 and is the primary agonist (stimulator) at the level of the cells. 5 deiodinase (5 [no prime] deiodinase) plucks the iodine atom off the 5 position of T4 to make RT3.

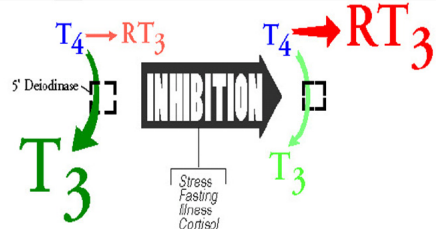
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Ch. Fatigue & Obesity



WTS (Wilson's Temperature Syndrome)



Under stress the body converts T4 less to T3 and more to RT3 to conserve energy. With less T3, the cells of the body slow down. This makes it clear that there is a peripheral autoregulatory mechanism as well as the glandular one that regulates T4 production.

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Obesity & Detox.



- ◆ The effect of Obesity
 - : change in xenobiotic metabolism
 - : expression and regulation of xenobiotic-metabolizing enzymes, both Phase I & Phase II

Blouin RA, Chandler MHH. Special pharmacokinetic considerations in the obese. *Applied Therapeutics Inc.*;1992 11, 1-11,20

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Obesity & Detox.



The Fat Cell : Multiple Function

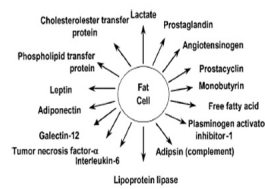


TABLE 1

Overweight and cancer in Europe

Cancer site	Relative risk (overweight vs normal weight)	Relative risk (obese vs normal weight)
Breast (postmenopausal)	1.12	1.25
Colon	1.15	1.33
Endometrium	1.59	2.52
Prostate	1.06	1.12
Kidney	1.36	1.84
Gallbladder	1.34	1.78

FIGURE 2 The fat cell as an endocrine cell. The fat cells generate and release a wide variety of peptides and metabolites that provide signals to distant parts of the body relating the size and activity of the adipose organ.

Bergstrom et al. *Int. J. Cancer* 2001;91: 421-430.

George A. Bray The underlying basis for obesity : Relationship to Cancer. *J. Nutr.* 2002;132:3451S-3155S

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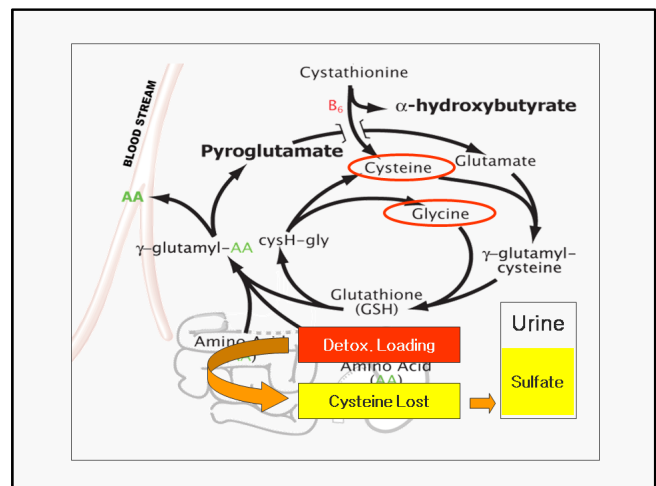
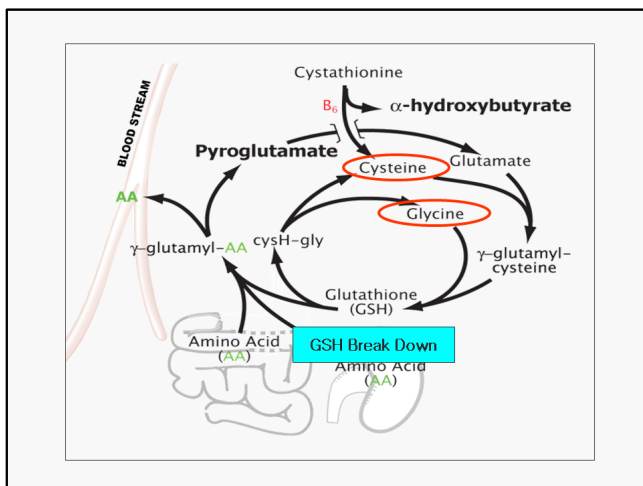
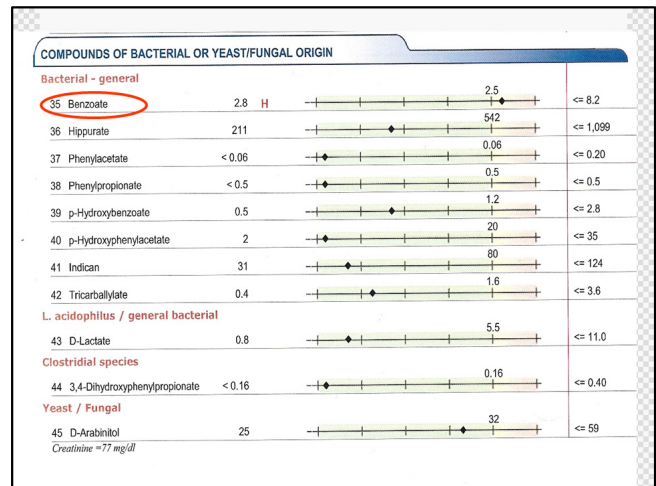
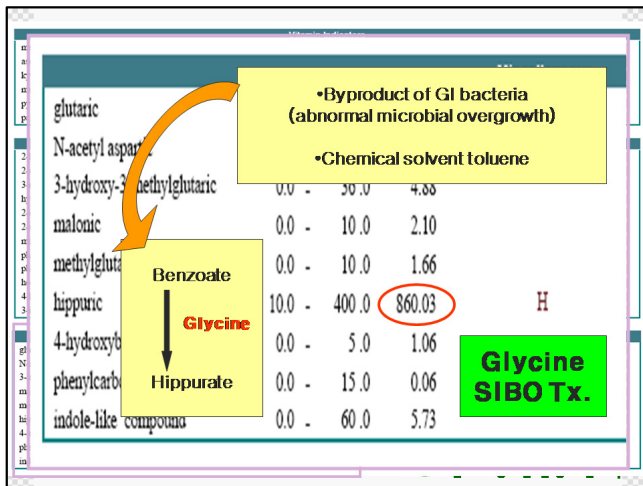
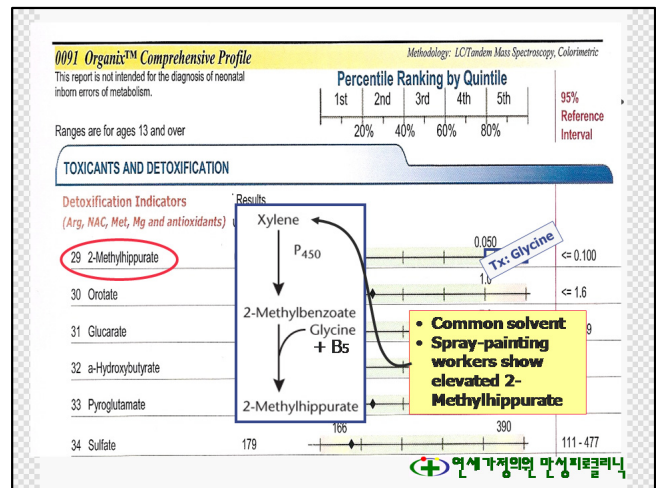
Obesity & Toxicity

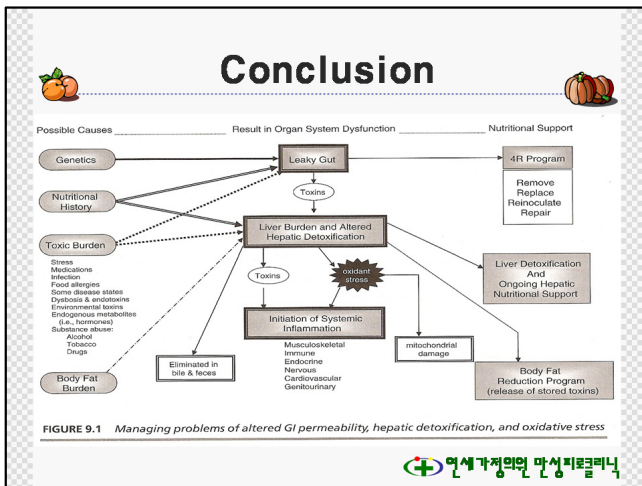
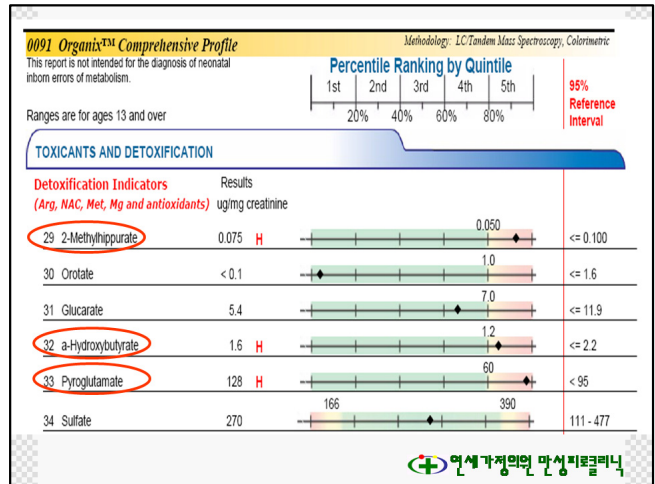
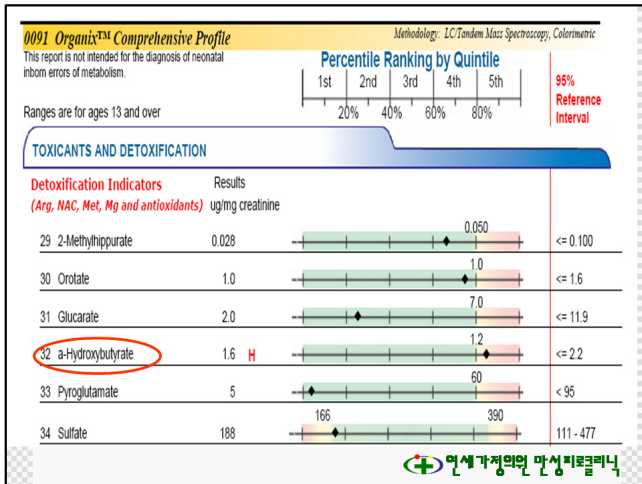
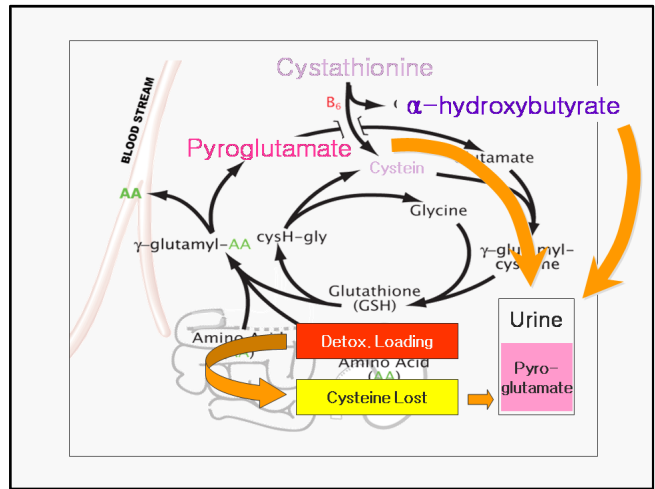
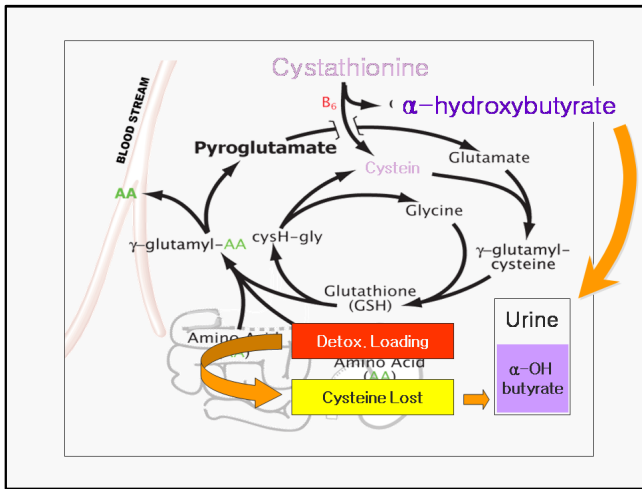
Is There a Connection?

- Effects on Thyroid and Metabolic Rate
- Toxins Alter Mitochondrial Function, Redox status, and Cytokine Function
- Detoxification Enzyme Polymorphism and Obesity
- Toxin Impair Central Appetite Regulation
- Hormone Disruptors: Hormonal Chaos
- Fatty Liver: Cause or Effect in Weight Gain

Mark Hyman, Systems Biology, Toxins, Obesity, and Functional Medicine Alt. Ther. Heal. Med. 2007 Mar/Apr 2007:13,2;S134-S139

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Conclusion

Supplements for Detoxification

The Basics

- Take a high potency multi-vitamin and mineral formula.
- Take extra-buffered vitamin C 1000-4000 mg a day with mineral ascorbates in powder, capsule, or tablets during periods of increased detoxification. (This can cause loose stools. If it does, just reduce the dose or stop.)
- Take milk thistle (silymarin) 70 to 210 mg a day.
- Supplement with essential fatty acids (omega-3 fatty acids), 1000-2000 mg a day.

Additional Supplements (use under medical supervision)

- N-acetylcysteine 500 to 1000 mg a day
- Amino acids (taurine 500 mg twice a day, glycine 500 mg twice a day)
- Alpha-lipoic acid 100 mg to 600 mg a day
- Carnitine 1000 to 2000 mg a day in divided doses
- Bioflavonoids (citrus, pine bark, grape seed, green tea)

Mark Hyman, Systems Biology, Toxins, Obesity, and Functional Medicine, Alt. Ther. Heal. Med. 2007 Mar/Apr 2007;13,2:S134-S139

연세강령의원 만성피로클리닉

[비만과 관련된 만성피로의 해독치료]

이동환의
만성피로 연구모임

종합검진을 받아도 이상이 없다고 나왔을까? 나는 항상 몸이 무겁고 피로한데.....
- 현대의학에서는 피로에 대한 병명이 없기 때문에 이상없음이라고 판정합니다. 이상이 없으므로 치료법도 없지요. 답답하지요?

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당신의 피로도를
전문지를 통해
정확히 측정합니다

만성피로 전문가 이야기
제가 제가 10년 이상 환자들을 진료하면서,
환자 대다수가 **잘못이 없음에도** 고통을 호소하는
이유를 알 길이 없었습니다.
약 5년간 부지 아예 의문을 가지고 같이 연구한 결과
세포가 조금씩 병들어 몸을 피로하게 만들고,
몸을 가눌 수 없을 정도의 피로가 **6개월간 지속되면**,
심각한 만성피로가 된다는 사실을 알았습니다.
저는 이를 **기능의학의 영양치료**를 통해
다시 활력을 되찾는 방법들을 신생물에 적용하고 있습니다.

만성피로 연구회 운영자
▶ **한의원 / 강의 의뢰 신청** ▶ **노원점**

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피로에 고통받는 현대인들에게 유용한
만성피로 연구모임 = **활력 증진 세미나**나
▶ **진행하기**
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30일
돈 들이지 않고 30일 안에
피로를 타파하는 만성피로
노원점 소개