

## [심포지엄]

## 생애전환기 건강증진 분야별 상담 전략

## - 운 동 -

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## 한국인의 건강증진행태

- 흡연 (20세 이상 성인) (2005)
  - 남자 52.3%, 여자 5.8% (2003 56.7%, 3.5%)
- 비만 (성인, BMI  $\geq 25.0$ )
  - 남자 32.6%, 여자 29.4% ('98 25.1, 28.1%)
- 운동
  - 걷기 운동(1일 30분 이상, 5일이상) 60.1%
  - 중등도 운동(1일 30분 이상, 주 5일이상) 21.8%
  - 고강도 운동(1일 20분 이상, 주 3일이상) 15.2%
- 음주
  - 음주율: 남 73.3%, 여 36.3% (54.6%)
  - 알코올 의존: 남 18.0%, 여 2.9%
- 주관적 스트레스 인지율 35.1%
- 자살 사고율: 남 13.8%, 여 23.0% (전체 18.5%)
- 안전벨트 착용: 82.6%
- Ref) 국민건강영양조사, 보건복지부, 2005.

## 2007 생애전환기 건강진단

## 생애전환기 건강진단 매뉴얼



## 생애전환기 건강진단 매뉴얼

1. 건강위험평가 및 상담 시 활용기법
2. 행동변화단계별 전략
3. 2차 건강진단에서 생활습관 평가 처방
4. 정신건강검사
5. 노인건강진단



## 생애전환기 건강진단 매뉴얼

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## 생활습관 평가/처방 매뉴얼

### 해외 건강위험습관 관리사례

- 현재까지 축적된 의학적 근거를 기반으로 개발되어 현재 사용 중인 건강위험습관 관리지침
  - US department of Health and Human services의 금연 가이드(USA)
  - NIAAA의 금주/절주 가이드(USA)
  - Society for Exercise Physiology의 신체활동 가이드(Canada)
  - Department of Health and Ageing의 SNAP과 Lifescripts Intervention (Australia)

### 국내 건강위험습관 관리현실

- 건강위험습관 관리 미흡
  - 국민보험공단 건강검진:개인 맞춤식 평가 미흡하고 사후관리 부족
  - 일차의료영역의 상대적 관리 소홀:수가제도의 문제, 의과대학에서 교육받지 못한 영역
- 건강위험습관이 한국인의 질병/사망에 미치는 영향에 대한 연구가 부족한 실정
  - 한국형 가이드를 만들기 어려운 현실

### 생애전환기 2차 건강진단의 의의

- 국가 주도의 체계적 건강위험습관 관리
- 국민 건강수준 향상
- 의료비 절감
- 일차의료의 위상과 역할 정립
- 상담에 대한 수가 보전

### 2차 건강진단

- 대상  
1차 건강진단 결과상 2차 건강진단을 권고 받고 자발적으로 해당 의료기관을 방문한 수검자
- 건강위험습관 영역  
흡연/음주/운동/영양/비만

### 2차 건강진단

#### 영역별 상담 목표

- 1) 각 영역별로 5A라는 단계적 접근방법을 통하여 상담 진행
- 2) 행동변화단계 및 성공확신 평가, 적절한 동기화 면담기술 사용, 해당 영역별 책자/교육자료 활용
- 3) 지속적인 건강위험습관 관리

## 5A 접근법

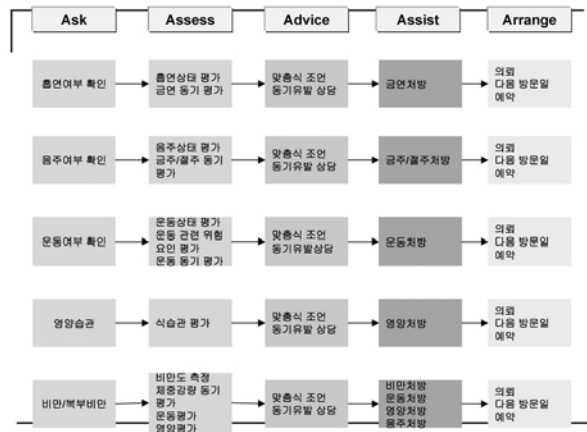
- Ask-Assess-Advise-Assist-Arrange
- 1996년 미국의 Department of Health and Human Services에서 금연지침을 제작하며 최초로 적용
- 최근에는 모든 영역의 건강위험습관 개선 프로그램에 확대 적용

## 5A 접근법

- Ask (묻기)
  - 환자가 가지고 있는 건강위험습관 유무 확인
- Assess (평가하기)
  - 1) 건강위험습관 상태 평가
  - 2) 생활습관 개선에 대한 행동변화단계 평가  
흡연: 계획이전단계 vs 계획단계 vs 준비단계
  - 3) 생활습관 개선에 대한 고려단계 평가  
음주/운동/영양/비만: 고려 전단계 vs 고려단계

## 5A 접근법

- Advise (조언하기)
  - 동기유발 면담(격려/지지)
  - 방해요인 대처방법 제공
- Assist (처방하기)
  - 맞춤식 처방
  - 책자/교육자료 제공
- Arrange (의뢰하기)
  - 전문가/관련 기관/보건소 의뢰
  - 다음 방문일 결정



## 생활습관 평가도구

- 타당도 조사가 이루어진 설문지와 신체계측을 통해 평가
- 흡연: 한국어판 니코틴 의존도 설문지 (FTND-K) 6문항
  - 음주: 한국어판 AUDIT 설문지(AUDIT-K) 10 문항

## 생활습관 평가도구

- 운동: 간결하고 명확한 한국형 신체활동량 평가 도구 부재
  - 호주 Lifescripts 가이드의 신체활동량 평가 질문 3문항
  - PAR-Q (Physical Activity Readiness Questionnaire) 7문항
- 영양: 간식식생활진단표 10문항
- 비만: 체질량지수/허리둘레

## 2차 건강진단 교육자료

- 고혈압
- 당뇨병
- 고지혈증
- 고요산혈증/통풍
- B형 간염
- 소화성 궤양
- 빈혈
- 골다공증
- 음주
- 비만
- 금연
- 운동
- 유방암의 조기발견
- 위암, 폐암, 대장암의 조기발견과 예방



## 의료 기관

- 흡연: 보건소 금연 클리닉, 금연 콜 센터
- 음주: 알코올 전문병원, 금주/단주 모임
- 운동: 스포츠센터, 2/3차 의료기관
- 영양: 2/3차 의료기관 영양사
- 비만: 비만 클리닉

## 건강위험습관 유무 확인

- 1차 건강진단 결과통보서의 생활습관개선 권고 항목 확인
- 기타
  - 1차 건진 결과 권고항목이 아니더라도 수검자가 평가 받기 원하는 건강위험습관
  - 1차 검진결과 권고항목이 아니더라도 의료진이 판단하기에 평가가 필요하다고 생각되는 건강위험습관

해당 건강위험습관 평가 시작

## 운동평가



## 운동 평가

본인에게 해당하는 항목을 찾아 ◻ 표를 하십시오.

1. 당신은 30분 이상 많이 나가거나 심장이 뛰는 격렬한 강도의 운동을 1주일에 하고 계십니까?  
(예: 무거운 짐 운반, 달리기, 조깅, 배어로빅, 자전거 타기)  
□0 □1 □2 □3 □4 □5 □6 □7
2. 당신은 30분 이상 강기를 1주일에 보통 몇 회나 하고 계십니까?  
(예: 운동이나 여가로 이 장소에서 저 장소까지 걷기)  
□0 □1 □2 □3 □4 □5 □6 □7
3. 당신은 30분 이상 심장박동이 증가하고 평소보다 숨이 찬 중간 강도의 운동을 보통 몇 회나 하고 계십니까?  
(예: 가벼운 짐 운반, 자전거 타기, 복식 테니스 치기)  
□0 □1 □2 □3 □4 □5 □6 □7

문1~3. 신체활동수준 평가  
Lifestyles 문항  
고강도/저강도/중간강도 신체활동 횟수  
세 문항 점수를 합산  
0-1 점: 신체활동량이 부족한 상태  
2-4점: 그런대로 건강을 유지할 수 있는 상태  
> 5점: 건강을 증진시키기에 충분한 상태

## 운동 평가

신체 활동량이 부족한 수검자에게

- 운동시작 고려 단계 평가  
“운동을 시작할 계획이 있습니까?”
- 운동시작 방해요인 평가

## 운동 조언

- 동기유발 상담
- 개인 맞춤형 조언
  - 신체활동 수준 설명
  - 운동의 건강상 이점 설명
  - 수검자의 생활습관/기호/일상습관 고려
  - 실제적인 활동량 증대 방법 제공
  - “10분씩 나누어 하루 총 30분간 운동하세요.”
  - 운동 방해 요인에 대한 대처방법 제공

## 운동 평가

4. 심장에 문제가 있어서 운동을 할 경우 의사의 권고에 의해서만 하라고 들은 적이 있습니까?  
☐ 예 ☐ 아니요
5. 운동을 할 때 가슴에 통증을 느낀 적이 있습니까?  
☐ 예 ☐ 아니요
6. 지난달에 운동을 하지 않고 있는 동안에도 가슴에 통증을 느낀 적이 있습니까?  
☐ 예 ☐ 아니요
7. 어지럼증이나 의식소실로 인해 군살을 잃은 적이 있습니까?  
☐ 예 ☐ 아니요
8. 운동을 바른 후에 뼈나 관절에 문제가 생긴 적이 있습니까?  
☐ 예 ☐ 아니요
9. 현재 할당이나 심장문제로 의사로부터 처방을 받고 있습니까?  
☐ 예 ☐ 아니요
10. 운동을 하면 안 되는 다른 이유가 있습니까?  
☐ 예 ☐ 아니요

문항 4~10. 운동관련 위험요인 평가  
**PAR-Q**  
 심혈관 질환 선별목적  
 처음으로 운동을 시작할 때 적용  
 이전보다 운동량을 늘리고자 할 때 적용  
 한 문항이라도 ‘예’라고 대답  
 응답한 문항에 대한 정밀 평가 필요

## 운동 처방(전)

운동 처방전

발달일:   
 환자 이름:   
 연령: 나이

1. 과거에 운동 수준은?
  - 건강을 유지하기에도 부족한 수준입니다.
  - 건강을 유지할 수는 있지만 건강을 증진시키기에는 충분하지 않은 수준입니다.
  - 건강을 증진시키기 위해 충분한 수준입니다.
2. 과거에 건강과 삶의 질을 증진시키기 위해 다음과 같은 문항을 권장합니다.
  - 1) 운동 종류
    - 빠르게 걷기
    - 수영
    - 체조/요가
    - 근력운동
    - 기타:
  - 2) 운동 시간
    - 10분
    - 15-30분
    - 30분 이상
    - 기타:
  - 3) 운동 횟수
    - 1주일에 1-2회
    - 1주일에 3-4회
    - 1주일에 5회 이상
  - 3. 운동의 장애 요인과 극복할 수 있는 과거의 경험
    - 시간/기호 부족
    - 날씨
    - 부상/질환
    - 아슬아슬할 줄
    - 낙상
    - 스트레스
    - 심정박동
    - 불타올름
    - 우울증
    - 기타:

모든 전문적인 의료실 도구를 위해서 과거를 메모로 적어주세요.

수치의 대입/제명:

1. 운동 수준 제시
2. 맞춤형 운동 처방
  - 운동종류
  - 운동시간
  - 운동횟수
3. 운동을 통해 호전을 기대할 수 있는 질병 상태 설명  
 지속적인 동기부여  
 환자의 질병 상태 파악
4. 의뢰  
 PAR-Q 선별문항에서 “예”라고 대답한 항목이 있을 때  
 운동 금기 질환이 있을 때
5. 주치의 이름

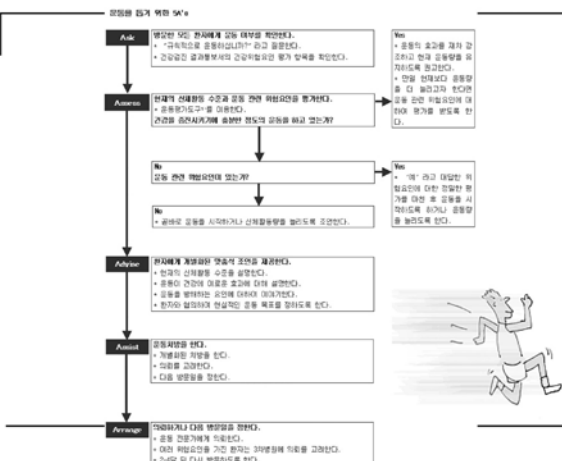
## 운동 처방

- 처음 운동을 시작하는 경우에는 약 3개월 간 점진적으로 저강도 운동에서 중간 강도 운동으로 이행
- 운동 시작 첫 주는 10분 전후로 주 3회 이상 시작하여 점진적으로 1일 30분 이상, 주 5회 이상으로 늘리도록 권장



## 운동 처방

- 고강도 운동으로 진행할 때에는 최소 중간강도로 3-6개월 간 유지한 후 PAR-Q를 통해 운동관련 위험요인을 평가한 후 진행



## Randomized controlled trials of physical activity promotion

- Inclusion
    - RCT
    - Free living adult subjects
  - Conclusion
    - Previously sedentary adults can increase activity levels
    - Promotion : personal instruction, continued support. Moderate exercise
    - Walking fulfills the criteria
- J Epid Comm Health 1995;49:448

## Once a week is not enough: Effects of a group based exercise program for older adults

- HRQoL, aged 65-80 yr
    - Group based exercise program for older adults in Netherlands(10 weeks)
    - RCT: once weekly, twice weekly, education
  - Group2 only improve Vitality+ scale ( $p=.01$ )
  - To improve health, do physical activity at least twice a week
- J Epid Comm Health 2004;58:83

## Leisure time exercise and personal circumstances in the working age population

- Longitudinal regression analysis of the British household panel survey (8 years)
- Reduced likelihood of exercise
  - Having children
  - Working long hours
- Increased likelihood of exercise
  - Retired men and women

## Posters can prompt less active people to use the stairs

- Interview for 1779 persons->658
    - 270 stair users, 388 escalator users
  - Logistic regression : stair use increased significantly
  - Main reason for stair use : improved health(41.4%)
  - Reasons for escalator users : ease of use(30.3%), laziness(24.2%)
- J Epid Comm Health 2000;54:942

## Multilevel modeling of built environment characteristics related to neighborhood walking activity

- Cross-sectional study for 56 city, 577 residents(mean age=74, SD=6.3 years)
  - Main outcome : self-reported walking
  - Positive relation between environment factors and walking activity
    - density of employment places, household density, green & open spaces for recreation, # street intersections
  - Resident level : # nearby recreational facilities related with walking activity
- J Epid Comm Health 2005;59:558



## Physical Activity Guideline (Canada)

- What do the experts say?
  - Endurance activities
  - Flexibility activities
  - Strength activities
- Physical Activity Readiness Questionnaire(PAR-Q)

### Endurance Activities: (4-7 days a week)

Endurance activities help your heart, lungs and circulatory system stay healthy and give you more energy. They range from walking and household chores to organized exercise programs and recreational sports. Check out [Joshua & Maria's Story...](#)

Here are some examples to get you thinking about how to increase your endurance activities:

- walking
- golfing (without a ride-on cart)
- yard and garden work
- propelling a wheelchair ("wheeling")
- cycling
- skating
- continuous swimming
- tennis
- dancing

### Flexibility Activities: (4-7 days a week)

Flexibility activities help you to move easily, keeping your muscles relaxed and your joints mobile. Regular flexibility activities can help you to live better, longer, so that your quality of life and independence are maintained as you get older. Flexibility activities include gentle reaching, bending, and stretching of all your muscle groups. See how Jacqueline did it...

Here are some ideas to help you increase your flexibility activities:

- gardening
- mopping the floor
- yard work
- vacuuming
- stretching exercises
- Tai Chi
- golf
- bowling
- yoga
- curling
- dance



### Strength Activities: (2-4 days a week)

Strength activities help your muscles and bones stay strong, improve your posture and help to prevent diseases like osteoporosis. Strength activities are those that make you work your muscles against some kind of resistance, like when you push or pull hard to open a heavy door.

To ensure good overall strength, try to do a combination of activities that exercise the muscles in your arms, mid-section, and legs. Strive for a good balance - upper body and lower body, right and left sides, and opposing muscle groups (e.g., both the front and back of the upper arm). Here are some ideas to increase your strength activities:

- heavy yard work, such as cutting and piling wood
- raking and carrying leaves
- lifting and carrying groceries (not to mention infants and toddlers!)
- climbing stairs
- exercises like abdominal curls and push-ups
- wearing a backpack carrying school books
- weight/strength-training routines

#### Safe Strength Training

- Start with five minutes of

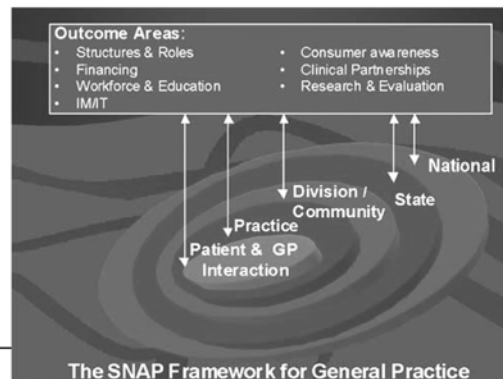


The screenshot shows the Australian Government Department of Health and Ageing website. The main content area is titled "Lifescripts" and describes it as a national initiative for providing lifestyle advice to patients. It mentions that Lifescripts is a national initiative, being implemented through local divisions of general practice, promoting risk factor management in general practice and primary health care services. It was a major component of the Community Awareness and Infrastructure initiative, announced as part of the *Social and Prevention Package* in the 2003-04 Federal Budget.

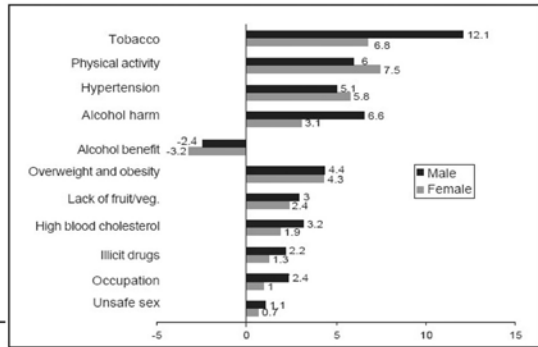
The "About Lifescripts" section states: "The Lifescripts component has been enhanced and expanded with an additional \$2.7m announced in the 2006-07 Federal Budget, making a total of \$5.5m over four years. The focus over the next four years is to build on the investment already made by:"

- increasing the reach and use of the Lifescripts resources in general practice through the Divisions network;
- enhancing GPs skills to assist patients with behaviour change using the Lifescripts resources; and
- adapting the Lifescripts resources for use with Indigenous and culturally and linguistically diverse patients.

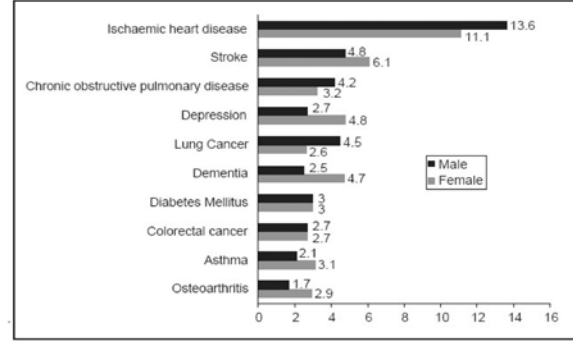
## SNAP Framework for GP



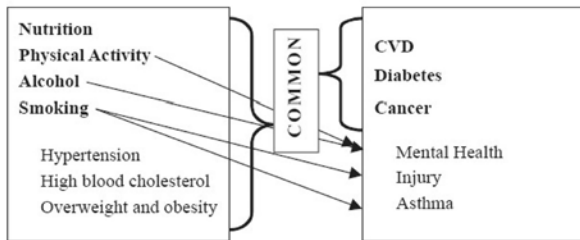
## Attributable risk factor DALYs – % of total DALYs(Disability Adjusted Life Years)



## DALY burden of disease and injury as a proportion of total DALYs (2000)



## SNAP risk factors and the National Health Priority Areas



## Physical Activity Guidelines

- Think of movement as an opportunity, not an inconvenience.
- Be active every day in as many ways as you can.
- Put together at least 30 minutes of moderate-intensity physical activity on most, preferably all, days.
- If you can, also enjoy some regular, vigorous exercise for extra health and fitness.

## An active way to better health.

NATIONAL PHYSICAL ACTIVITY GUIDELINES



This brochure sets out four steps to better health for Australian adults. Together, guidelines recommend the minimum amount of physical activity you need to do to enhance your health. They are not intended for high-level fitness, sports training or vigorous, to achieve the best results, try to ease out of these guidelines and combine as active lifestyle with healthy eating.

1. Think of movement as an opportunity, not an inconvenience.
2. Be active every day in as many ways as you can.
3. Put together at least 30 minutes of moderate-intensity physical activity on most, preferably all, days.
4. If you can, also enjoy some regular, vigorous activity for extra health and fitness.

regular physical activity can:

- help prevent heart disease, stroke and high blood pressure;
- reduce the risk of developing type 2 diabetes and some cancers;
- help build and maintain healthy bones, muscles and joints, reducing the risk of injury; and
- promote psychological well-being.

### Guideline 1

**THINK OF MOVEMENT AS AN OPPORTUNITY, NOT AN INCONVENIENCE.**  
Where ever you are, think of movement of the body as an opportunity for increasing health, not as a time-wasting inconvenience.

**The need for movement**  
The human body was designed to move. Over hundreds of thousands of years of evolution, human beings have used the power of movement, hunting, gathering, farming/food, collecting and building shelter.

but the technology of today has reduced much of the opportunity for human movement. Can you reduce how much we walk, stand and follow driving demands daily network for us both in the workplace and at home. Some constraints such as this, video, DVD and computer, can help us reduce for long periods.

The shift in human movement has been discussed, but at the same time levels of obesity and other health problems have been increasing.

Changing the way we think about movement we need to change our attitude toward physical activity. If we are serious about not being 'less healthy', if we value all movement as an opportunity, rather than an inconvenience, we will be taking a positive step towards better health and preventing disease. We can enjoy the benefits of modern technology without the negative health consequences.

### Guideline 2

**BE ACTIVE EVERY DAY IN AS MANY WAYS AS YOU CAN.**  
Make a habit of walking or cycling instead of using the car, or through instead of using stairs/elevator.

The increase in effort using technology in modern societies has coincided with increasingly poor health. So, we not only have less opportunity to be active, but we have less time. However, it is possible to improve some of the health benefits of regular movement by being more active occasionally.

When active in small ways throughout the day is likely to provide health benefits to older adults, no matter what your age, body weight, health condition or disability.

**Ways to increase activity**  
Increase in daily activity comes from small changes made throughout your day - try to add up. It is important to remember that some activity is better than none, and more is better than a little.

- To make a habit of increasing activity in your day, you can:
  - walk or cycle instead of using the car;
  - park further away from your destination and walk the rest of the way;
  - walk or cycle to and from your train/metro station or bus stop, and get on and off a stop that is further away.

- Take the stairs instead of the lift.
- Walk rather than rest on escalators or travelators.
- Walk in the garden.
- Play with children in an active way.
- Walk or play with pets.
- Challenge family, friends and work colleagues to be active with you.

### Guideline 3

**PUT TOGETHER AT LEAST 30 MINUTES OF MODERATE-INTENSITY PHYSICAL ACTIVITY ON MOST, PREFERABLY ALL, DAYS.**  
We can accumulate your 30 minutes for most throughout the day by combining a few shorter sessions of activity of around 10 to 15 minutes each.

**Moderate-intensity activity isn't hard!**  
Moderate-intensity activity will cause a slight, but noticeable, increase in your breathing and heart rate. A good example of moderate-intensity activity is brisk walking, that is at a pace where you are able to comfortably talk but not sing. Other examples include mowing the lawn, digging in the garden, or medium-paced swimming or cycling.

**Moderate-intensity activity doesn't have to be continuous!**  
Research has shown that accumulated short bouts of moderate-intensity activity are just as effective as continuous activity at improving indicators of health such as blood pressure and blood cholesterol.

**So you can:**

- accumulate 30 minutes or more throughout the day by combining a few shorter sessions of activity of around 10 to 15 minutes each or
- do 30 minutes or more continuously.

**Moderate-intensity activity should, however, be carried out for at least 10 minutes at a time without stopping.**

**You best results combine an active lifestyle with healthy eating.**  
In general, the more variety of nutritious foods including plenty of vegetables, legumes, fruits, breads and cereals (especially wholegrain).

It also involves choosing foods that are low in fat (particularly saturated fat), salt and include only moderate amounts of sugar and food containing added sugar. If you drink alcohol, limiting your intake is recommended. More information on healthy eating and the Dietary Guidelines for Australian adults can be obtained from the Australian Government Department of Health and Ageing.



### Guideline 4

**IF YOU CAN, ALSO ENJOY SOME REGULAR, VIGOROUS ACTIVITY FOR EXTRA HEALTH AND FITNESS.**  
This guideline does not replace Guideline 3. Rather, it adds an extra layer for those who are able, and wish, to achieve greater health and fitness benefits.

**Vigorous activity**  
Research has shown that people who participate in regular vigorous activity are healthier and live longer than those who do not. Vigorous activity is any activity that makes your heart and lungs work hard.

**How hard is vigorous activity?**  
"Vigorous" means activity that makes you "huff and puff".

For example, when taking a full sentence between breaths is difficult, vigorous activity can come from sports such as football, squash, tennis and basketball and activities such as aerobics, circuit training, speed walking, jogging, fast cycling or brisk running. In fact, many of the types of activity should be carried out for a minimum of around 30 minutes, three to four days a week.

**Seeking medical advice**  
Although there's no age barrier to carrying out vigorous activity, medical advice is recommended for those who have been previously inactive, who have heart disease, have other health problems, or who have other major health problems.

Vigorous activity in pregnancy is not recommended without strict medical supervision. Weaving, road racing, swimming and a gradual build-up from an inactive level are also recommended with vigorous activity, in line with most recommended fitness training programs.

**For more information**  
www.health.gov.au  
Other resources that you may find useful include: Everyone wants to be more active. The problem is getting started. Australian Physical Activity Guidelines for adults, Children and Adolescents. Australian Physical Activity Guidelines for adults, Children and Adolescents.

**For more information**  
Each of these can be obtained by calling 1800 00 00 00 and asking for the PDF publications request form.

**National Physical Activity Guidelines for Adults** has been developed through extensive consultation with a wide range of experts in physical activity for the University of Western Australia and the Centre for Health Promotion and Research, Sydney, for the Australian Government Department of Health and Ageing (formerly the Commonwealth Department of Health and Ageing).

### GET HEALTHY. GET ACTIVE.

Building a healthy, active Australia.  
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United States Department of Health & Human Services

Improving the health and well-being of America

Frequent Questions

Home

About HHS

Disasters & Emergencies

Diseases & Conditions

Drug & Food Information

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Value-Driven Health Care

Health Information Technology

Medicare & Medicaid

In the Spotlight

Asthma Awareness

Learn more about asthma, read about [Asthma Awareness Month Events](#).

Review of the Virginia Tech Tragedy

Secretary Mike Leavitt will lead a [review by top federal officials of issues raised by the Virginia Tech tragedy](#).

Value-Driven Health Care

More than 100 million Americans are now served by health plans committed to providing transparent quality and cost information. Read the [press release](#). Learn more about [Value-Driven Health Care](#).

PandemicFlu.gov

Visit [PandemicFlu.gov](#) One-stop access to U.S. Government avian and pandemic flu information. Mask guidance released. Learn more.

News

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May 09: Statement by Mike Leavitt, Secretary of Health and Human Services, Banishing Geriatric Units on Pediatric Innovation Amendment [More»](#)

HHS Family of Agencies

OS - Office of the Secretary

ACL - Administration for Children & Families

ASAP - Administration on Aging

AMH - Agency for Healthcare Research & Quality

ATSDR - Agency for Toxic Substances & Disease Registry

CDC - Centers for Disease Control & Prevention

CMS - Centers for Medicare & Medicaid Services

FDA - Food & Drug Administration

HRSA - Health Resources & Services Administration

NIH - National Institutes of Health

NIJ - National Institute of Justice

NIH - National Institute of Mental Health

NIH - National Institute of Neurological Disorders & Stroke

NIH - National Institute of Nursing Research

NIH - National Institute of Child Health & Human Development

NIH - National Institute of Diabetes & Digestive & Kidney Diseases

NIH - National Institute of Environmental Health Sciences

NIH - National Institute of General Medical Sciences

NIH - National Institute of Heart, Lung, & Blood

NIH - National Institute of Mental Health

NIH - National Institute of Neurological Disorders & Stroke

NIH - National Institute of Nursing Research

NIH - National Institute of Child Health & Human Development

NIH - National Institute of Diabetes & Digestive & Kidney Diseases

NIH - National Institute of Environmental Health Sciences

NIH - National Institute of General Medical Sciences

NIH - National Institute of Heart, Lung, & Blood

Department of Health and Human Services

Centers for Disease Control and Prevention

Division of Nutrition and Physical Activity

Introduction

Proper nutrition is critical to good health. But identifying which foods you need for a healthy diet can be challenging. These resources can help you get started. [More»](#)

Physical Activity

Regular physical activity reduces the risk for many diseases, helps control weight, and strengthens muscles, bones, and joints. For older adults, it can also reduce the risk for falls. [More»](#)

Overweight and Obesity

Increases in obesity — among both adults and children — have prompted concern about the implications for Americans' health. Many factors contribute to this complex health issue. [More»](#)

Programs & Campaigns

Project Better Homes for America

The United States Department of Health and Human Services (HHS) is proud to announce the launch of the "Project Better Homes for America" campaign. This campaign is a national effort to encourage the consumption of fruits and vegetables for improved public health. CDC developed and maintains the site in partnership with federal agencies and other organizations.

Physical Activity for Everyone

Introduction

Everyone Year Livin'

Who ever said physical activity is all work and no play? In fact, it can be just the opposite! There is no need to think of strenuous exercise or being athletic. Instead, imagine doing the physical activities you enjoy and reach the health benefits faster!

Selected Resources

VERB

Encouraging teens to be physically active is a continued task. The Powerful Places, Powerful People, Web site has been updated with new poetry, exciting fun ideas, and an interactive section on leading local efforts.

Designed for kids 8-13 years old, VERB and M&M gives them the information they need to make healthy lifestyle choices.

Stronger, Smarter, Stronger Training for Older Adults

Stronger is an exercise program based upon sound scientific research involving strengthening exercises. The Physical Activity for Health Professionals section offers information and tools for the health professional. It provides key reference documents, data and performance resources and information to assist you with program planning and evaluation, community development and promotion of physical activity.

Physical Activity for Everyone

Components of Physical Fitness

Cardiorespiratory endurance

Muscular strength

Muscular endurance

Body composition

Flexibility

What is "cardiorespiratory endurance (cardiorespiratory fitness)"?

Cardiorespiratory endurance is the ability of the body's circulatory and respiratory systems to supply fuel during sustained physical activity (VO2max). 1985 as adapted from Coates & Gullone, 1985. To improve your cardiorespiratory endurance, try activities that keep your heart rate elevated at a rate level for a sustained length of time such as walking, swimming, or dancing. The activity you choose does not have to be strenuous to improve your cardiorespiratory endurance. Start slowly with an activity you enjoy, and gradually work up to a more intense pace.

What is "muscular strength"?

Muscular strength is the ability of the muscles to exert force during an activity (1RM). 1985 as adapted from Williams & Costill, 1985. The key to making your muscles stronger is working them against resistance, whether that be from weights or gravity. If you want to gain muscle strength, try exercises such as lifting weights or simply taking the stairs.

What is "muscular endurance"?

Muscular endurance is the ability of the muscles to continue to perform without fatigue (VO2max). 1985 as adapted from Williams & Costill, 1985. To improve your muscular endurance, try cardiorespiratory activities such as walking, jogging, bicycling, or dancing.

Physical Activity for Everyone

Recommendations

There is good news for all Americans. Scientific evidence shows that physical activity done at a moderate intensity level can promote health benefits (CDC/NCHS, 1995). If people have been sedentary, they can improve their health and well-being with regular, moderate levels of activity each day.

Those who participate in regularly scheduled activities regularly should be encouraged and supported in their efforts to increase their activity at a higher intensity or perform longer other than health benefits. The level of activity may not be a realistic goal for everyone, at least not at first. Many Americans, however, find it easier to increase their activity level and reach the health benefits of a regular active lifestyle. It is a good idea to set a goal for increasing your physical activity and enjoying the benefits of a regular active lifestyle that includes a variety of moderate- and vigorous-intensity activities. See [Physical Activity Guidelines for Americans](#) (PDF-440) for a chart that lists the intensity levels of many types of activities.

Adults should strive to meet at least one of the following physical activity recommendations.

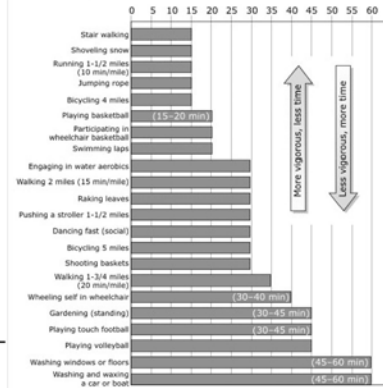
- Adults should engage in [moderate-intensity](#) physical activities for at least 30 minutes on 5 or more days of the week. Centers for Disease Control and Prevention/National College of Sports Medicine
- OR
- Adults should engage in [vigorous-intensity](#) physical activity 3 or more days per week for 20 or more minutes per session. Healthy People 2010

# Physical Activity Guidelines

If...	Then...
You do not currently engage in regular physical activity.	You should begin by incorporating a few minutes of physical activity into each day, gradually building up to 30 minutes or more of moderate-intensity activities.
You are now active, but at less than the recommended levels.	You should strive to adopt more consistent activity: <ul style="list-style-type: none"> <li>moderate-intensity physical activity for 30 minutes or more on 5 or more days of the week, or</li> <li>vigorous-intensity physical activity for 20 minutes or more on 3 or more days of the week.</li> </ul>
You currently engage in moderate-intensity activities for at least 30 minutes on 5 or more days of the week.	You may achieve even greater health benefits by increasing the time spent or intensity of those activities.
You currently regularly engage in vigorous-intensity activities 20 minutes or more on 3 or more days of the week.	You should continue to do so.

\*Scientific evidence to date supports the statements above.

### Number of Minutes of Activity Required to Burn 150 kcal



### 운동처방의 실례

- 운동종류
  - 걷기, 수영, 자전거타기
  - 근력운동: 아령, 팔굽혀펴기, 윗몸일으키기
- 운동강도
  - THR = 55-90% MHR
  - RPE 11-13
- 운동시간 : 30-60분
- 빈도 : 3~5회/주
- 운동순서 : 준비운동 - 본운동 - 정리운동
- 2~4주마다 feedback

### 결 론

- Health Behaviors 실태 확인 - 운동 여부
- 운동동기, 운동 위험요인, 운동 상태
- 5A
  - Ask-Assess-Advise-Assist-Arrange
- 운동처방
  - Endurance, Strength, Flexibility
  - 종류, 강도, 시간, 빈도, 지속기간
- Monitor & Encouragement

### References

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- <http://www.phac-aspc.gc.ca/pau-uap/paguide/index.html>
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- <http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-publth-strateg-lifescrpts-index.htm>