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ALDO MORO

CORSO DI IGIENE

**Scuola
di
Medicina**

Levels of prevention in health



Prevention: an evolutive concept

Prevention, in a narrow sense, means averting the development of a pathological state.

*In a broader sense, it includes all measures—definitive therapy among them— that **limit the progression** of disease at any stage of its course*

Clark DW, MacMahon B. Preventive medicine. Boston, MA: Little, Brown & Co,1967.



Prevention: an evolutive concept

*Diseases prevention covers measures not only to prevent the occurrence of disease, such as risk factor reduction, but also to **arrest its progress** and reduce its consequences once established*

WHO 1998

Action to reduce or eliminate or reduce the onset, causes, complications, or recurrence of disease

Australian National Public Health Partnership, 1998



Preventable causes of the diseases BEING

- **B**iological factors and **B**ehavioral Factors
- **E**nvironmental factors
- **I**mmunologic factors
- **N**utritional factors
- **G**enetic factors
- **S**ervices, **S**ocial factors, and **S**pirituals factors

JF Jekel, Epidemiology, Biostatistics, and Preventive Medicine, 1996



Levels of prevention

- Primordial prevention
- Primary prevention
- Secondary prevention
- Tertiary prevention
- Quaternary prevention



Levels of prevention: different target

Level	target
Primordial prevention	Health determinants
Primary prevention	Healthy subjects
Secondary preventions	Asymptomatic subjects
Tertiary prevention	Ill patients
Quaternary prevention	Subgroup of ill patients



Primordial prevention

- **minimize future hazards** to health
- **hence inhibit the establishment factors** (environmental, economic, social, behavioural, cultural) known to increase the risk of disease
- It addresses broad health determinants rather than preventing personal exposure to risk factors



Primordial prevention

Teens / [Drugs & Health Blog](#) / [If You're Under Age 21, Drinking Is Always Illegal](#)

Drugs & Health Blog

If You're Under Age 21, Drinking Is Always Illegal

Sara Bellum

May 02, 2013

You're going to an after-prom party, and your parents ask if the host's parents will be there. You may say, "yes," and it may be true, but you also secretly may know that they will allow underage guests to drink alcohol. You think this is okay, because, after all, an adult is there.

Not true.





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Primordial prevention



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Primary prevention

preventing the onset of specific diseases
via risk reduction:

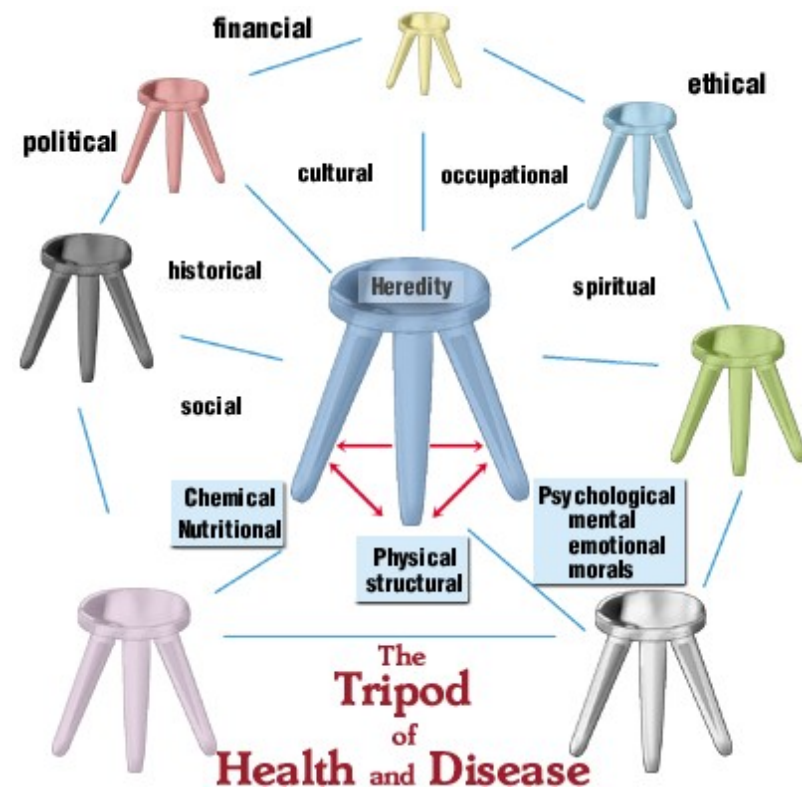
- by altering behaviours or exposures that can lead to disease
- by enhancing resistance to the effects of exposure to a disease agent



Primary prevention

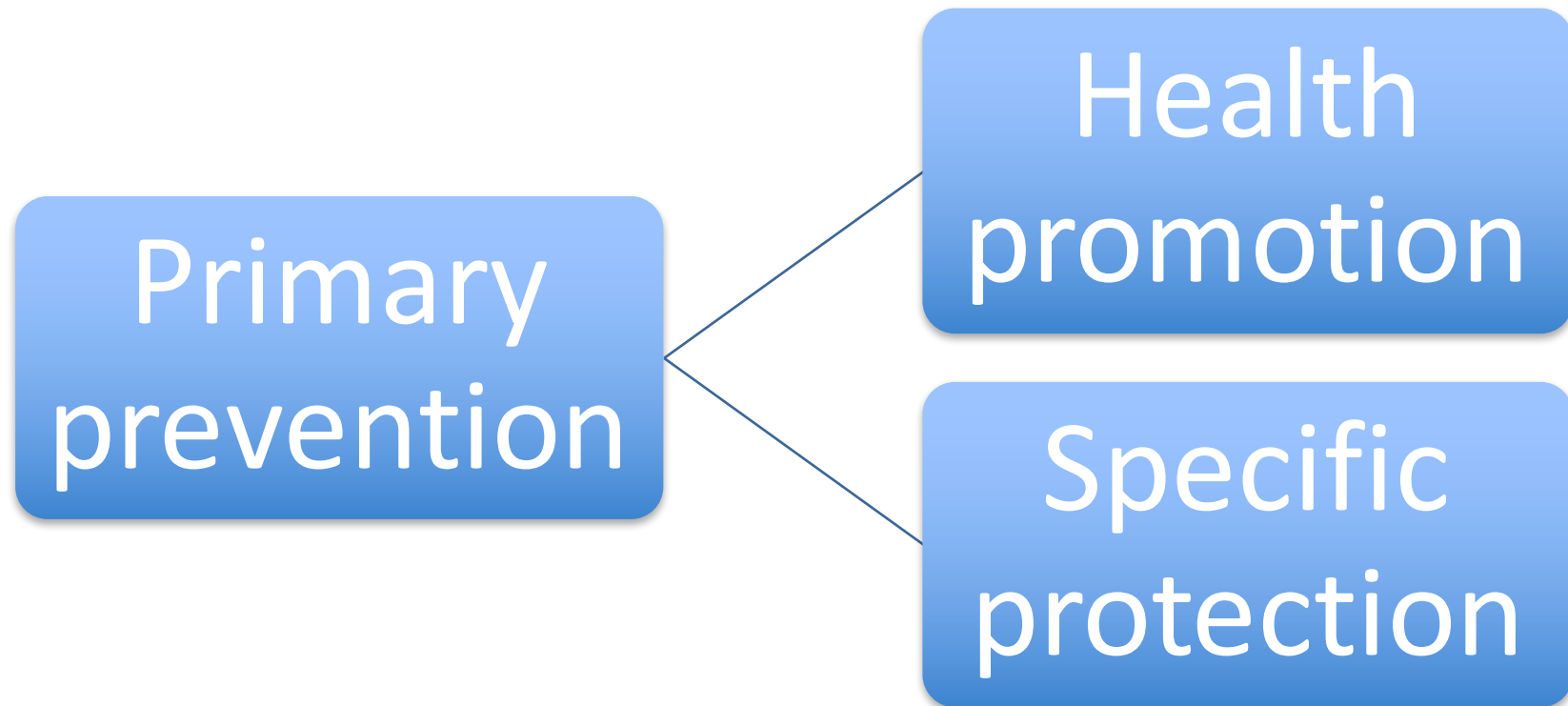
Positive health

achievement and maintenance of an acceptable level of health that will enable every individual to **lead a socially and economically productive life**



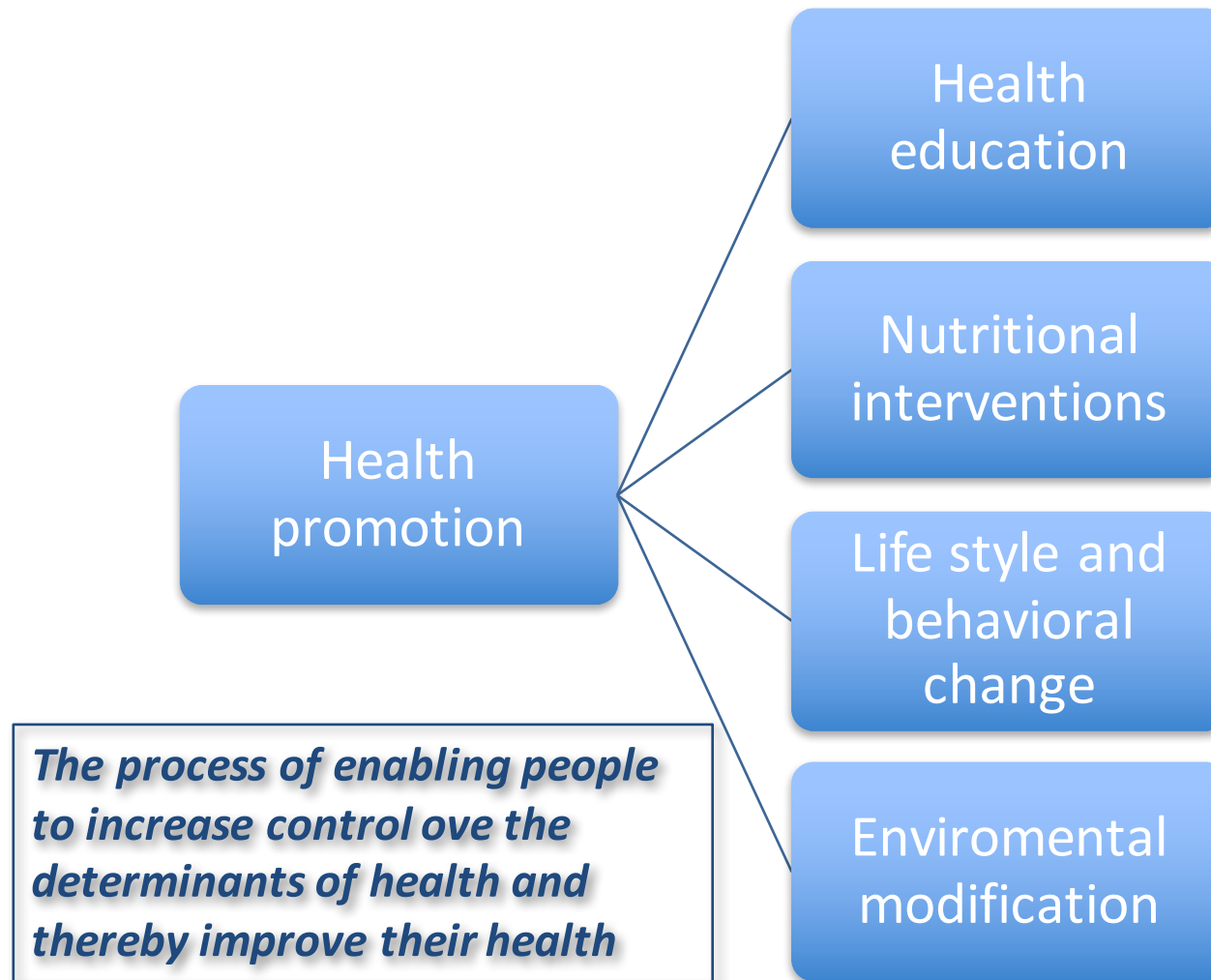


Primary prevention



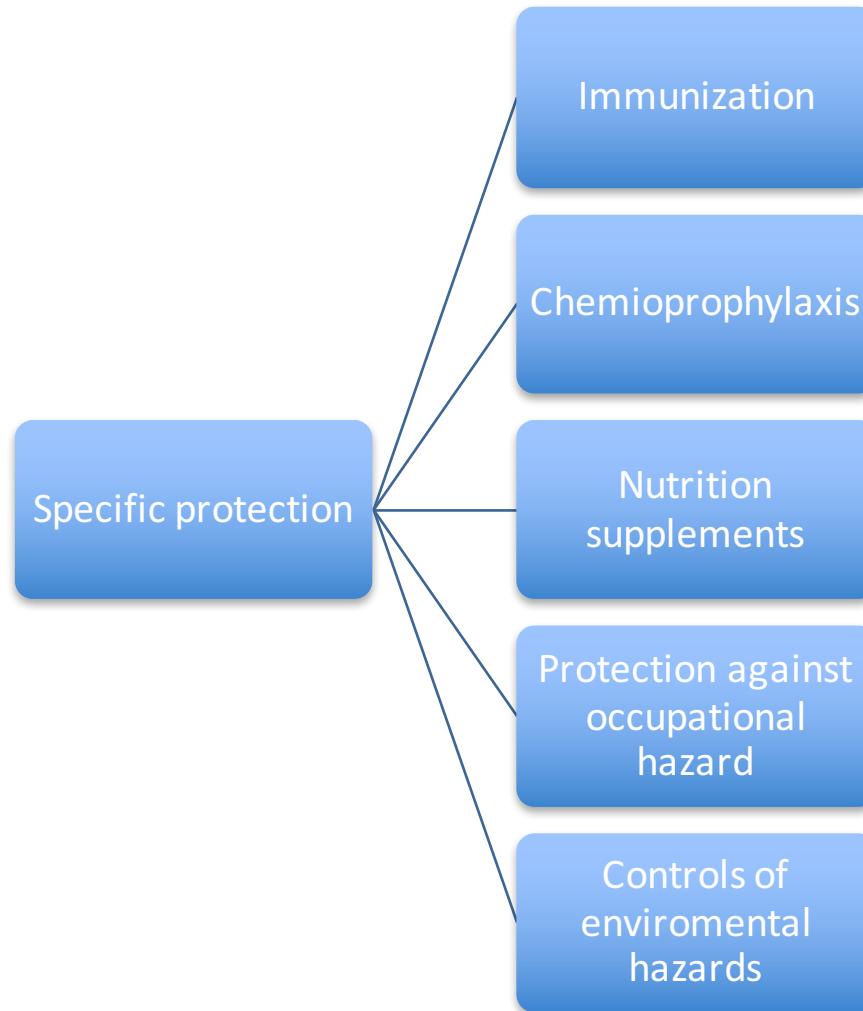


Primary prevention





Primary prevention





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Health promotion

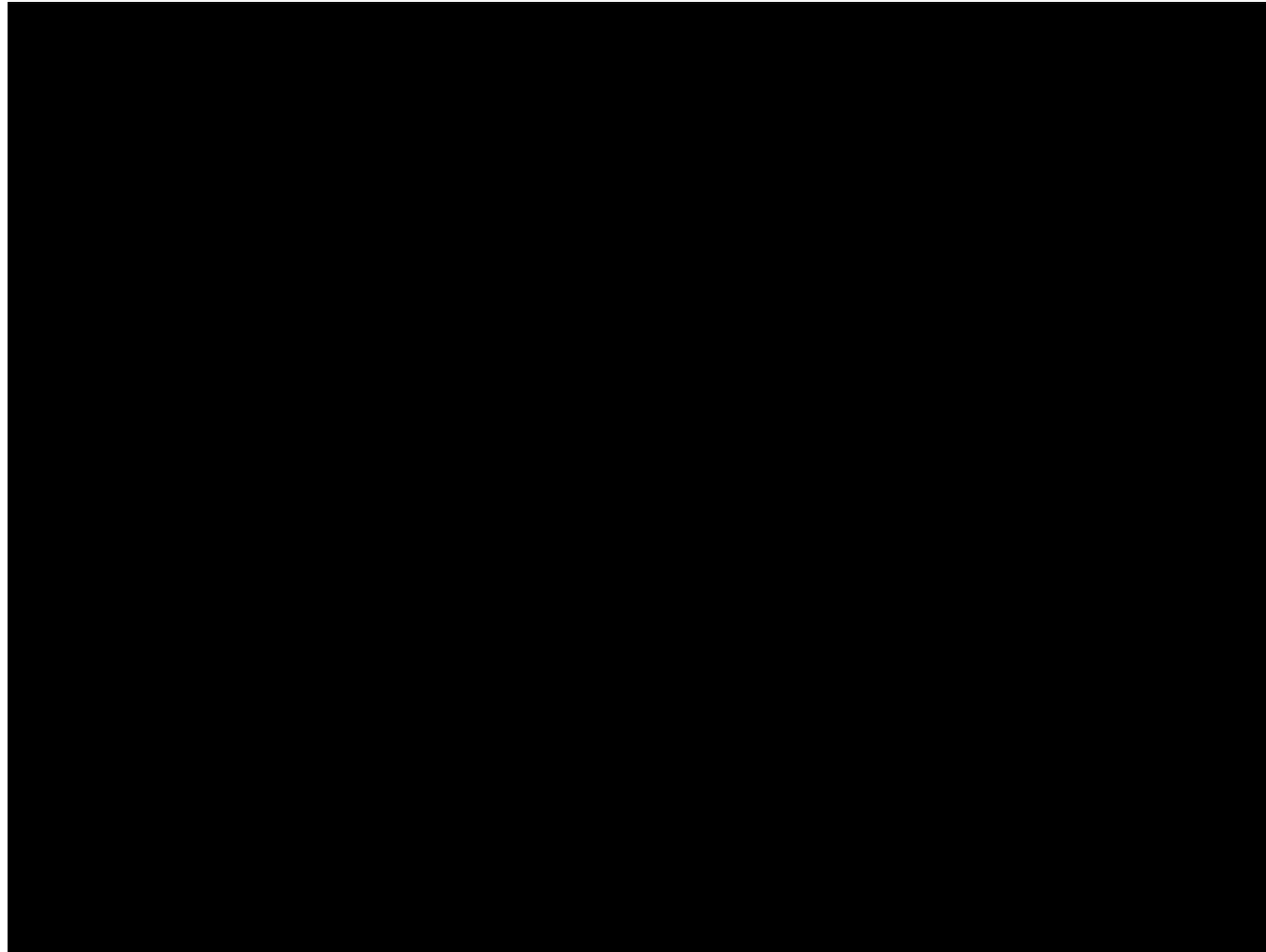




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Health promotion





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Specific protection

The screenshot shows the WHO website interface. At the top, there are language options: عربي, 中文, English, Français, Русский, and Español. Below these are social media icons for RSS, YouTube, Twitter, Facebook, Google+, and a search icon. The main navigation bar includes: Home, Health topics, Data, Media centre, Publications, Countries, Programmes (highlighted), Governance, and About WHO. A search box is located on the right of this bar.

World Immunization Week 2016: Close the immunization gap

Immunization game-changers should be the norm worldwide

21 April 2016 -- Immunization averts 2 to 3 million deaths annually. However, an additional 1.5 million deaths could be avoided, if global vaccination coverage improves. Today, nearly 1 in 5 children worldwide are still missing routine immunizations for preventable diseases. During World Immunization Week 2016, WHO highlights recent gains in immunization coverage, and outlines further steps needed to meet global vaccination targets by 2020.

[Read the press release](#)
[Watch the video on immunization week](#)
[Read the commentary on vaccines](#)

WORLD IMMUNIZATION WEEK 2016
www.who.int/campaigns/immunization-week/2016

CLOSE
THE IMMUNIZATION
GAP

IMMUNIZATION FOR ALL
THROUGHOUT LIFE



Approaches for primary prevention

- **Mass strategies**

*directed at the whole population
irrespective of individual risk level*

- **High-risk strategies**

*directed to people at special or major
health risk*



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Population strategies





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High risk strategies





Secondary prevention

procedures that detect and treat pre-clinical pathological changes and thereby control disease progression

- Oncological screening
- Cardiovascular/metabolic screening



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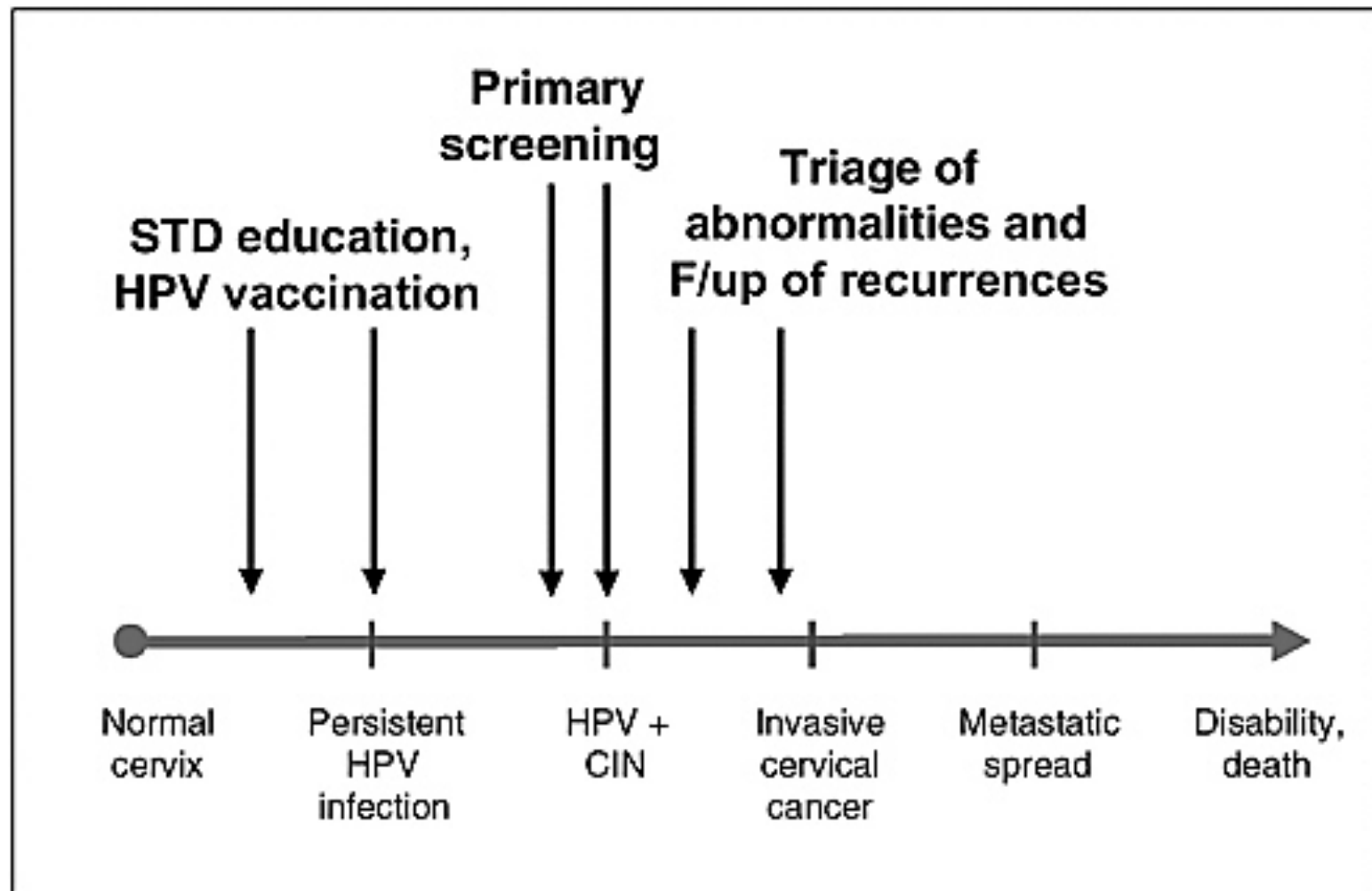
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The milestone of secondary prevention

- Early diagnosis of asymptomatic subjects
- Adequate treatment that could arrest the disease process



Secondary prevention





Tertiary prevention

- All the measures available to reduce or limit impairments and **disabilities**, and to promote the patients adjustment to irremediable conditions
- The milestones of tertiary prevention are
 - Disability limitation
 - Rehabilitation



Disability limitation

Disease

Impairment

Disability

Handicap





Disability limitation Ictus

Ictus

Impairment: Patient loss the ability to use the right arm

Disability: the patient is not able to perform his work or other occupation

Handicap: the patient could begin unemployed



Rehabilitation

The combined and coordinated use of medical, social, educational and vocational measures for **training and retraining** the individual to the **highest possible level of functional ability**

- **Medical rehabilitation**
- **Vocational rehabilitation**
- **Social rehabilitation**
- **Psychological rehabilitation**



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Rehabilitation





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Rehabilitation





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Vocational rehabilitation programs





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Vocational rehabilitation programs

Charlotte Office
(704) 563-1224

Triad Offices
(336) 856-1234



DUNCAN LAW
www.DuncanLawOnline.com



Prevention level

Disease	Intervention level	Primary	Secondary	Tertiary
Colorectal cancer	Individual	Counselling on healthy lifestyles: dietary counselling for people at risk of colorectal cancer, etc.	Hemoccult stool testing to detect colorectal cancer early	Follow-up exams to identify recurrence or metastatic disease: physical examination, liver enzyme tests, chest x-rays, etc.
	Population	Publicity campaigns alerting the public to the benefits of lifestyle changes in preventing colorectal cancers; promotion of high fibre diets; subsidies to help people access exercise programmes; anti-smoking campaigns	Organized colonoscopy screening programs	Implementation of health services organizational models that improve access to high-quality care
Infectious diseases: hepatitis C	Individual	Counselling on safe drug use to prevent hepatitis C virus (HCV) transmission; counselling on safer sex	Screening for HCV infection of patients with a history of injection drug use	HCV therapy to cure infection and prevent transmission
	Population	HCV prevention includes safer sex practices, programmes to discourage needle sharing among intravenous drug users, etc.	Establish a universal testing system for HCV in high risk groups	(Similar to primary prevention): ensuring close control of high risk sites such as tattoo parlours that have been associated with outbreaks
Metabolic syndrome	Individual	Nutrition and exercise counselling	Screening for diabetes	Referral to cardiac rehabilitation clinics
	Population	Built environment favourable for active transport (walking, bicycling rather than using a car)	Community level weight loss and exercise programs to control metabolic syndrome	Implementation of multidisciplinary clinics



Quaternary prevention

an action taken to identify a patient at risk of **over-medicalization**, to protect him from new medical invasion, and to suggest to him interventions which are ethically acceptable

National Public Health Partnership. Preventing chronic disease: a strategic framework. Background paper. Melbourne, Australia: National Public Health Partnership, 2001



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5 levels of prevention

