

New Guidelines for Hypertension Increases Those who Are Defined as "At Risk"

Recently the Joint National Committee on the Prevention, Detection, Treatment, and Evaluation of High Blood Pressure came out with its seventh guideline (JNC7). Notably, in this guideline, the threshold of blood pressure readings for detecting blood pressure were modified and lowered and a new class (pre-hypertension) was created. The guidelines were based on an exhaustive analysis of many research studies. It is unclear how much this will change clinical practice and

what will be done with the new category. This much is fairly clear, however. Unlike many conditions, where there is a distinct cutoff in lab tests between those with a disease and those without, blood pressure tends to have a fairly linear relationship with risk of heart disease and stroke. **In other words, the lower the blood pressure the better. Regardless of one's blood pressure, (s)he should modify lifestyle to get the blood pressure as low as possible.**

The Seventh Report of the Joint National Committee (JNC7) on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure.¹

New classification (2003)		Previous classification (1997)	
140/90 or above	High	High	140/90 or above
120-139 / 80-89	Prehypertension	Borderline	130-139 / 85-89
		Normal	129/84 or below
119/79 or below	Normal	Optimal	120/80 or below

Key points from the guidelines:

- If you have a blood pressure of 120 to 139 systolic (the upper number in a blood pressure measurement) over 80 to 89 diastolic (lower number), you are considered prehypertensive. You need to begin lifestyle modifications to prevent stroke and heart disease. Lifestyle modifications include losing excess weight, exercising, limiting alcohol, following a heart-healthy diet, cutting back on salt, and quitting smoking.
- The increase in stroke and heart disease risk begins at blood pressures as low as 115/75 mmHg and doubles with each increase of 20 mmHg systolic blood pressure and 10 mmHg diastolic. For example, if your blood pressure were to increase from 115/75 mmHg to 135/85 mmHg, your risk of stroke and heart attack would double.
- The lifetime risk for high blood pressure is much greater than previously thought. Ninety percent of those who, at age 55, do not have hypertension will eventually develop it.
- If you are older than 50, a systolic blood pressure over 140 mmHg is a more important risk factor for stroke and heart disease than your diastolic blood pressure.
- Most people who need medication to control their high blood pressure should take a thiazide-type diuretic either alone or with another hypertension medication. You may need

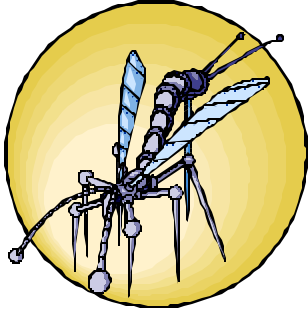
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Special points of interest:

- New guidelines increase the numbers of people who are defined as "at risk"
- The lower the blood pressure, the better
- Ninety percent of people over age 55 without hypertension will eventually develop it
- Diuretics are the first choice in medication management for most people

What is the Best Mosquito Repellent?



In addition to being a nuisance by causing itching and blemishes, mosquitoes can be the vector for more serious infections, including the West Nile Vi-

rus. Because of this, it is important to know how to reduce the exposure. In an article published in the *New England Journal of Medicine*, investigators compared 16 products designed to repel mosquitoes, including compounds containing (DEET), IR3535, soybean oil, and citronella, Skin-so-Soft moisturizing cream, 3 wristbands impregnated with repellent; and one repellent that was a blend of botanical agents. The primary outcome was the time to first bite. The wristbands were the least effective with a time to bite of only 15 seconds, and Skin-so-Soft was not much better (2.8 to 10.3 minutes depending on the formulation). Citronella products and Skin-So-Soft BugGuard Plus were slightly more effective, with a range of 10.3 to 22.9 minutes. Soybean oil, found in Bite Blocker for Kids, was effective for 94.6 minutes. DEET however, was the most effective mosquito

repellent with a time to first bite of 112 minutes for the 6.65% concentration, 234 minutes for the 20% concentration, and 301 minutes for the 23.8% concentration found in Deep Woods Off.

DEET-containing compounds are the most effective mosquito repellent. The higher the concentration, the more effective. 2% soybean oil is a reasonable alternative for young children if you want to avoid DEET. Long sleeve shirts and other physical protection is also very important and also serves to protect against tick bites.

Reference: *Fradin MS, Day JF. Comparative efficacy of insect repellents against mosquito bites. N Engl J Med 2002; 347:13-8*

Echinacea Probably not effective for the common cold

Echinacea has been widely promoted for treatment of the common cold. There are two different species of Echinacea used in health care (*e. angustifolia* and *e. purpurea*). In a recent study, 148 students were given either a combination of these two species in a capsule (a product commonly available in health stores), or a placebo at the first signs of symptoms of a cold. The researchers were unable to detect any differences in the duration of

the cold.

Is this the final story on Echinacea? Certainly not! There are thousands of people who feel they benefit from the herb. In addition, the study would not have been able to detect a difference in the duration of symptoms if the benefit were less than two days of symptom relief. In addition, there are different formulations and it is possible that one or more formulations

could be effective. The bottom line is that if Echinacea is effective, the magnitude of benefit is likely to be small and will only be present if the herb is taken at the very first signs of a cold.

Reference: (*Barrett BP, Brown RL, Locken K, Maberry R, Bobula JA, D'Alessio D. Treatment of the common cold with unrefined echinacea. A randomized, double-blind, placebo-controlled trial. Ann Intern Med 2002; 137:939-46.*)

"The bottom line is that if Echinacea is effective, the magnitude of benefit is likely to be small"

And, on the other hand, Zinc Nasal Gel May be Effective for the Common Cold



Here is another preparation that has been widely touted to treat the common cold. Zinc lozenges have been studied in the past with mixed results. If there is a benefit, it is likely to be very small. In a recent study, investigators enrolled 80 patients with symptoms of a cold for 24-48 hrs. and treated them with either zinc nasal gel or a placebo. The group receiving the nasal gel had a time reduction to resolve all symptoms of 1.7 days. There was some increase in side effects in the treated group, although the magnitude was not

judged to be significant.

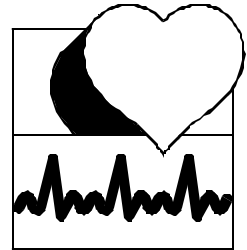
Bottom line: This was a small study and the side effect issue could have been better defined. Nevertheless, zinc nasal gel seems to be safe and may be effective to treat the common cold if it is taken at the earliest signs of a cold

Reference: *Mossad SB. Effect of zincum gluconicum nasal gel on the duration and symptom severity of the common cold in otherwise healthy adults. QJM 2003; 96:35-43.*

Hypertension (continued)

- Most people who need medication to control their high blood pressure should take a thiazide-type diuretic either alone or with another hypertension medication. You may need initial treatment with other classes of medications; angiotensin-converting enzyme (ACE) inhibitors, angiotensin receptor blockers (ARBs), beta-blockers, or calcium channel blockers if you have other conditions, such as diabetes, heart failure, or chronic kidney disease.
- Most people with high blood pressure will need two or more medications, including a thiazide-type diuretic, to lower their blood pressure to below 140/90 mmHg, the goal for people with uncomplicated hypertension. If you have other conditions, such as diabetes, heart failure, or chronic kidney disease, your goal blood pressure is lower: 130/80 mmHg.

¹Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (2003). The seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. NIH Publication No. 03-5233. Bethesda, MD: U.S. Department of Health and Human Services.



Guest Article: Interval Training - A Primer

by Len Glassman

The American College of Sports Medicine suggests that individuals perform cardiovascular (endurance) training to improve the heart and lungs and resistance training to improve muscular strength.¹ It has been suggested that individuals develop an exercise program that accounts for both types of training. The problem for most newcomers and veterans alike is finding the time to incorporate both types of training into their hectic schedules. A solution to this is called interval training, which combines both cardiovascular and resistance training in the same exercise session.

Interval training is an effective new approach to the ever pressing question of what to do with your precious exercise minutes.

Endurance and Resistance Exercises = Interval Training

Resistance and endurance training both improve physical capacity and health. You may prefer one over the other, yet current guidelines for exercise prescription suggest that both should be done to improve physical capacity.

Endurance training (such as brisk walking, running, hiking, biking), im-

proves the functions of the heart and lungs, including cardiac hypertrophy, decreased resting heart rate, increased stroke volume, and increased skeletal muscle capillary density and hypertrophy. Improvements in one's endurance allows the body to function more efficiently, and increases enzyme action for metabolism. Endurance training also decreases a person's risk for heart disease, stroke, diabetes and mortality.³ Resistance training (such as strength training using weights or resistance tubing), helps to strengthen the skeletal and muscular systems, including increased bone density and muscle size and strength. Resistance training can also increase fat-free weight and decrease body-fat levels. Having additional muscle mass may also increase resting metabolism, which plays an important role in increasing energy expenditure.² All of these changes are beneficial in decreasing the chance for obesity, osteoporosis, diabetes, cardiovascular disease and, in older people, the number of falls.

Amount of exercise

Exercise prescriptions to improve cardiovascular and fitness levels suggest that exercise should be done three to five days per week, for 30 to 60 minutes, at an intensity of 40 to 85 percent of maximal heart rate.¹ Beginning exercisers should start at the lower end of the exercise prescription and, as they improve, progressively increase the time and intensity. The specific type of training to

perform depends on one's health and fitness goals.

Exercise prescriptions for resistance training suggest performing eight to ten exercises at least twice per week.¹ Those exercises should include both upper- and lower-body exercises, and should be designed to improve the strength of the muscles exercised.

Interval training is a form of cross training performed three times per week for approximately 45 minutes to one hour per session. In this type of training, exercisers perform combination sets of endurance and strength training exercises (such as lunges or squats with weights or plyometric exercises with weights), for a designated period of time (depending upon one's fitness level), then transfer to heavier resistance exercises, performing approximately eight to fifteen repetition maximum lifts (depending upon one's fitness goals) of each resistance exercise.

Training order

When performing concurrent resistance and endurance training, most research suggests that resistance training be done first, followed by endurance conditioning.³ However, the training order is dependent on the client's goals. If the goal is to maximize weight loss while maintaining

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Interval training

or increasing fat-free mass, then interval based endurance training should be done first in the exercise session, followed by resistance conditioning. Conversely, if increases in muscle mass and strength are the desired goals, then resistance training should precede endurance conditioning.

Conclusion

Interval training can be beneficial for all ages, abilities and lifestyles. With the proper exercise prescription, order and dedication, improvements can be made in fitness level and capacity, and overall health.

REFERENCES

1. ACSM position stand. The recommended quantity and quality of exercise for developing and maintaining cardiorespiratory and muscular fitness, and flexibility in healthy adults. *Medicine and Science in*

Sports and Exercise 30(6): 975-991, 1999.

2. Foss, M.L., and S.J. Keteyian. *Fox's Physiological Basis for Exercise and Sport*. WCB McGraw-Hill: Boston, Mass., 1998.

3. Sale, D.G., J.D. MacDougall, I. Jacobs and S. Garner. Interaction between concurrent strength and endurance training. *Journal of Applied Physiology* 68(1): 260-270, 1990

Dr. Eidus's comments: *Interval training is an outstanding way to improve your health. It combines both cardiovascular fitness and muscle strengthening. For those who find this to be a little daunting, you can start on a more modified regimen. Remember, as little as 20 minutes of cardiovascular exercise three times a week can reduce your risk for heart disease. For osteoporosis prevention, weight bearing exercise is a must. For people with heart disease or several risk factors, consult your physician before start-*

ing any new exercise regimen. For those who need extra motivation or are not sure of proper exercise technique, a personal trainer such as Mr. Glassman can be of great value.

This article was prepared by Len Glassman, a Certified Personal Trainer & Health Nutritionist at Personal Best Fitness Center located in Garwood, New Jersey (908) 456-0340. Len specializes in goal oriented strength, flexibility and sports specific training of men, women and teenage children.