MEMORANDUM

DATE: June 21, 2012

TO: All Members of the Delaware State House of Representatives

FROM: Ms. Daniese McMullin-Powell, Chairperson
State Council for Persons with Disabilities

RE: S.B. 214 [Physical Activity for Elementary School Students]

The State Council for Persons with Disabilities (SCPD) has reviewed S.B. 214, which requires that Delaware public schools provide a minimum of 150 minutes of moderate to vigorous physical activity weekly for all K-5 students. A student’s program of physical activity would be consistent with any IEP. Each elementary school would include a physical activity plan in its school profile submitted to the Department of Education. Finally, the DOE would issue implementing regulations. SCPD endorses the proposed legislation and has the following observations.

First, students who are physically fit perform better academically and have fewer suspensions days and absenteeism;

Second, national guidelines recommend that children accumulate a minimum of 60 minutes of moderate physical activity daily; and

Three, 40% of children ages 2-17 in Delaware are overweight or obese.

These observations are consistent with the findings and commentary in the attached articles. Additional background is contained in the attached June 8, 2012 News Journal article which highlights the support of the Nemours Foundation for the bill.
Thank you for your consideration and please contact SCPD if you have any questions regarding our observations on the proposed legislation.

cc: Mr. Brian Hartman, Esq.
    Ms. Susan Haberstroh
    Governor's Advisory Council for Exceptional Citizens
    Developmental Disabilities Council

Sh 214 physical activity 6-19-12
RESEARCH BREAKTHROUGH

EXERCISE = SCHOOL ACHIEVEMENT

An extensive California study finds a direct connection between students' fitness and academic performance.

We've suspected it all along, but now a large-scale study of California fifth-, seventh-, and ninth-graders has shown that the most physically fit kids perform better academically.

The study: In the spring of 2001, the California Department of Education gave a standardized reading and mathematics test, as well as a "Fitnessgram" test to 353,000 fifth-graders, 322,000 seventh-graders, and 279,000 ninth-graders. The Fitnessgram, developed by the Cooper Institute for Aerobics Research in Dallas, assesses six major areas of physical fitness, including aerobic fitness, body fat, strength, and flexibility.

The results: In all three grades, achievement scores increased with increasing levels of fitness as measured by the Fitnessgram. The relationship was stronger in mathematics than in reading. (See chart for more details.)

Comment: "This statewide study provides compelling evidence that the physical well-being of students has a direct impact on their ability to achieve academically," says Delaine Eastin, California's state superintendent of public information.

—AMBY BURFOOT

Achievement Test

In grades 5, 7, and 9, the California students at the highest fitness level scored much better on an achievement test than those at the lowest fitness level.

KEY:
BLUE = READING
ORANGE = MATH

Reader Poll
How many marathons have you run?

Visit www.runnersworld.com to participate in our weekly polls.

61%
6%
8%
24%
7%
0-10
11+
0-10
the largest running event on the African continent. At the same time it's become the standard-bearer for mass-participation running in a nation, which despite its unparalleled level of achievement at the Olympic and world level, has no history or tradition of competition for the common man.

The success of the race is largely due to the efforts of two-time Olympic 10,000-meter champion and multiple world-record holder Haile Gebrselassie, whose influence, support, and involvement has allowed it to prosper. "Without Haile, none of this would be possible," says the event's Amharic-speaking British race director, Richard Nerurkar. "The event has been self-funding from the first year, it even produces a surplus which goes back to the Ethiopian Athletics Federation and local charities. But trying to cut through the bureaucracy of the country without Haile's support would have been impossible."

Addis Ababa is high (7,874 feet) and hot (72 degrees F), but the roads are good and wide, the kilometer markers accurate, and there were makeshift showers for cooling off along the route. Ethiopians Silesie Sihine and Tirunesh Dibaba set men's and women's course records of 29:54 and 34:48. Most runners who crossed the finish line—from athletes with Olympic gold-medal aspirations to barefoot 5-year-olds walking the course beside their mothers—received a commemorative medal on a red, yellow, and green ribbon. Because of the bandits, race organizers ran out of medals, which caused great disappointment among the very back of the pack. And as if to remind you that this was not your typical American 10-K, a goat wandered on to the route in the last few hundred yards. Resisting all eviction efforts, it mounted a sprint over the finish line to the loud cheers of the crowd.

HEALTH

Artificial Intelligence

How running helps the brain grow stronger

It's no secret that smart people exercise (that's what we say around our office). The question is, are runners smart because they choose to partake in this healthy habit, or does the act of running itself generate brain power? Some scientists were recently pondering this question. Here's what they found.

Researchers from the Oregon Health & Science University (OHSU) tested the exercise-makes-you-smarter theory on lab mice with running wheels. They found that mice did in fact grow more brain neurons while they were running. Even more interesting, however, was the finding that the mice in the slow-running pack were better problem solvers than the mice who ran at excessively high levels.

"Extremely intense runners may actually max out on mental benefits," says OHSU researcher Justin Rhodes, Ph.D. "In other words, they might override it to the point of impairment, and learn slower because they become pathologi- cal about exercise and focus only on it." So, not only will running help sharpen your learning capabilities, but a midpacker might actually have a shot at beating an elite runner, at least at Jeopardy.

To prove this fitness/inte lligence connection even further, another OHSU researcher, Judy Cameron, Ph.D., wanted to see how moderate exercise (5 hours a week) would affect mental performance. In her study, monkeys who ran learned how to do postworkout games and puzzles faster than non-running monkeys. The running group also increased the number of blood vessels in their brains, which means they had more oxygen and nutrients to support their brain cells. The biggest benefit was seen in older monkeys. "These animals had fewer blood vessels to begin with, but far more afterward," says Cameron. "Which means to us that, for older humans, 5 hours of exercise a week could have positive effects on the brain."

Want more proof? We've known that endorphin-boosting exercise can improve mood and alleviate depression in humans, but researchers from the University of Ulm in Germany recently found that aerobic exercise such as running can also improve mental alertness and reaction skills. Researchers studied people suffering from depression and found that exercise not only acted as an anti-depressant, but it also improved their response times to different tasks.

-Beth McNichol
State to send fitness reports home with fourth-graders

By EDWARD L. KENNEY, The News Journal
Posted Friday, January 19, 2007

Ray Gardner looks forward to getting his children's first "fitnessgrams," school reports that are in the works to let parents know about their children's body-fat and physical-fitness levels.

"Personally, I think that's an excellent idea," said Gardner, who has two sons at Downes Elementary School in Newark, one of 19 schools involved in the pilot program. "I think the more information you have, the more informed decisions you can make. I think that helps you as a parent."

In her State of the State address Thursday, Gov. Ruth Ann Minner announced plans to extend the pilot program to every fourth-grader statewide to address alarming increases in childhood obesity.

"This report will empower parents with information to help their children make healthy choices now to prevent more debilitating health problems in the future," she said.

John Ray, who oversees physical education at Delaware's education department, said parents of pupils in the program should receive their children's first reports by spring.

"We all know about the rise in obesity," said Linda Wolfe, who is in charge of school health for the education department and will be training school nurses to measure body-mass indexes for the fitnessgrams. "It's happening across the nation, not just in Delaware. We want to be a partner in the solution to the growing obesity problem."

Along with the fitnessgrams, a companion program to provide students with 150 minutes of physical activity each week is being tested this school year.

Next year, the education department hopes to expand the program to grades seven and nine or 10 (physical education usually is divided between those two grades) as well, which would give students and parents a fitness readout in elementary, middle and high school, Ray said.

In addition to a body-mass index -- a calculation based on height, weight and age -- the reports will include physical-activity measurements such as push-ups and timed running. Physical education teachers assess students in gym class to compile those measurements, Ray said.

While a plan is in place for the fitnessgrams, the education department will wait to see how the weekly 150 minutes of activity shapes up at the pilot schools before deciding whether to make it a requirement at schools statewide, he said. Currently, elementary students can spend as little as 30 minutes a week in gym class, and high school students are required to take only one credit of physical education -- that's 90 minutes a day for one semester -- to graduate.

Some schools have made a commitment to increase physical activity with or without a mandate.

Debbie Wilson, the physical education teacher at Downes Elementary, has been busy writing grants to bring more exercise equipment -- from age-appropriate weights to active games such as Dance Dance Revolution -- into the classrooms so pupils can use it for 10-minute exercise breaks during the day. The children also exercise following the morning announcements, with music piped in over the intercom.

"Over one-third of our children are overweight or obese," she said, citing national statistics. "It's doubled in the last 10 years. If we continue to go in the direction we're going now, the children who are entering school today will not outlive their parents. This is a..."
way to turn this epidemic around."

Children are supposed to exercise at least an hour a day, she said, so 150 minutes a week is not too much to ask.

Sandra Kupchick, physical education teacher at Brandywine High and president of the Delaware Alliance of Physical Education, Recreation, Health and Dance, said the Brandywine School District got a jump on the state's initiative by introducing fitnessgrams last year at Brandywine and Mount Pleasant high schools. The fitness reports were delivered to students and not parents as part of that program, she said.

This year, Concord High was added, she said.

"We see a lot of improvement in their body fat," Kupchick said. "The kids are starting to get into shape. And as they lose weight around their waist, they begin feeling better about themselves and have better self-esteem."

Exercise also has other benefits, Wolfe said.

"We know the health of children directly impacts their learning," she said. "We know that the healthy children have a better quality of life and more longevity."

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Data suggest exercise may fight addiction

Drugs and alcohol may have less of a hold on the exercise-altered brain

By LAURAN NEERGAARD
Associated Press

Sure, exercise is good for your waistline, your heart, your bones — but might it also help prevent addiction to drugs or alcohol?

There are some tantalizing clues that physical activity might spur changes in the brain to do just that. Now the government is beginning a push for hard research to prove it.

This is not about getting average people to achieve the so-called runner’s high, a phenomenon reserved for intense exercisers.

Instead, the question is just how regular physical activity of varying intensity — dancing, bicycling, swimming, tae kwan do — might affect mood, academic performance, even the very reward systems in the brain that can get hijacked by substance abuse.

What first caught the attention of Dr. Nora Volkow, the chief of the National Institute on Drug Abuse, was this: A study found tweens and teens who reported exercising daily were half as likely to smoke as their sedentary counterparts, and 40 percent less likely to experiment with marijuana.

Volkow knows, from her own six-mile daily runs and from scientific experiments, that the brain literally likes physical activity. Exercise seems to invigorate neurochemicals that sense and reinforce pleasure.

"In children, it’s innate," she said. "Children want to move."

But the nation’s children are becoming more sedentary, as illustrated by the obesity epidemic, as "screen time" replaces outdoor play.

"Why do we lose the ability to experience pleasure from physical activity?" Volkow asked.

Volkow recently brought more than 100 specialists in exercise and neurobiology to a two-day conference to explore physical activity’s potential in fighting substance abuse, and announced $4 million in new research grants to help.

Drug treatment programs often include exercise, partly to keep people distracted from their cravings, but there’s been little formal research on its effects.

The best evidence: Brown University took smokers to the gym three times a week and found adding the exercise to a smoking-cessation program doubled women’s chances of successfully kicking the habit. The quitters who worked out got an extra benefit: They gained half as much weight as women who managed to quit without exercising, said lead researcher Dr. Bass Marcus.

She now is working with the YMCA on a larger, institute-funded study to prove the benefit.

Marcus cautioned that people trying to kick an addiction have a powerful incentive to exercise. Could that possibly translate into prevention? Among the clues:

- Rats were less likely to ingest amphetamines if their cages had running wheels, suggesting exercise stimulated a reward pathway in the brain to leave them less vulnerable to the drug’s rush.
- In people, exercise acts as a mild antidepressant and relieves stress. Depression, anxiety and stress increase risk of alcoholism, smoking or drug abuse.
- Volkow is intrigued that attention deficit disorder and obesity both involve problems with the brain chemical dopamine, one system that drugs hijack to create addiction.
- Baby monkeys who don’t play enough in childhood have problems controlling aggression when they’re older. The most aggressive tend to have defects involving the feel-good brain chemical serotonin — and they binge-drink when researchers offer them alcohol.
- Physically active rats produce more stem cells in key brain regions important for learning and mood. Activity also increases formation of blood vessels and strengthens communication networks between brain cells. Together, that’s far too little research to know if exercise really matters for substance abuse, scientists at the National Institutes of Health meeting cautioned.

But, a few studies of school-age children suggest physical activity predict better performance on math, verbal and other tests — and better school performance in turn is linked to lower risk for substance abuse.

And getting sedentary seniors moving improves brain function, according to research aimed at preventing dementia, not drug abuse, although the improvement is in an area that in younger people is linked to risky decision-making.
Study: Teens sinking into couch

Exercise drops drastically after age 9, raising fears for adulthood

By LINDSEY TANNER
Associated Press

CHICAGO — One of the largest studies of its kind shows just how sluggish American children become once they hit the teen years: While 90 percent of 9-year-olds get a couple of hours of exercise most days, fewer than 3 percent of 15-year-olds do.

What's more, the study suggests that fewer than a third of teens that age get even the minimum recommended by the government — an hour of moderate-to-vigorous exercise, like cycling, brisk walking, swimming or jogging.

The sharp drop raises questions about inactivity continuing into adulthood, which could endanger kids' health throughout their lives, the study's authors said.

"People don't recognize this as the crisis that it is," said lead author Dr. Philip Nader, a pediatrician and professor emeritus at the University of California at San Diego.

Inactivity is linked with greater risks for many health problems, including heart disease, obesity, high blood pressure and diabetes.

The new findings come just a week after an influential pediatricians group recommended that more children have their cholesterol checked and that some as young as 8 should be given cholesterol-lowering drugs. That advice was partly out of worries over future levels of heart disease and other ailments linked to rising rates of childhood obesity.

The latest study, appearing in today's Journal of the American Medical Association, tracked about 1,000 U.S. children at various ages, from 2000 until 2006.

Special gadgets were used to record activity. Average levels of moderate-to-vigorous activity fell from three hours a day at age 9 to less than an hour at 15.

Nader said he was "surprised by how dramatic the decline was," and cited schools dropping recess and gym classes and kids' increasing use of video games and computers as possible reasons.

The National Institute of Child Health and Human Development funded the research, calling it one of the most comprehensive studies of its kind.
Beat the blues with your running shoes

Studies suggest that exercise can relieve depression

By KIM PAINTER • USA Today • May 16, 2010

Most people seeking treatment for depression or anxiety face two choices: medication or psychotherapy. But there's a third choice that is rarely prescribed, though it comes with few side effects, low costs and a list of added benefits, advocates say.

The treatment: exercise.

"It's become clear that this is a good intervention, particularly for mild to moderate depression," says Jasper Smits, a psychologist at Southern Methodist University in Dallas. Exercise as an anxiety treatment is less well-studied but looks helpful, he says.

It's no secret that exercise often boosts mood: The runner's high is legendary, and walkers, bikers, dancers and swimmers report their share of bliss.

Now, says Daniel Landers, a professor emeritus in the department of kinesiology at Arizona State University.

And exercise seems to work better than relaxation, meditation, stress education and music therapy, Landers says.

"Most physicians and therapists are aware of the effects," says Chad Rethorst, a researcher at the University of Texas Southwestern Medical Center in Dallas. "But they may not be comfortable prescribing it."

Smits and another researcher, Michael Otto of Boston University, are on a mission to change that. The two have written a guidebook for mental health professionals and are working on guides for primary care physicians and consumers.

Ideally, Smits says, depressed or anxious people would get written exercise prescriptions, complete with suggested "doses" and strategies for getting started and sticking with the program.

One thing that helps people keep up this therapy, he says, is the immediate boost that many report. The same can't be said of taking pills, he says.

But Smits and other exercise-as-treatment enthusiasts are quick to say that medications and psychotherapy are good treatments, too, and can be combined with exercise.

"They work well," Smits says. "But too few people get them, and few get them in the doses that are needed."

Many people who start talk therapy or medications soon stop using them because of costs, side effects, inconvenience or other factors. In short-term studies, at least as many people stick with exercise as with drugs, Rethorst says. Not known, he says, is "how this will translate into the real world."

Other remaining questions:

• What kind of exercise works? Most studies have focused on aerobic exercise, such as running and walking, but have not ruled out strength training or other regimens.

• How much is needed? At least one study shows results from the amount recommended for physical health: 150 minutes of moderate exercise (such as...
brisk walking) or 75 minutes of vigorous exercise (such as running) each week.

• How does it help? Does it boost certain brain chemicals? Induce deeper sleep? Give patients a sense of action and accomplishment?

• Can it prevent initial bouts or recurrences of depression and anxiety?

That seems likely, says Michelle Riba, a psychiatrist who works with cancer patients and others at the University of Michigan. She prescribes exercise to depressed patients as part of a long-term plan for healthier living that includes sleep, eating and, in many cases, weight loss.

Exercise can be especially important, she says, for patients taking antidepressant medications that cause weight gain.

"I don't think exercise will ever be the only treatment, but it may be a major part of preventing recurrences," she says. "It should be part of everybody's plan of health."

Purchase this Photo

Data pooled from many small studies suggest that in people diagnosed with depression or anxiety, the immediate mood boost from exercise is followed by longer-term relief, similar to that offered by medication and talk therapy. (News Journal file/ROBERT CRAIG)
Weight loss may boost brain health

Variety of cognitive abilities increase after patients have bariatric surgery

BY NANCY HELLMICH
USA Today

Here’s another reason to lose weight: It may improve your memory and concentration, new research suggests.

Scientists know that overweight and obese people are at a greater risk for memory problems and other cognitive disabilities, but the latest study is one of the first to indicate that substantial weight loss improves brain health.

John Gunstad, an associate professor of psychology at Kent State University, and a team of scientists from several research centers analyzed memory tests taken by 150 people who weighed an average of 300 pounds. Many had several health problems, such as high blood pressure, type 2 diabetes and sleep apnea.

Of that group, 109 of them then had bariatric surgery — mostly gastric bypass surgery, which creates a smaller stomach and bypasses part of the small intestine. The other 41 obese patients did not have surgery.

After 12 weeks, all participants took the same set of memory tests a second time.

The surgery patients, who had lost an average 50 pounds, showed improvement in multiple cognitive abilities, including memory and executive functioning, which includes organization skills.

The morbidly obese patients, whose weight stayed the same, showed a mild decline in memory.

The improved memory for the surgery patients likely is not solely due to improved blood pressure because only a small number went from being classified as having hypertension to not having it, Gunstad says.

It appears that there is another physiological process that is causing these improvements in memory, he says. “We’ve known for a while that diet and exercise may also improve cognition, so it’s possible there are several factors that are causing these changes.”

He says it’s a logical conclusion that as the body becomes healthier, the brain would become healthier also.
Obesity epidemic for US adults, kids shows no sign of shrinking

By LINDSEY TANNER
Associated Press

CHICAGO — America's obesity epidemic is proving to be as stubborn as those maddening love handles.

More than one-third of adults and almost 17 percent of children were obese in 2009-2010, echoing results since 2003, the Centers for Disease Control and Prevention reported Tuesday.

"It's good that we didn't see increases. On the other hand, we didn't see any decreases in any group," said CDC researcher Cynthia Ogden.

Early in the decade, slight increases were seen among white, black and Hispanic men, and among Hispanic and black women. These changes may be leveling off, but the authors said they "found no indication that the prevalence of obesity is declining in any group."

In 2009-2010, more than 78 million adults and almost 13 million children aged 2-19 were obese, the CDC researchers reported.

Those numbers are staggering, and while they haven't increased in recent years, "we're plateauing at an unacceptably high prevalence rate," said Dr. David Ludwig, director of an obesity prevention center at Children's Hospital in Boston. He was not involved in the reports.

The CDC reports summarize results of national health surveys in children and adults, which are conducted every two years. The nationally representative surveys include in-person weight and height measurements. The 2009-2010 reports involved nearly 6,000 adults and about 4,000 children, from infancy through age 19.

The results were released online in the Journal of the American Medical Association.

Dr. Elbert Hu, an associate professor of medicine at the University of Chicago who studies health care policy issues, said his research shows that even if obesity rates continue to remain stable, there will be dramatic increases down the road in diabetes and in costs linked with that disease. That's because Type 2 diabetes, among many diseases linked with obesity, becomes more prevalent as people age.

The latest reports focused on obesity, meaning a body-mass index of at least 30. But the numbers of adults and children who were overweight, with a BMI of between 25 and 29, also remained high.

Overall, 33 percent of adults were overweight but not obese, versus about 15 percent of children and teens.

Rates of overweight or obese adults and children were generally higher in blacks and Hispanics than in whites.

The government says a healthy weight is a BMI of 18 to 25. The index is a ratio of height to weight.
Report: Obesity problem requires multifaceted fix
Schools should be at forefront of change, group says

By LAURAN NEERGAARD
Associated Press

WASHINGTON — Fighting obesity will require changes everywhere Americans live, work, play and learn, says a major new report that outlines dozens of options — from building more walkable neighborhoods to zoning limits on fast-food restaurants to selling healthier snacks in sports arenas.

But schools should be a national focus because that’s where children spend most of their day, eat a lot of their daily calories — and should be better taught how to eat healthy and stay fit, the influential Institute of Medicine said Tuesday.

Among the most controversial of the recommendations: Communities could consider a tax on sugary sodas and offer price breaks for healthier beverage choices.

That prompted outrage from the American Beverage Association.

“Advocating discriminatory policies that uniquely focus on sugar-sweetened beverages is the wrong approach,” said an association statement that added those drinks account for just 7 percent of calories in the average person’s diet.

Everyone has ‘role’

Most of us know we should eat less and move more. But the institute makes clear this isn’t just an individual but a societal problem. For a host of reasons, families, communities and society as a whole have become the problem and we’re surrounded by cheap, high-calorie foods.

The new report offers a road map of the most promising strategies to change that and argues that the solutions can’t be implemented piecemeal.

“We each of us has this role. We can sit back and let the schools do it, or let a mayor or think somehow the federal government’s going to solve it,” said report co-author William Purcell III, former mayor of Nashville, Tenn. “These recommendations require concerted effort among all.”

A health advocacy group urged governments, industry and schools to adopt the recommendations.

“The country has begun to address obesity, but we are still doing far too little given the tremendous burden it places on our health and health care costs,” said Margo Wootan of the Center for Science in the Public Interest.

Two-thirds of U.S. adults and almost a third of schoolchildren are either overweight or obese, and progress to stop this epidemic has been too slow, the Institute of Medicine concluded.

Recommendations

For schools, it recommended that students get at least 60 minutes of physical activity every day — a combination of physical education, recess and other activities. Many schools have slashed P.E. and cut into recess in recent years in an effort to increase learning time amid tighter budgets. The report also says schools should serve healthier foods, backing national school nutrition standards, and teach nutrition.

Other recommendations include:

> Restaurants should ensure that at least half of kids’ meals comply with federal dietary guidelines, without charging more for the healthier options.

> Healthier foods should be routinely available everywhere, from shopping malls to sports arenas.

> More food companies should improve how they market to children — and if they don’t, the government should step in and mandate changes.

> To make physical activity routine, communities should be designed with safe places to walk and exercise.

> Public and private insurers should ensure better access to obesity screening, preventive services and treatments.

> Employers should expand workplace wellness programs.

> The president should appoint a task force to evaluate the impact of U.S. agriculture policies on obesity.

> The Institute of Medicine, an arm of the National Academy of Sciences, is an independent organization that advises the government.
Senate to kids: Time to exercise

Bill mandating activity now goes to House

By JONATHAN STARKEY

Dover — The Delaware Senate voted Thursday to pass a bipartisan bill requiring 150 minutes of physical activity weekly in Delaware's elementary schools, despite opposition from the state Education Department and the powerful teachers union.

Bethany Beach Democratic Sen. George Bunting sponsored the bill, saying it would help combat childhood obesity, and it gained support even among the chamber's most conservative Republicans, including Marydel Sen. Dave Lawson. The measure heads to the state House of Representatives, where Republican Rep. Mike Ramoné is its sponsor.

Senate Minority Leader Gary Simpson, a Milford Republican, cast the chamber's only vote against Senate Bill 214. "I'm not sure that mandating this in elementary school is going to change our society's habits," he said during a floor debate.

Delaware education regulations require physical education for K-12 students, and periodic physical assessments, but no specific amount of time for physical activity. Bunting's bill would require all K-5 students in public schools to participate in 150 minutes of moderate to vigorous physical activity each week.

More than 70 percent of Delaware's elementary schools are incorporating exercise into daily lessons — with many surpassing the 150-minute threshold, say educators and the Nemours Foundation, which used a federal grant to help state schools increase school-time exercise. Nemours has lobbied for Bunting's bill.

See EXERCISE, Page B2