

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF WISCONSIN**

---

**UNITED STATES OF AMERICA,**  
Plaintiff,

v.

**Case No. 16 CR 64**

**RONALD D. VAN DEN HEUVEL,**  
Defendant.

---

**SENTENCING MEMORANDUM**

---

The following is provided to the court to assist in the determination of a proper disposition in the above referenced matter.

The conduct for which Mr. Van Den Heuvel has been convicted is in stark contrast to positive contributions he has made to his community. For decades, Ron Van Den Heuvel has given his time, resources, and finances to a host of entities which serve impoverished, as well as physically and emotionally disabled citizens of Green Bay. It cannot be calculated how many people's lives he has touched through his selfless sense of giving and positive works. Below is a non-exhaustive list of programs with which he has been involved which have served the interest of the citizenry: (Attached are documents verifying Mr. Van Den Heuvel's charitable community service history: Exhibits 1-5)

1. From 1992 until 2016, he served on the Northeastern Wisconsin Cerebral Palsy Corporation as a board member raising funds and other contributions. One of the accomplishments of this

organization during his tenure was the installation of two therapeutic pools in the Cerebral Palsy Center. Additionally, a daycare center has been established on site for the parents and teachers whose children are being cared for at the facility. The organization has flourished in other ways during his participation. For years, the center held a banquet at Christmas time for the children. Mr. Van Den Heuvel was there to assist at the banquet and learn how it felt to have a child who suffered from cerebral palsy. He was also trained by a therapist on ways to take care of a child suffering from CP and how to assist in insuring that their physical needs are met. This was another reflection of Mr. Van Den Heuvel's felt need to immerse himself in the services for such children and understand the difficulties in caring for an afflicted child.

2. Mr. Van Den Heuvel contributed funds to Bellin Hospital from 1995 to 2000. One of its buildings bears his family name: Van Den Heuvel Family Power Facility. (See attached photos: Exhibits 6,7)
3. From 1972 until 2012, the defendant was a member of the Board of Directors of the Syble Hopp School in De Pere. This facility is designed to assist disadvantage youths. While on the board, Mr. Van Den Heuvel contributed financially.
4. From 1992 until 2012, Mr. Van Den Heuvel was on the Board of Directors of the Boys and Girls Club of Green Bay. His

participation on the board and his financial contributions assisted to expand the number of participants from 209 to approximately 2,000. During his tenure, the Boys and Girls Club was introduced into the school through a program for non-English speaking children.

5. From 2000 until 2005, the defendant served as a board member of St. Norbert's College committee which raised funds to assist in establishing the Ray Van Den Heuvel Family Community Center. (see attached photos: Exhibits 8-10)
6. From 1986 to 1996, he assisted in raising money to rehabilitate an existing building for the creation of Cure-for-All Ages, a not for profit elder and day care program in Green Bay.
7. In 1996, Mr. Van Den Heuvel, and others, created a project for the establishment of the Southeast Georgia Autism Center in Savannah, Georgia. That organization is still in existence. He helped with the construction of the Center's building, which now has an educational facility for autistic children. The number of youth who have benefited has dramatically increased over the years.
8. From 1992 to 1997, he and others assisted in establishing the Rural Visiting Nursing Program in Clarion, Wis.. Prior to the creation of the entity, there was no outreach medical service

for this highly rural area and, as a result, there was a severe limitation of critical medical care.

9. For ten years, Mr. Van Den Heuvel served as a board member, and for two years as the chairman of the Northeastern Wisconsin March of Dimes. He raised funds and assisted in implementing initiatives including "Chef's Action", The March for Babies, and a program to educate unwed mothers regarding prenatal care.
10. For 25 years, the defendant has been a participant in the activities of the Green Bay Community Foundation. He assisted in raising funds and finding shelter for the poor and disadvantaged.
11. During the entirety of Mr. Van Den Heuvel's life, his religion has been an essential foundation and guiding directive force. He has been a member of the same parish for his entire life. The defendant's church affiliation has, by no means, been limited to attendance. For 20 years he has been actively involved in the development and administration of religious education. He has been on the Curriculum Committee for the school's Pre-K to 8 program, as well as the computer and science lab committee. Mr. Van Den Heuvel has raised capital for the endowment fund which subsidizes poor children to enable them to attend Catholic school. One of the committees in which he participated created an endowment to fund a

foreign language program within the school. In addition, the defendant has contributed regularly through financial contributions.

12. For approximately ten years, Mr. Van Den Heuvel served on the Capital Campaign Board for Rawhide Ranch for Northeast Wisconsin.
13. From 1986 to 1990, the defendant assisted in the creation of the YMCA/YWCA of Rincon, Georgia.
14. Over the years, Mr. Van Den Heuvel has contributed financially to the DARE program in Green Bay, as well as Glenwood School for Boys in Illinois.

#### **WORK HISTORY**

Since early childhood, the defendant has labored at manual and intellectual jobs by performing the most menial tasks to some of the most complex developmental projects. He is described as a tireless worker who is driven by an unlimited imagination and a true desire to leave the world a better place than when he arrived. While the events described in the Plea Agreement, at first glance, reflect what could be described as callous disregard for rules and the law and an attempt to "feather his own nest", they were in fact driven by a true desire to create and/or maintain functioning corporations. The manner chosen was clearly improper, and a reflection of poor judgment. But his productive work history is in sharp contrast to this conduct.

Only once was Mr. Van Den Heuvel's work ethic and drive to achieve shaken. The death of his five month old child in 2004 led him to question whether he should continue to achieve his work objectives, and to examine if there was a meaningful way to carry on. He decided, in consultation with his father, that the best manner by which he could honor his son's life was to continue the hard efforts which he had always expended on future projects designed to achieve lofty goals. He drew strength from his faith and was able to realize that his family and others depended on him and, that the impact that it would have if he chose not to pursue his goals would be devastating.

Many of the ventures in which Mr. Van Den Heuvel has engaged have been highly successful and have been a source of income for countless employees. As is the case in many businesses, unforeseen events change the course of commercial ventures and create unresolvable challenges. There are occasions in which the decision making thought process of company executives, when faced with insurmountable problems, becomes clouded and consequential bad judgement occurs. This is not to say that the conduct in which Mr. Van Den Heuvel engaged was excusable, justifiable, or that he does not accept full responsibility. Rather, it is to place the events in their proper context.

#### **FAMILY CONSTRUCT**

Mr. Van Den Heuvel and his wife, Kelly, have been married for 14 years. The couple had twins in 2003, both born as micro-preemies. They were hospitalized for four months before being allowed to return home. H█████ developed an virulent infection from which he never recovered. He died in 2004. H█████, H█████'s twin, has had thirty different medical procedures since he was born. He was fed through a feeding tube until he was five. He has a history of seizures and still at age 15, has a compromised immune system. A minor cut can become an explosive problem. An infection can result in systemic issues. For years, H█████ could not even run as a normal child and has significant resultant physiological delays. Mr. Van Den Heuvel is one of the child's physical and emotional protectors. He has an amazing bond with H█████, almost to compensate for the loss of the twin.

Mr. and Mrs. Van Den Heuvel had a third child, K█████, who is now 13 years old. The family is extraordinarily close. The four do virtually everything together. They travel, go to concerts, have family meetings, and ensure that each other is supported fully and unequivocally. They all go to church every week and practice their religion throughout their lives. They constantly talk about their faith and about how important it is to each other.

The defendant is in constant communications with his children all day through social media. The family share breakfast and dinner together each day, and lunch on Sundays after church. At night, he

assists them with their homework to ensure, to the best of his ability, that it is done in a timely fashion. While Mr. Van Den Heuvel is tremendously supportive and interactive with his children, he monitors their behavior and insists that they seek permission if they chose to go places which may be questionable. The defendant has been described as a "helicopter dad" who watches over his children incessantly.

Mr. Van Den Heuvel also shares a tremendous relationship with his mother who is 88 years old. He brings her communion every Sunday after church, as well as every holy day. He makes certain that he, or someone else, brings her mail and newspaper everyday and that some food is delivered to her residence. The defendant is also in touch with his mother by phone and visits her virtually everyday.

Kelley Van Den Heuvel has had five surgeries for breast cancer. The most recent episode in 2017 was extraordinarily disturbing in light of the devastating potential, consequences, the intensive treatment regimen and its frequent reoccurrence. The possibility that the disease will reemerge weighs heavily on Kelley's and the rest of the family's minds. She must be monitored constantly and needs as much emotional and physical support as is possible. Mr. Van Den Heuvel and his wife are extraordinarily close. They are not only self-supporting, but have a remarkable relationship with their children. The defendant attends every

single doctor appointment with Kelly. He is actively involved, as best as he is allowed, to help her contend with the effects of the cancer and recover fully, with as limited pain and emotional distress as can be avoided. He is the main source of support for Kelly, in that her family is not in the State of Wisconsin. She has no other extended family in Green Bay.

While Kelly is a very strong-willed and accomplished person in her own right, she lives with the constant fear and attendant stress of the reoccurrence of her previous cancer events and subsequent surgeries. Without the defendant's presence and assistance, that stress will not be held in check. K [REDACTED] and H [REDACTED] are acutely aware that their mother is at risk and clearly recognize the importance of their father in the household.

#### **THE DEFENDANT'S GOALS**

The instant indictment does not describe a typical Ponzi scheme in which an individual sets up a pyramid-like structure to obtain investors' funds simply and exclusively for his own benefit. This is not such a case. Mr. Van Den Heuvel's efforts were in large measure to sustain businesses which he truly believed would bear fruit, to wit: productive businesses which would support a large workforce and which would produce a viable, saleable commodity. While it is true that certain funds derived from the loans were not used as intended, some of the funds did go for what Mr. Van Den Heuvel believed were corporate obligations and which

were necessary to maintain the businesses. (It should be noted that Mr. Van Den Heuvel has accepted full responsibility for his actions. He acknowledges that funds from the loans were improperly obtained and that proceeds were misused.)

Mr. Van Den Heuvel has a genuine desire to make the world a better, cleaner place. He wants to make sure that he is part of work complex which produces a marketable product and which provides many diverse employment opportunities. His intentions are laudable. His current goal is to continue in a lawful fashion and learn from his mistakes. His vision is to someday make the planet devoid of disease and contamination. Whether this is an attainable objective is questionable, but no one can dispute that such ambition is admirable and to be encouraged.

#### **COLLATERAL CONSEQUENCES**

With every criminal conviction and attendant disposition, there are collateral consequences, often which are unforeseen or unpredictable. In this case, removal of Mr. Van Den Heuvel from the family and his community will have a devastating effect. For Kelly, there will be a loss of emotional, financial, and familial support all of which is the mainstay of the Van Den Heuvel home. Kelly has gone through emotional trauma for years. Much of the emotional and physical of cancer do not dissipate with the passage of time. Rather, some increase in intensity. Mr. Van Den Heuvel, in direct coordination with the doctors, helps to ameliorate the side effects

and emotional byproducts of the disease. (Filed separately are a series of articles which reflect the intensity of the emotional consequences which directly correlate to cancer and its treatment. These studies examine and set forth the connection between stress, and, prognosis and recovery. Clearly, Kelley Van Den Huevel's future will be enhanced if stress and emotional trauma are reduced. Removal of her husband from that effort could have devastating consequences.

A meaningful, close support system is an essential ingredient to achieving successful remission. The Van Den Heuvel's are a family unit whose members are interdependent. The children and the defendant's mother are highly dependent on him, not simply because of his title as father and son, but as a result of his supportive and giving ways.

Numerous studies have recognized the significant adverse effects which befall the children whose parents are incarcerated. They may develop behavioral problems including rule-breaking and acting-out conduct. They may have difficulty concentrating or become impulsive. The child will suffer from the inevitable socioeconomic effects. A child who has an incarcerated father will experience negative reactions from peers. Such children may suffer a deterioration in academic achievement. Children with an incarcerated parent may have an increased risk of substance or alcohol abuse. They will have difficulty coping with the loss and

the uncertainty of associated with the incarceration. Presumably, some children may even mistakenly blame themselves for their parent's sentence. It need not be said that children need their father's presence and the loss is virtually impossible to fully compensate. (Filed separately are articles which show secondary consequences for children whose parents are incarcerated.)

The defendant has a very close relationship with his elderly mother. She is dependent upon him for emotional and physical support. They are in daily communication and are mutually dependent. Separating Ms. Van Den Huevel from her son, at this point in her life, can have no positive effect.

While the government has disparaged the business activities of Mr. Van Den Heuvel, they have failed to acknowledge that he was, for a long period of time, successful in various ventures. There are still employees for whom he pays salary and benefits. His absence from the workplace will prevent the maintenance of these enterprises and jobs will be lost.

Perhaps the government has not recognized the largess by which Mr. Van Den Huevel has comported his life. His selfless contribution in time, money, and imagination have sustained numerous community projects. If he is denied the opportunity to provide these historically valuable contributions, society, the underprivileged and physically challenged individuals will suffer.

The aforementioned are simply some of the secondary consequences which outflow from a sentence of incarceration. Removal of Mr. Van Den Heuvel from the community, while it may serve as a punitive sanction, is counterproductive to the needs of others. The consequential effects outweigh, monumentally, any theoretical benefit of a penalty of incarceration. The disruption to Kelly's support system is individually a justifiable reason not to incarcerate Mr. Van Den Huevel. The stress which Kelly will endure could easily retard or prevent her recovery.

For the reasons stated above, it is respectfully requested that the court impose a sentence of probation, with home confinement as the punitive sanction, restitution (as has been stipulated), and a continued requirement of significant community service to the citizenry of Green Bay. Such sentence fully incorporates the need to protect the community, imposes a punitive component, addresses the rehabilitative needs of Mr. Van Den Heuvel, and recognizes the accomplishments and characterological qualities of Mr. Van Den Heuvel.

Dated at Milwaukee, Wisconsin this 28<sup>th</sup> day of December, 2017.

Respectfully submitted,

*/s/ Robert G. LeBell*

---

Robert G. LeBell, SBN 01015710  
Attorney for Defendant  
309 N. Water Street, Suite 350  
Milwaukee, Wisconsin 53202  
(414) 276-1233

---

# Effects of Parental Incarceration on Children and Families

Lois E. Wright, Ph.D. and Cynthia B. Seymour, JD

---

Despite the large and increasing numbers of incarcerated parents, the children have been a forgotten population, with their special needs inadequately understood or addressed. Despite the inadequacy of our data on these children, the limited research, taken together with our theoretical and empirical knowledge of similar populations, can provide us with some understanding of the effects of parental incarceration on children.

It is exceptional for a family to experience incarceration in the absence of other difficulties. More often than not, an array of social, cultural, and familial risk factors coexist, each adding perhaps only a small increment to the totality of risk for the child and family. Though no one factor is predictive of particular child difficulties, we can predict negative outcomes from an accumulative array of factors; generally, the more endangering factors, the greater the risk. (This is not to say that negative outcomes are inevitable, and resilience within children with incarcerated parents remains largely unexplored.)

## What Are the Effects on Children?

To understand the effects of parental incarceration on a child, we must look at the totality of a family's experiences involving a multiplicity of interrelated social, cultural, and familial factors, making it difficult to sort out the results of crime, arrest, and incarceration from ongoing life problems. To begin to understand these children's difficulties, we must look at their experiences both before the incarceration and during the incarceration. Though some children may have enjoyed a fairly stable and nurturing preincarceration family life, most will have experienced considerable instability and possibly maltreatment, with the problems related to incarceration superimposed upon existing difficulties.

Children's circumstances will vary, and each may experience a unique combination of risk factors. In addition, each child will react differently to his or her experiences, and available services and supports for each child vary. These differences complicate our ability to understand children's reactions to parental incarceration.

Some of the risk factors occurring both before and during incarceration are:

*Poverty.* Parents are apt to have been living in poverty before their incarceration and to have been unable to provide basic material resources. Poverty is often the core issue for a range of other difficulties that have consequences for children, including living in impoverished neighborhoods, limited parental educational achievement and limited parental job prospects.

*To understand the effects of parental incarceration on a child, we must look at the totality of a family's experiences involving a multiplicity of interrelated social, cultural, and familial factors.*

*Children's circumstances will vary, and each may experience a unique combination of risk factors.*

*Parents are apt to have been living in poverty before their incarceration and to have been unable to provide basic material resources.*

*Substance abuse usually has a role in the incarceration, either as a causal factor or as the primary offense.*

*Alcohol and other drugs.* Substance use and abuse is associated with poor neighborhoods, child maltreatment, and other social ills, severely limiting the user's ability to function appropriately across a range of life roles. Substance abuse usually has a role in the incarceration, either as a causal factor or as the primary offense. Even without the additional problems created by arrest and incarceration, "a mother's drug addiction can undermine her ability to provide consistent nurturing to her children" [8].

*Crime.* Living in an environment of ongoing criminal activity, either the parent's own crime or crime in the neighborhood, has documented effects on children, as they may live in constant fear or may have become numb, accepting danger as a normal part of growing up.

*Intrafamilial violence.* The parent may have been battered or a batterer. If the mother's partner is currently abusing her, her children are likely to be exposed to that violence at home [8]. Witnessing battering has been documented to negatively affect children (e.g., fear, guilt, and desensitizing to violence) [1].

*Child maltreatment.* Abuse or neglect of a child for some period before incarceration or as a precipitating factor in the incarceration is well documented as having a range of effects on children.

*Previous separations.* The children may have experienced previous foster care or other separation, and this period of incarceration may represent one more separation, though one with a slightly different meaning. Still, an ongoing pattern of instability leaves children more vulnerable to effects from additional separations.

*Parent's history of abuse.* The parent him/herself may have been maltreated as a child, and this experience can affect parenting abilities [8]. Abused parents who have not had the opportunity to deal with their own histories of child abuse or to recognize the ways it might affect how they raise their children may have an impaired ability to provide nurturing and discipline.

*Enduring trauma.* Enduring trauma is not a separate risk factor but rather a term used by The Center for Children of Incarcerated Parents to describe the multiple and ongoing traumatization some children experience throughout one or several life stages, with no recovery time or supportive resources between traumas [6].

*Arrest and incarceration.* The parental arrest and incarceration expose the child to additional risks: further separations from the parent and possibly siblings, unstable care arrangements, uncertainty about his or her future, secrecy and deception regarding the incarceration, stigma, and difficulties with visitation.

*The parental arrest and incarceration expose the child to additional risks: further separations from the parent and possibly siblings, unstable care arrangements, uncertainty about his or her future, secrecy and deception regarding the incarceration, stigma, and difficulties with visitation.*

### What Are Children's Reactions?

Despite the limitations in our knowledge of this population and the difficulty of establishing cause-effect relationships amid the potential multiplicity of risk factors, we do have a beginning body of knowledge about some of the negative consequences. Studies have indicated some child difficulties that may be related to the incarceration itself and that distinguish this group of children. We will review here some more general findings (i.e., effects that are similar to those of other forms of trauma) as well as those specifically linked to parental crime, arrest, and incarceration.

As a general context for looking at children's specific reactions to parental incarceration, it is important to understanding the following:

*Children are diverted from development tasks when they experience trauma.* It is normally expected that children's emotional energy will be invested in mastering their age-specific developmental tasks (i.e., forming attachments and developing trust, developing autonomy, developing initiative, learning to work productively, and achieving identity). The everyday challenges children experience, if they have the coping resources to meet them, make children stronger and move them forward developmentally. But if the challenges are too great and exceed children's capacity to cope, emotional survival begins to take precedence over mastery of developmental tasks, and they begin to show developmental delays (e.g., retarded language development) or regression (e.g., soiling or clinging), as well as other inappropriate coping strategies (e.g., numbing).

*Children's responses to trauma will vary according to age.* For instance, Johnston (1992) found disorganized feelings and behaviors in early childhood and maladaptive behaviors in later childhood (i.e., antisocial behaviors such as lying and stealing, aggressive or isolated behavioral disorders, conduct disorders, and depression). Among older children, sexual misconduct, truancy, delinquency, substance abuse, and gang activity were found [5]. In addition, children of different ages vary in terms of coping ability. Young children are least likely to have acquired the developmental skills necessary to cope with trauma and will be most in need of intervention. If they are unable to respond adaptively, they will respond maladaptively [5].

*Children's reactions will vary over time.* While we lack longitudinal studies documenting how children's reactions change overtime, we know generally that a crisis reaction is different from a long-term accommodation (adaptive or maladaptive) to trauma. In addition, we know that intervention is more effective if it is offered before maladaptive patterns have settled in and begun to feel "normal" for the child. Theory related to the grieving process suggests that people go through stages of grieving; these children are grieving for the absent parent. While the pattern of reaction is not invariable and the theory not entirely substantiated, it does provide some guidelines for understanding changing reactions over time. In addition, long after the traumatic event, posttraumatic stress reaction has been observed in some children [5].

*Children are diverted from development tasks when they experience trauma. If the challenges are too great and exceed children's capacity to cope, emotional survival begins to take precedence over mastery of developmental tasks.*

*Children's responses to trauma will vary according to age.*

*Children's reactions will vary over time.*

*Children are always traumatized by separation.* Regardless of the cause of the separation (e.g., parental death, divorce, military service, incapacity, or incarceration), it has a profound effect. These effects on children of different ages have already been well documented in the child welfare and divorce literature. We know that, depending upon the child's age and length of separation, reactions can include such things as inability to form later attachments, woebegone searching, numbing, self-blame, anger, depression, regression, and antisocial behaviors.

*When a parent is incarcerated, the child enters a period of remarkable instability and uncertainty, not even knowing with what he or she must cope.*

*Children's abilities to cope are hampered by uncertainty.* While coping with bad situations is difficult, coping with uncertainty (e.g., relatives missing in action or abducted) is even more difficult. Yet uncertainty pervades the child's life when a parent is incarcerated, touching basic life issues. Answers to questions such as "what is going on?" "where will I live?", "who will care for me?", "when will I see my parent again?", "when will she/he home again?", "will there be enough money?", and "what will happen next?" remain nebulous. The child enters a period of remarkable instability and uncertainty, not even knowing with what he or she must cope. Often, a caregiver's well-meaning attempts to deceive the child only serve to increase the child's stress.

*Children's trauma due to parental incarceration has some unique features.* Sometimes the parent's crime is actually against the child, as in the case of severe physical or sexual abuse. The child may have witnessed a crime (including murder) by one parent against another. The child might have witnessed other types of criminal activity or been solicited for involvement in criminal activity (considered emotional abuse). Thus, it may pit family member against family member, undermining the child's sense of safety, security, and loyalty to a parent.

*Children suffer stigma when a parent is incarcerated. For most, stigma is everywhere in the community, among peers, and often in their own extended family—causing feelings of shame and low self-esteem.*

*Children suffer stigma when a parent is incarcerated.* For most, stigma is everywhere in the community, among peers, and often in their own extended family—causing feelings of shame and low self-esteem. For other children, coming from neighborhoods or families in which incarceration and related trauma are everyday events, stigma is not a great factor [2,9]. These children's lives are already seriously disrupted, hence the fact that they experience less stigma than others is no gift.

*Children express their distress through their bodies.* Most children will find it difficult to communicate their distress through words, unless there is strong support for doing so. Rather, they express themselves through physical, emotional, cognitive, and behavioral means that we call symptoms.

In addition, posttraumatic stress reaction is receiving increasing attention. When children have been exposed to multiple and ongoing traumas, such as seeing a parent arrested, unstable care arrangements, secrecy, and stigma, they begin to show a constellation of symptoms that comprise posttraumatic stress disorder (PTSD) [8]. Chart 1 presents some of the physical, cognitive, emotional, and behavioral reactions that have been noted in children with incarcerated parents.

### Chart 1. Child Reactions to Parental Incarceration

- Identification with the incarcerated parent, awareness of social stigma
- Change in future orientation and intrusive thoughts about their parents
- Concern about outcomes of case, unsure and worried about how to live without mother, concern about an uncertain future
- Flashbacks to traumatic events related to arrests
- Embarrassment and anger
- Fear, sadness, loneliness, guilt, low self-esteem, depression, emotional withdrawal from friends and family
- Separation anxiety and fears of abandonment
- Eating and sleeping disorders
- Aggression, anxiety and hyperarousal, attention disorders and developmental regression
- Physical aggression, withdrawal, acting out, academic and classroom behavior difficulties, truancy.

Source: Table 7. Child Reactions to Parental Incarceration, Wright, J. B. & Seymour, C. B. (2000). *Working with Children and Families Separated by Incarceration: A Handbook for Child Welfare Agencies*. Washington, D.C.: CWLA Press.

### What Are the Effects on the Family?

It is important to look at the effects on the family, because that is the primary environment of the child, providing support and protection or exposing the child to threat and endangerment. As noted above, many families experience ongoing difficulties: poverty, instability, violence, and substance involvement, upon which the crisis of crime and incarceration is superimposed. How is the family different after the crime and incarceration? The primary changes can be categorized as structural, material, emotional, and dynamic, though these actually interact, each impacting the other.

Perhaps the most immediately apparent change in a family is structural. A family member is now absent, and either a remaining family member must take on the departing parent's roles and responsibilities, or those roles remain unfulfilled. Either scenario produces stress on the family.

Though most incarcerated men are either single or divorced, with fewer than one-fourth being married, most have children in whose lives they have played some part prior to incarceration [3]. Usually, because the father is seldom the sole caregiver of a child, the children continue to live with their mother. Still, the incarceration, whether the father was a full-time member of a household or a nonresident contributor, does remove him from whatever roles he may have filled in his child's household (and some fathers leave several households behind, as they have fathered children by several women).

*Because the mother is more likely than the father is to be the custodial parent and primary caregiver of a child, her incarceration will most likely have an even greater effect on family structure.*

Because the mother is more likely than the father is to be the custodial parent and primary caregiver of a child, her incarceration will most likely have an even greater effect on family structure. If she has run an independent household, her children will need new living arrangements. Usually her children will stay with a relative, most often the maternal grandmother. The caregiver's home will also experience structural change through the addition of the children. Children may find themselves living in a home that has been disrupted by their presence even though they may be wanted there. Sometimes one caregiver is not able to care for an entire sibling group, so brothers and sisters may be separated. This separation only contributes to the trauma and disorientation that children experience when mothers become incarcerated.

*The whole family may go through an emotional upheaval as they experience the stigma, shame, guilt, and pain of dealing with a family member's incarceration.*

Incarceration occurs disproportionately for families who are already living in poverty [4] and poses further financial difficulties. If a father is incarcerated, child support (court ordered or informal help) will be interrupted, possibly plunging the family into financial crisis. If he is the sole support of his family, the mother may have to go to work, which will have structural, emotional, and dynamic reverberations. If a mother who is the primary caregiver is incarcerated, the children may be left with no means of financial support except what can be provided by the substitute caregiver, often with state assistance.

If the substitute caregiver is a relative, most likely a grandmother, she may be unprepared for the financial effect of taking on a new child or children. Meeting children's needs is not without cost, and the older the child, the greater the cost.

The whole family may go through an emotional upheaval as they experience the stigma, shame, guilt, and pain of dealing with a family member's incarceration. Dealing with the criminal justice system—the lack of information about how to contact the parent, conditions surrounding visits, uncertainty about what will happen to the parent—involves additional stress. While some families will cope admirably well, others may cope by expressing anger at the parent or insisting on secrecy about the incarceration.

It is important to reemphasize that some families will have experienced few of these factors. Perhaps for them the parent's crime and incarceration were fairly isolated incidents in otherwise stable families. We can't stereotype these families, which are as different from one another as any group of families would be. Just as multiple factors combine to pose risk for children and families, multiple factors can also influence eventual positive outcomes.

Adapted with permission from Wright, L.E. & Seymour, C. B. (2000). *Working with Children and Families Separated by Incarceration: A Handbook for Child Welfare Agencies*. Washington, D.C.: CWLA Press.

# Why Children With Parents in Prison Are Especially Burdened

Two reports highlight the psychological effects of mass incarceration that no one is talking about.



Quincy Jones, 11, attends a holiday party at Hope House in Washington, DC on Saturday. Jones's father is incarcerated.

Emily Jan

AMY ALEXANDER, CONTRIBUTOR

DEC 14, 2015 | POLITICS

---

Want to receive exclusive insights from The Atlantic—while supporting a sustainable future for independent journalism? Join our new membership program, The Masthead.

---

*This article is from the archive of our partner **National Journal***

While mass incarceration in America came to dominate the domestic political and policy debate this year, the impact of imprisoned parents on children has largely remained a side issue.

Two new reports make a strong case for centering children and families more squarely in the foreground of discussions on criminal justice—and within evolving legislative and policy changes affecting incarceration.

“Discussions of U.S. corrections policy do not often consider children,” write P. Mae Cooper and David Murphey, researchers at Child Trends and authors of a comprehensive study on youth and children of imprisoned adults.

“We need effective programs to mitigate the harm associated with having an incarcerated parent. Although in-prison programs focusing on parenting skills are common, few are focused on meeting the needs of children directly during the time parents are in prison,” Cooper and Murphey write.

Some 5 million children, or roughly 7 percent of all children living in the U.S., have a parent who is currently or was previously incarcerated, according to the study, which was published in October 2015 and drew from National Surveys of Children’s Health dating to 2007.

---

**Murphey and Cooper estimate that black children, poor children, and children of parents with “little education” are disproportionately represented among the total population of children of incarcerated parents.**

---

Findings in the Child Trends study are echoed in a similar report published Dec. 10 by the Center for American Progress, a progressive political think tank in Washington. CAP researchers Rebecca Vallas, Melissa Boteach, Rachel West, and Jackie Odum found that between 33 million and 36.5 million children—nearly half the total population of U.S. children—have at least one parent who has a criminal record.

Real-world implications for the children of incarcerated parents include a range of potential negative effects, leading authors of the Child Trends study to call for policymakers and lawmakers to step up funding and programs aimed at “reducing

the trauma and stigma these children experience, improving communications between the child and the incarcerated parent, and making visits with the incarcerated parent more child-friendly.”

And Vallas, director of policy for the Poverty to Prosperity Program at CAP and lead author of the report on parents in the criminal-justice system, said, “Because these challenges affect such a large share of our nation’s children, we ignore these intergenerational consequences at our peril.”

### **What’s at Stake**

While researchers at Child Trends acknowledge that there are few longitudinal studies of the long-term impact of parental incarceration on children, Cooper and Murphey’s analysis of existing data shows an alarming collection of “adverse childhood experiences (ACEs),” also known as immediate negative outcomes, affecting children with incarcerated parents. The list of such ACEs includes “increased risk for trauma, or toxic stress, particularly when they are cumulative,” Cooper and Murphey write.

In addition, the Child Trends researchers cite related indicators that have potential long-term negative impacts for children. These indicators are frequently present in households where a parent is or has been incarcerated, and they render children vulnerable to fallout from a dynamic that psychologists call “loss of an attachment figure.” The report found that:

- More than half had lived with someone who had a substance-abuse problem, compared with fewer than 10 percent of children with no parental incarceration.
- Nearly three in five had experienced parental divorce or separation, compared with one in five children without parental incarceration.
- More than one-third had witnessed violence between their parents or guardians, and one-third had witnessed or experienced violence in their neighborhoods. Less than 10 percent of those without an incarcerated parent had experienced either one.

- More than one in four had lived with someone who was mentally ill or suicidal, and nearly one in 10 had experienced the death of a parent.

The major takeaway is that direct interventions are needed to help keep incarcerated parents connected in positive ways with their children, and to have programs that help families, schools, and neighborhoods to cope.

---

**The major takeaway is that direct interventions are needed to help keep incarcerated parents connect in positive ways with their children.**

---

Without such programs—including community- and educator-awareness training designed to reduce shame and stigma surrounding incarcerated parents—a toxic cycle of crisis can develop, which could later lead to incarceration for the child.

For families of limited economic means, in particular black and Latino families, options for supporting children with imprisoned parents can be scarce. Murphey and Cooper estimate that black children, poor children, and children of parents with “little education” are disproportionately represented among the total population of children of incarcerated parents.



Amira Jones, 9, picks out a gift for her aunt and grandmother at Hope House's annual holiday party on Saturday. Jones's mother is in jail. (Emily Jan)

## The Scramble for Solutions

To date, the federal response to this aspect of America's mass-incarceration machinery has been scattershot. With more than 2 million men and women locked up in jails and prisons nationwide—and with blacks and Latinos comprising a majority—the U.S is the most heavily incarcerated country in the developed world. Analyses of impact to communities, municipalities, and states has focused primarily on financial costs, which have increased dramatically since the 1980s.

Yet, with the exception of the Second Chance Act—a bill introduced in 2007 under President George W. Bush that directed the Federal Bureau of Prisons to allow “aging prisoners” under certain circumstances to request transfers to home confinement, and receive grants to aid reentry—no significant legislation addressing the socioeconomic status of current or former prisoners and their family-members has emerged.

The Second Chance Reauthorization Act, which will renew and update the 2007 bill, was sponsored by Republican Sen. Rob Portman of Ohio last summer and is awaiting a vote. Its focus now must include attention to family needs, in particular children, in the context of inmates and the recently-released, according to the bill's sponsor.

"About 95 percent of the people in our prisons will eventually return to society. It is in all of our interests to give these individuals a second chance," Portman and Democratic Rep. Danny Davis of Illinois argued in a recent op-ed. Davis sponsored the 2007 bill. "That may mean helping someone break a drug habit, acquire needed skills or deal with a mental health issue to hold a job, support a family and pay taxes. The spouses, children and extended family of ex-offenders deserve a second chance and if re-entry programs are successful, our communities will be safer, and taxpayers will save millions of dollars annually," wrote Portman and Davis.

In 2013, the Department of Health and Human Services's Administration for Children and Families convened the Children of Incarcerated Parents' Working Group. The group, led by the White House Domestic Policy Council, is composed of representatives from HHS and the departments of Justice, Housing and Urban Development, Agriculture, and Education, as well as the Social Security Administration. It produced a solutions-oriented tool kit that was distributed to prison bureaus, welfare agencies, and residential reentry centers.

Thus, during the past 20 years, a patchwork of public and private support systems have developed to fill the space left by the dearth of direct federal funding and support for children who have incarcerated parents. The Annie E. Casey Foundation (a *Next America* sponsor), developed a suite of resources for funders and community and charitable organizations designed to "preserve the parent-child connection" during parental incarceration, including literacy programs, mentoring and counseling for children, and parent-child visiting programs.

Some states, too, have mounted programs and services to address the challenge of keeping children and incarcerated parents connected. In Oregon, the state

Department of Correction oversees the Children of Incarcerated Parents Project, a 12-year-old public-private initiative that includes Head Start programs, mental-health services, and educational opportunities.

In Washington, Hope House, a nonprofit focusing on helping incarcerated parents stay connected with their children, offers summer-camp opportunities, as well as a recorded-books program. Executive Director Carol Fennelly, who founded Hope House in 1998 and its summer camp a few years later, said that while she's optimistic in general about the recent attention from politicians and policymakers to the larger issue of ending mass incarceration, she has concerns that the status of children and families of the imprisoned is not receiving crucial direct support.

Most urgently needed, in Fennelly's estimation, are educational awareness programs designed to eliminate or lessen the shame and stigma experienced by children of incarcerated parents. "We have had children in our programs who shared with me that one of the hardest parts of what they face is judgment from teachers, peers, and others in their communities," Fennelly said.

"Sometimes people aren't even aware that they react negatively once they first learn that a student has a parent behind bars. But that child certainly can hear it and feel it."

*This article is from the archive of our partner National Journal.*

---

*This article is part of our Next America: Criminal Justice project, which is supported by a grant from the John D. and Catherine T. MacArthur Foundation.*

---

#### ABOUT THE AUTHOR

---

Amy Alexander is a writer based in Washington, D.C.

---

BREAST CANCER &gt; RISK AND PREVENTION

# Stress as a Risk Factor for Breast Cancer and Recurrence

## Stress Impacts the Immune System, Sleep, and Hormones

By Pam Stephan | Reviewed by Doru Paul, MD

Updated October 27, 2016

Share

Pin

Email

Stress happens when push comes to shove. If you experience some force, pressure or demand on your body, mind, or emotions that causes tension or distress, you will respond or react in some way. For some, stress is a powerful motivator, and for others it may cause emotional, mental, and even physical symptoms. Let's take a look at stress and see whether it may be a risk factor for breast cancer.

### Common Stressors to Watch Out For



What are common stressors and what is your stress response?. Istockphoto.com/Stock Photo©Milan Markovic

Life is full of opportunities for stress. Since stressors are so varied, you might like to keep in mind this short list of common life events that trigger stress responses:

- Loss of a close relative, friend, or pet
- Loss of a spouse to death or divorce
- Divorce of one's parents



---

**ECONOMIC CRISIS**

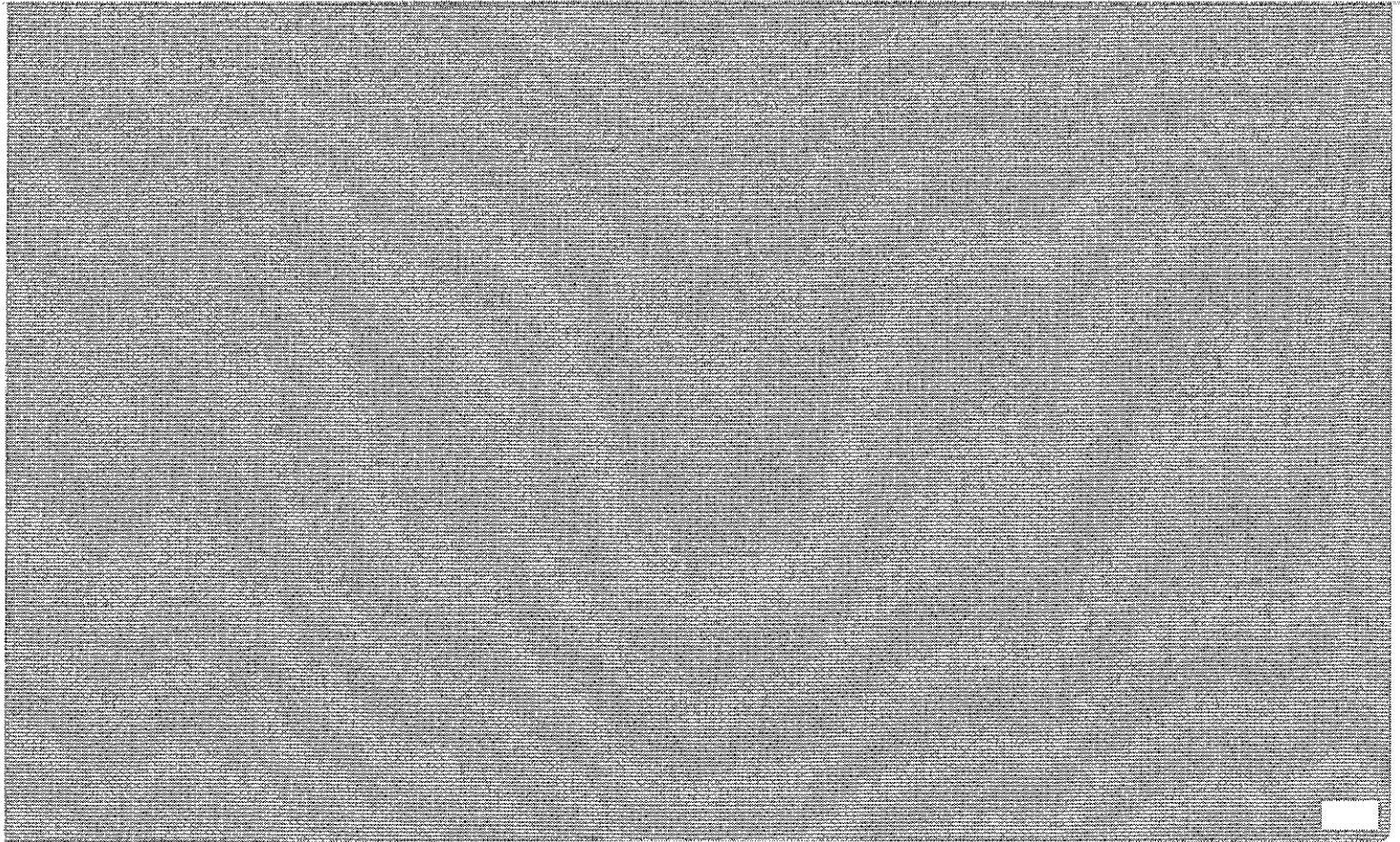
Severe illness – your own or that of a close relative

Family and personal relationships

Advertisement

Advertisement

## Can Stress Cause Breast Cancer?



Is stress a risk factor for breast cancer?. Istockphoto.com/Stock Photo@dolgachov

"You can't tell *me* I didn't have *breakup cancer*," said Katherine Russell Rich in her book *The Red Devil*. She found a breast lump right after her divorce and was diagnosed with Stage 4 breast cancer. Elizabeth Edwards was helping her husband campaign for Vice President when she found her breast lump. You may know somebody with a similar story – after a period of chronic stress or significant loss, they found a lump and were diagnosed with cancer.

It may seem natural to associate negative emotions with breast cancer, but researchers are not sure if, or why, your body may be more vulnerable to cancer due to stress. And, *not everybody who has stress gets sick* – some people can de-stress or fight back, without risking their health.

In 2008, a group of Israeli scientists studied a group of women under 45 years old. They found that young women who had endured two or more traumatic life events had a higher than average rate of depression and greater vulnerability to breast cancer. The younger a woman was when a crisis hit, the greater their risk for cancer.

Likewise, a Scandinavian study found an increased risk of breast cancer among women who **perceived** their lives to be more stressful.

### **Stress, Your Immune System, and Stress Hormones**

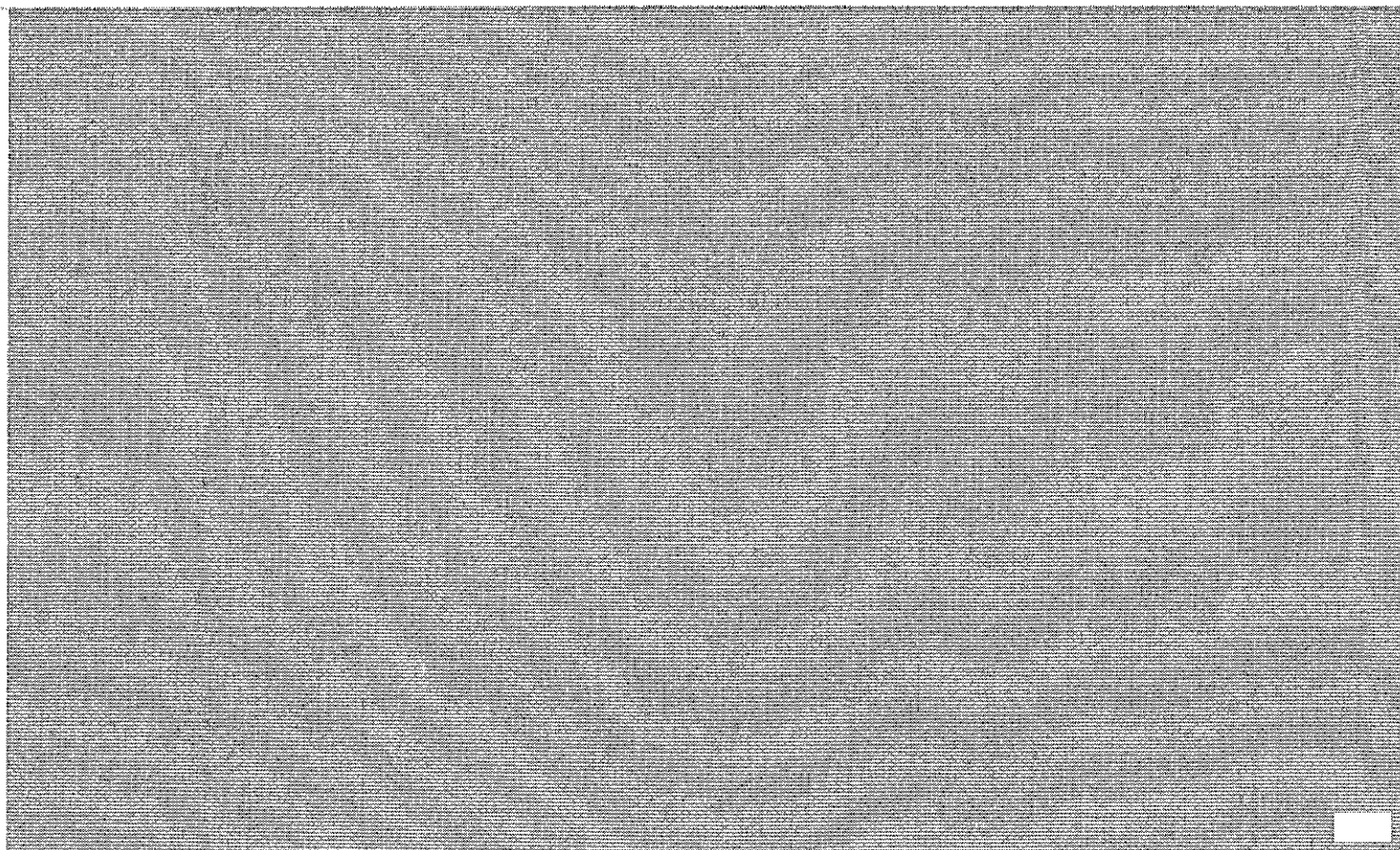
It is thought that stress may affect your nervous, endocrine and immune systems. Chronic stress may weaken your immune system, leaving you with less resistance to disease. In the Israeli study, women who responded to stress with optimism and a fighting spirit seemed to have a protective emotional armor that raised their defenses against breast cancer.

It's important to understand that stress rarely happens in isolation – and perhaps some of the things people do when stressed play a role. For example, some people eat more or drink more, or smoke when stressed.



Advertisement

## **Can Stress Cause Breast Cancer to Recur or Spread?**



Stressed Out Stock Photo. Phlebotomy Tech/Flickr/CC by 2.0

While we're not sure where we are at with cancer initiation, it appears that stress is a bad idea for people who have had breast cancer.

Researchers have looked at this from several angles – albeit, mostly in cells in a dish or in rodents thus far.

From a biological standpoint it would make sense that stress could stimulate breast cancer to grow or spread. When we are stressed we release a hormone called norepinephrine – one of our "stress hormones." Norepinephrine in turn may stimulate both the formation of new blood vessels by cancers (angiogenesis) and hasten metastasis (spread of cancer.) Other studies looking at something called "telomerase activity" also suggest that there could be a biological basis behind stress facilitating the recurrence or spread of cancer.

Does this translate to living creatures? For mice who were placed in a simulated stressful environment, their tumors were more likely to spread.

Studies in humans also seem to point a naughty finger at stress, though it's more difficult to separate out confounding factors. In a fairly large study, women with some types of breast cancer lived longer if they participated in mindfulness stress reduction activities.

As a final note, we know that stress can cause insomnia. We've also learned that insomnia can be dangerous for people who have had cancer, having been associated with lower survival rates for women with some types of breast cancer.

If you've had breast cancer and are feeling panicky after considering this, take heart. Yes, it does appear that stress is unhealthy for those who have had cancer. Yet but we've also learned that on the flip side of the posttraumatic stress many cancer survivors experience, there is also something called posttraumatic growth. Cancer really can change people for the better!



Advertisement

## Stress and Life – Find Your Balance

CHECK YOUR SYMPTOMS  
PRICES

FIND A DOCTOR

FIND LOWEST DRUG

SIGN IN

SUBSCRIBE

WebMD

HEALTH  
A-ZDRUGS &  
SUPPLEMENTSLIVING  
HEALTHYFAMILY  
&  
PREGNANCYNEWS &  
EXPERTS

SEARCH



ADVERTISEMENT

Breast Cancer &gt; News &gt;

**BREAST  
CANCER HOME**

News  
Reference  
Slideshows  
Questions & Answers  
Message Board  
Medications  
Find an Oncologist

**BREAST  
CANCER  
GUIDE**

Overview & Facts  
Symptoms & Types  
Diagnosis & Tests  
Treatment & Care  
Living & Managing  
Support & Resources

**RELATED TO  
BREAST  
CANCER**

Breast Cancer In  
Pictures  
Side Effects You Can See  
Hair Loss: 12 Ways to  
Handle It  
Breast Cancer Treatment  
3 Types of Mastectomy  
Breast Reconstruction  
Surgery

# Does Stress Cause Breast Cancer?

Swedish Study Suggests That Chilling  
Out now Could Lower Breast Cancer  
Risk Later

By Neil Osterweil



Listen

FROM THE WEBMD ARCHIVES

Sept. 24, 2003 (Copenhagen, Denmark) —  
As if life isn't stressful enough, Swedish  
researchers say that being under stress  
may double a woman's risk of developing  
breast cancer.

They based their findings on surveys of  
more than 1,400 Swedish women in the  
late 1960s who were part of a long-term  
health-care study.

The women, who were reported to be a  
representative sample of the Swedish  
population, were asked to fill out a health  
survey, which included a question about  
stress, asking whether at any time in the

**TODAY ON WEBMD****A Visual Guide to Breast  
Cancer**

From mammograms to living after  
treatment.

**Dealing With Breast  
Cancer?**

Get answers to your questions.

**Breast Cancer Screening**

The 3 latest tips to know.

**Cancer Side Effects**

And how to best treat them.

Cancer Guide A-Z

More Related Topics

Examples of stressful situations the women might have encountered were tension, fear, anxiety, or sleep disturbances related to family or work problems. Because the question about stress was only one of many different questions asked at the time, the researchers felt that their answers would probably have accurately reflected the way they felt at the time, says Oesten Helgesson, MD, a physician in the department of primary health care at Gothenburg University.

CONTINUE READING BELOW

## YOU MIGHT LIKE

Ad

**How  
bell**

Cut a l  
day by

ADVERTISEMENT

Although other studies have looked at the question of whether stress can contribute to breast cancer, those studies were based on reports from individual patients who were already diagnosed with cancer, and that could skew the results, says Helgesson, in an interview with WebMD at a European cancer conference here.

"The women sit in a room with a lump in their breast and they get a form to fill about stress, and that could introduce bias. That's why we looked at this question," he tells WebMD.

ADVERTISEMENT

## RECOMMENDED FOR YOU



VIDEO

Breast Cancer: What's Watchful Waiting?



ARTICLE

Living Well With Metastatic Breast Cancer



ARTICLE

Mammogram Screening Guidelines



ARTICLE

Warning Signs of Breast Cancer



ARTICLE

Breast Cancer: Steps to Reduce Your Risk

Metastatic breast cancer treatment stopped working?



FROM  
OUR  
SPON

You're  
not  
to  
blame

The women were part of a study that included an initial examination and detailed health questionnaire, and regular follow-up exams over the next 24 years. Helgesson and the other researchers took the information the women provided about stress at the outset of the study, and used it to determine if there was any relation between increased breast cancer risk and earlier stress.

### Stress Ranks High Among Risk Factors

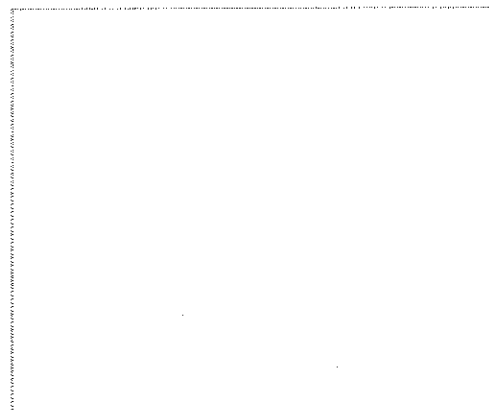
They found that women who reported being under stress had twice the risk of developing breast cancer as women who managed to stay cool, calm, and collected. This twofold risk held up even when they took into account other factors that might explain the increased risk for breast cancer, such as family history of cancer, alcohol use, body weight, smoking, and factors related to reproduction, such as the age when women first had their periods, the age they were when they had their first baby, and the age they were they began menopause.



ARTICLE  
Benign Breast Lumps



ARTICLE  
Facts About Breast Cancer



ADVERTISEMENT

## TOOLS & RESOURCES

Does This Cause Cancer?

Breast Cancer Surgery Options

Breast Cancer Myths & Facts

Guide to Breast Cancer, In Pictures

Cancer Symptoms Women Ignore

Managing the Visual Side-Effects of Breast Cancer

## SUBSCRIBE TO WEBMD NEWSLETTERS

- ☐ Living Better
- ☐ Women's Health
- ☐ Men's Health

**1 2****View All****> NEXT PAGE****Subscribe**

By clicking Submit, I agree to the WebMD Terms & Conditions & Privacy Policy and understand that I may opt out of WebMD subscriptions at any time.

**TOP PICKS**

**Chemo: 3  
Things You  
Need to Know**

**Complementary  
Treatments  
for Cancer**

**When to Get a  
Screening  
Mammogram**

**Dealing with  
Chemo  
Nausea**

**Breast  
Cancer's Link  
to Bone  
Metastasis**

**Suspicious  
Mammogram  
Result: Now  
What?**

**FURTHER READING**

**Complementary  
and  
Alternative**

## **for Breast Cancer**

---

## **Tips for Helping a Loved One Who Has Breast Cancer**

---

## **Breast Cancer- Related Fatigue**

---

## **Breast Cancer Treatment Side Effects**

---

## **Tips for Living Well With Breast Cancer**

---

## **Circle of Friends**

---

## **Managing Chemotherapy Side Effects**

---

## **Breast Cancer Stress and Fatigue Topics >**

## I can't straighten my fingers because I have Dupuytren's contracture

There's a nonsurgical treatment that could help adults with Dupuytren's contracture when a "cord" can be felt.

[Learn More](#)

From Our Sponsor, the maker of **XIAFLEX®**  
collagenase clostridium histolyticum

### IMPORTANT SAFETY INFORMATION FOR XIAFLEX® WHAT IS XIAFLEX®?

XIAFLEX® is a prescription medicine used to treat adults with Dupuytren's contracture when a "cord" can be felt. It is not known if XIAFLEX is effective in children under the age of 18.

**Do not receive XIAFLEX® if you have had an allergic reaction to collagenase.**  
[Important Safety Information](#) | [full Prescribing Information](#) | [Med](#)

## Health Solutions FROM OUR SPONSORS

Cancer Treatments  
Consider Clinical Trials  
Live Better With Diabetes  
Therapy at Home?

Understand Immunotherapy  
Ringing in the Ears  
Survive Cold and Flu Season  
Children's Hospitals

Immediate Pain Relief  
Wearable Health  
Unique Cancer Treatment  
Targeted Cancer Therapy

Get Cancer Answers  
Lower Back Pain Relief  
Smartphone Health Apps

## More from WebMD

Tips to Better Manage Your Migraine  
The Stress of Caregiving  
Healthy Cat Tips  
Immunotherapy for Cancer

How Hereditary Angioedema Is Treated  
What to Know About Methotrexate  
Multiple Sclerosis & Stress

Living Better With Migraine  
How to Prevent Meningitis in Your Teen  
Tips for Your Dog's Health

Diabetes Assessment  
Avoid Allergy Triggers  
Treating Advanced Prostate Cancer  
Symptom Diary for Multiple Sclerosis

WebMD



### Policies

[Privacy Policy](#)  
[Editorial Policy](#)  
[Advertising Policy](#)  
[Correction Policy](#)  
[Terms of Use](#)

### About

[Contact Us](#)  
[About WebMD](#)  
[Careers](#)  
[Newsletter](#)  
[Corporate](#)

### WebMD Network

[Medscape](#)  
[Medscape Reference](#)  
[MedicineNet](#)  
[eMedicineHealth](#)  
[RxList](#)  
[OnHealth](#)  
[BootsWebMD](#)  
[WebMDRx](#)  
[First Aid](#)  
[WebMD Magazine](#)  
[WebMD Health Record](#)  
[Dictionary](#)  
[Physician Directory](#)

### Our Apps

[WebMD Mobile](#)  
[WebMD App](#)  
[Pregnancy](#)  
[Baby](#)  
[Allergy](#)  
[WebMD Magazine](#)  
[Medscape](#)  
[TheHeart](#)

### For Advertisers

[Advertise with Us](#)  
[Advertising Policy](#)



AdChoices 

© 2005 - 2017 WebMD, LLC. All rights reserved.  
WebMD does not provide medical advice, diagnosis or treatment.  
See additional information.

# Daily Mail

.com

[Home](#) | [U.K.](#) | [News](#) | [Sports](#) | [U.S. Showbiz](#) | [Australia](#) | [Femail](#) | [Health](#) | [Science](#) | [Money](#) | [Video](#) | [Travel](#)[Latest Headlines](#) | [Health](#) | [Health Directory](#) | [Coupons](#)

## Milwaukee, WI: Residents 1936 and 1966 Should Ch

American drivers that never knew that insurance rates are surprised. Drivers should read this...

## Stress doubles breast cancer

by BEEZY MARSH, Daily Mail

Women who suffer stress are twice as likely to develop breast cancer, a study suggests.

Worries about work and family, which lead to tension, fear, anxiety and sleep disturbance, appear to raise the risk of suffering the disease later in life.

The damaging effect of stress is on a par with recently documented dangers of taking HRT - which also doubles the risk of breast cancer.

The findings are a blow for a generation of women who face growing levels of stress due to trying to balance work and home lives.

They may also help to explain the rises in breast cancer incidence-But the results are controversial, as the study is the best evidence so far of the power of feelings to trigger disease - a theory which is discounted by many medics.

Case 1:16-cr-00064-WCG Filed 12/28/17 Page 14 of 34 Document 170-2

Doctors from the Sahlgrenska Academy in Gothenburg, Sweden, carried out a 24-year study of almost 1,500 women to make the unprecedented findings.

Their research will be presented at the European Cancer Conference in Copenhagen today.

The group of healthy women aged 38 to 60 were examined by doctors 35 years ago, during 1968 and 1969. They were also questioned about their stress levels over the previous five years.

Women had follow-up examinations during 1974, 1980 and 1992. After the final check-ups, doctors compared which women had suffered more breast cancer.

Those who had reported stress for a month or more during the five years preceding the start of the study had double the risk.

Other factors which would almost certainly increase the risk of disease - including smoking, weight, alcohol intake, age of first pregnancy and age at the menopause - were all taken into account.

Yet still the increase in breast cancer risk remained, with stress the only obvious causal factor.

Cases in the UK have reached an alltime high, with more than 40,000 women affected every year and 13,000 lives lost.

Lead author Dr Osten Helgesson said: "This study showed a statistically significant, positive relationship between stress and breast cancer."

Out of 1,350 women for whom there was complete data, 456 reported stress and 24 of them - or 5.26 per cent - developed breast cancer.

A total of 894 said they had no stress and 23 - or 2.5 per cent of them - developed the disease.

Therefore, researchers concluded, the risk of breast cancer was doubled among the stressed women.

However, Dr Helgesson said one weakness was the study did not try to pinpoint exactly how much stress was needed to

Like  
Daily IV

Follow  
Daily IV

## DON'T MISS

► Shirtless Ma  
Wahlberg shows  
impeccably s  
physique as h  
swimsuit-clad  
on family holi  
Barbados

Wendi Deng, r  
intimate with  
lover Bertold  
21, as she pai  
yacht with Pa  
McCartney an  
daughter Stel

cause the disease.

He added: "I would emphasise that more research needs to be carried out before it can be said that stress definitely increases a woman's risk."

Some experts believe the link could be due to hormonal changes which the body undergoes at times of stress.

Breast cancer is largely a disease driven by the hormone oestrogen, and it is possible that feelings of stress could cause changes in hormone levels which then affect healthy cell growth within the breast.

Stress is thought to lead to changes in the immune system - which could damage the body's ability to kill off cancerous cells, allowing disease to proliferate.

Delyth Morgan, chief executive of the charity Breakthrough Breast Cancer said: "Further research is needed before any direct association between stress and increased breast cancer risk is confirmed."

**Women with breast cancer have a dramatically improved chance of survival if they are given the hormone treatment tamoxifen, experts said yesterday.**

**Taking the drug for five years leads to a 30 per cent reduction in the death rate 15 years after breast cancer is first diagnosed.**

**Leading epidemiologist Professor Sir Richard Peto said results are so convincing that experts should look into giving tamoxifen for longer - in the hope of furthering survival of cancer victims.**

**Breast cancer death rates have tumbled over the past two decades due to early diagnosis, better treatment and the use of treatments such as tamoxifen.**

**Around 13,000 women died of breast cancer in 2001, but that was a fall of 21 per cent over the last decade.**

**Although the actual number of cases of the disease has increased, their chances of survival are better than ever.**

► **PICTURE EX**  
So far from the  
Tapper family  
Nikki, 44, is a  
fox in a floral  
the reality TV  
hit Barbados

► **Jennifer Ani**  
slips into a bi  
Cabo with shi  
husband Just  
as they enjoy  
Year's trip wit  
friend Jason I

► **'What's that**  
of your trouse  
Island's Alex  
sends fans wi  
VERY cheeky  
snap as he pc  
swim shorts

► **'When she e**  
naughty treat  
happens!': Sh  
Catherine Tyl  
reveals she si  
from bloating  
Christmas

► **No LOVE ha**  
here! Victoria  
model Elsa H  
off her VERY  
behind as she  
kettlebell in a  
bodysuit

► **'It's all about**  
at the momen  
Packham reve  
WON'T marry  
term girlfriend  
while his belo  
pooch is still

► **'Taco Wedne**  
JLo and Alex'  
Busty Kim Ka  
sizzles in tiny  
she joins Jen  
and sister Ko  
celeb-studde

**Sir Richard said the latest studies show 35 per cent of breast cancer sufferers who were not given tamoxifen died within 15 years.**

**But only 25 per cent of sufferers who were given five years of tamoxifen had died 15 years after their disease was diagnosed. Breast cancer in most cases is driven by the female hormone oestrogen and tamoxifen is an anti-oestrogen drug.**

**Share or comment on this article**

► **Peep show!**  
Chyna leaves the imaginative poses in sheer lingerie on Instagram as her battle with Kardashians

► **Olly Murs to**  
celebrity dating his bid to find following 'split' Melanie Sykes claimed he has 'messaging' A

## MOST WATCHED NEWS VIDEOS

Embed this </>

Thousands of people spend Christmas day

Adorable moment dog opens Christmas box

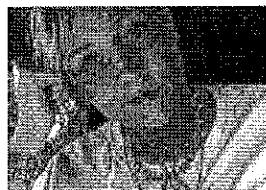
'The family loved having her': Harry talks

Bruised and blood covered 'traveller' men

Three people have died after head-on

Meghan Markle and Duchess of Cambridge

## MOST READ NEWS



'Actually she has a large family who



'I'm a queen and I demand to be



'My darling boy, it makes me very



Pink Gold

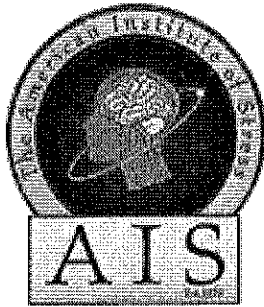
► **So that's how it!** Judy's dramatic weightloss is SUSHI, reveal trainer daughter (who wanted credit for it)



**Comments 0**

Share what you think

Add your comment



Transforming stress through awareness, education and collaboration.

JOIN NOW

Membership

Stress Info

Magazines

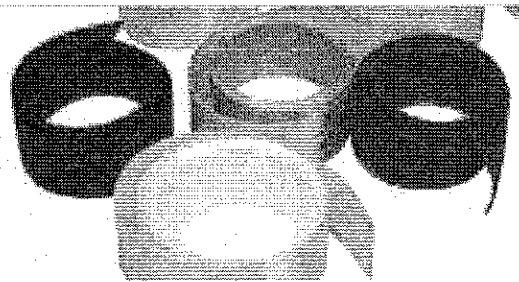
Learning Center

Donate

Shop

Q

My interest in stress and cancer began around 55 years ago, when I had a Fellowship at Hans Selye's Institute of Experimental Medicine and Surgery at the University of Montreal. His magnum opus *Stress* had just been published in 1950, expanding on his theory of the "General Adaptation Syndrome" and its resultant "Diseases of Adaptation". One of the hallmarks of his "Alarm Reaction", the first phase of this syndrome, was marked dissolution of lymphoid tissue and atrophy of the thymus gland. However, the significance of this was not clear with respect to its implications for altered immune system function that might predispose to malignancy.



During dinner at his home one evening, Selye indicated that he had been intrigued with the possible relationship between stress and cancer. He cited various anecdotal reports of the onset of malignancy following emotional stress. He was fascinated by the phenomenon of spontaneous remission, which he thought was due to a strong faith that buffered the harmful effects of stress, and we discussed various aspects of this with respect to its relevance to the "General Adaptation Syndrome". I suggested to him that cancer might possibly represent another "Disease of Adaptation", or a response to stress that had gone awry, but our conversation soon turned to more pressing priorities.

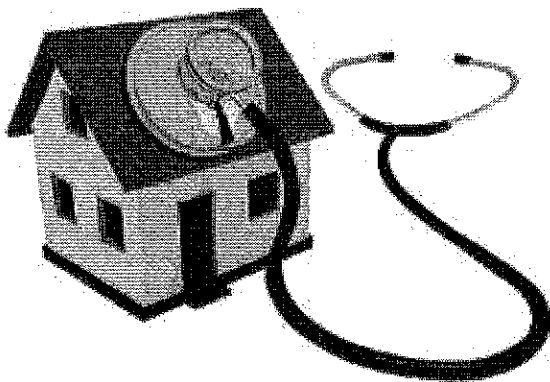
The subject did not come up again until over a quarter century later in 1977, when Selye's International Institute of Stress and Sloan-Kettering Institute co-sponsored a symposium entitled Cancer, Stress, and Death. Selye called to indicate that he would be coming to New York and wanted to have dinner with me to discuss my participation in this event. When we met, he suggested that I contribute a paper on possible relationships between stress and cancer, particularly with respect to the hypothesis that cancer might represent another "Disease of Adaptation". I pointed out that I had been involved in clinical practice for over two decades, and no longer had the time, resources, or training required for such an undertaking. In addition my immediate reaction was that attempting to prove any relationship between stress and cancer in humans would be an insurmountable task for numerous reasons. There was still no satisfactory scientific definition of stress. Cancer comprised a variety of distinct malignancies that most likely had different etiologies. Cancer also caused stress and it might be difficult to determine which came first. More importantly it was obviously impossible to establish exactly when malignant growth began as opposed to when it was first detected, making it equally difficult to prove any temporal relationship.

However, as usual, Selye was persistent and persuasive, and reminded me of our dinner discussion at his home. He had also brought a reprint of "The Growth and Development of the Stress Concept", a chapter he had asked me to write for Modern Trends in Endocrinology in 1958, where I had again referred to the possibility that cancer might represent a "Disease of Adaptation". During dessert and coffee, he confided that he had a very personal interest in this subject. About five years previously, he had been diagnosed as having a histiocytic reticulosarcoma, a tumor that is usually fatal. He attributed his apparent complete recovery to his own faith and determination to remain well in order to continue his research, rather than any surgery or cobalt therapy. Since then, he had been collecting a great deal of material dealing with the subject of stress and cancer, and asked if I would at least look it over before turning down his request. I acquiesced but again emphasized why I was ill equipped to do justice to this complex topic. We reminisced about so many other things as I drove him back to the airport that I dismissed the matter completely.

However, two weeks later Selye sent me a warm note offering to put his research staff at my disposal, together with a package of reprints containing comments penciled in at various locations that were cleverly designed to pique my curiosity. I would normally not have had the time to go through it thoroughly but was able to do so since it serendipitously coincided with a two-week vacation. I found it fascinating reading and after checking some of the references cited that had not been included, which his staff quickly supplied I was even more intrigued. I had taken the bait hook, line and sinker and was now anxious to pursue the assignment for several reasons.

The belief that cancer might in some way be related to stress or distressful emotions is as old as the history of recorded medicine. Over 2,000 years ago, in his dissertation on tumors, *De Tumoribus*, Galen noted that women who were melancholy were much more susceptible to cancer than other females, presumably because they had too much black bile (*mélas chole*). It was difficult to find much written about cancer in the English medical literature until 1701, at which time a British physician, Gendron, emphasized the effect of "disasters of life as occasion much trouble and grief" in the causation of cancer. Eighty years later, Burrows attributed the disease to "the uneasy passions of the mind with which the patient is strongly affected for a long time."

Early nineteenth century physicians such as Nunn emphasized that emotional factors influenced the growth of tumors of the breast, and Stern noted that cancer of the cervix in women was more common in sensitive and frustrated individuals. Walshe's major treatise *The Nature and Treatment of Cancer* called attention to the "influence of mental misery, sudden reverses of fortune and habitual gloomings of the temper on the disposition of carcinomatous matter. If systematic writers can be credited, these constitute the most powerful cause of the disease." One hundred years ago, Snow's review of over 250 patients at the London Cancer Hospital concluded that "the loss of a near relative was an important factor in the development of cancer of the breast and uterus."



I attach particular importance to these observations, particularly the last, because the practice of medicine one or two hundred years ago was much more personalized. Physicians had to rely more upon their own understanding of the significance of the history, emotional background, and life-style of the patient, in contrast to today's emphasis on detached diagnostic high tech laboratory and

imaging procedures. In addition, their education was more apt to include a heavy background in literature, the humanities, and philosophy, rather than the current accent on basic science. They were much more likely to be familiar with the patient's family and social relationships, and the influences of other psychosocial environmental factors. They also spent much more time observing and talking to patients, and asking pertinent questions about such details, than is possible in the frenetic pace of today's super specialized and relatively perfunctory practice setting. Thus, by virtue of education, orientation, and a more personalized approach, they might well be expected to have had a greater sensitivity and appreciation of certain subtle nuances that could suggest any possible relationship between emotional stress and cancer.

During the 20th century, emphasis shifted to external agencies as the cause of cancer.

Currently, a host of carcinogens in the air we breathe, the foods we ingest, or various

viruses have been incriminated. All of these approaches imply some physical assault on us from without, consistent with the germ theory of disease, which is quite understandable. Pasteur's discovery of microbes and clinical achievements, and the proof afforded by Koch's Postulates confirmed the direct causal relationships between microorganisms and infectious diseases. The subsequent success of various vaccines and dramatic life-saving effects of antibiotics seemed to settle any doubts. People became sick because something attacked them from without. Little attention was directed to what determined resistance or susceptibility to disease. Few questioned why certain individuals, similarly exposed to the same tubercle bacillus, hepatitis virus, or carcinogen, remained healthy.

Nevertheless, over the past several decades, numerous clinical and animal research studies have continued to confirm the important influences stressful emotions can exert with respect to the development and progression of different diseases, and particularly malignant growth. Some of the major characteristics of cancer prone individuals appear to be frequent feelings of hopelessness and helplessness, an inability to express anger or resentment, an unusual amount of self dislike and distress, and having suffered the loss of a meaningful emotional relationship. Everson et al. evaluated hopelessness in some 2500 men and found that six years later those who scored high were almost 3.5 time higher to have died from cancer or heart disease. For purposes of this discussion, I should like to concentrate on Snow's observation about the significance of loss of an important emotional relationship as a precursor to cancer.

Implicit in Cannon's "fight or flight" theory, is the teleological premise that our automatic and involuntary responses to stress have been progressively developed over the lengthy course of man's evolution. It is postulated that they represent adaptive changes which were essential for the survival of our ancestors when faced with a life threatening physical threat. The outpouring of adrenalin and stimulation of the sympathetic nervous system caused the pupils to dilate and promote better vision, blood clotting was quickened to reduce loss from lacerations or internal hemorrhage, blood pressure and heart rate rose increasing flow of blood to the brain to facilitate decision making, and carbohydrate and fat stores in the body were broken down raising blood sugar and lipid levels to provide fuel for more energy. The circulation of blood was shunted away from the gut where it was not immediately needed for purposes of digestion, to the large muscles of the extremities. This produced greater tension and strength in the arms and legs to assist in physical combat, or speed of locomotion away from a scene of potential peril.

However, the nature of stress for modern man is not a potentially lethal, physical encounter with a sabre toothed tiger or a warring tribe every few months, but rather a host of emotional stresses which often occur several times a day. The tragedy is that these still often result in the same "fight or flight" responses which are now no longer appropriate or purposeful. Repeatedly invoked, it is not difficult to understand how they could contribute

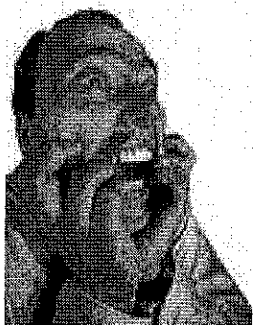
to "Diseases of Civilization" such as hypertension, diabetes, heart attack, strokes, peptic ulcers, muscle spasms, etc. Many of our responses to stress don't seem to make any sense in terms of having ever provided any benefits. When severely frightened, some people experience "goose flesh", or the hairs on the back of the neck may stand up, and what good does that do?. However, the stimulation of those same arrector pili muscles is responsible for the flying fur on the arched back of an aroused cat, which makes it look more ferocious to an assailant. They also produce the bristling of the quills of the porcupine, providing a very effective defense mechanism. Thus, all of our responses to stress undoubtedly served some useful purpose at some time during the lengthy course of human evolution.

It is equally apparent that we often overreact to a stimulus with responses that are damaging. We see this in the occasional development of disfiguring keloids during excessive scar formation in wound healing. Similarly, lip cancer may develop in clay pipe smokers at the site of heat injured tissue which is attempting to repair itself. There are other instances where adaptational evolutionary changes may eventually prove detrimental. In my 1958 chapter discussing Selye's concept of "Diseases of Adaptation" I referred to the theory of "opportunism" in the evolutionary process. This refers to the organism's response to fill a need with whatever means are available, even if that response may ultimately prove harmful. The illustration cited at that time was the tremendous variation in the development of different horns by some twenty-three species of African Antelopes. Some horns are obviously too small to be effective, such as those of the duiker, while others are prohibitively unwieldy, as in the kudu. As one examines this tremendous variation, the marked alterations in anatomical configuration and functional effect do not appear to serve any useful or rational adaptive purpose, and are more of a detriment. If I were to rewrite that article today, I would select the development of malignancy in man as perhaps a more dramatic example of "opportunism" in the evolutionary process, for the following reasons.

As one descends the phylogenetic scale, the incidence of cancer progressively decreases, and it is absent in primitive forms of life. Conversely, the ability of the organism to regenerate injured or lost tissues increases proportionately. Simpler organisms, including some invertebrates, are able to sever parts of their anatomy when they are injured. Obviously, this capability would have survival value only if the animal possessed an equally remarkable ability to regenerate the cast off portion from available cell remnants. Thus, a starfish can grow a new appendage, and the salamander or newt can grow a new tail or leg if it is severed. Humans, however, do not have such reparative or regenerative powers, except perhaps for the liver and spleen which are similar in nature to organs found in lower forms of life.

I believe that some cancers may represent a vestigial remnant of this primitive, purposeful, regenerative potential. When we suffer a loss or injury, an attempt to respond with similar

purposeful replacement activities is triggered. Unfortunately, this new growth, or neoplasia, may prove to be harmful rather than functional. Experiments with chemicals known to cause cancer when applied to the skin or injected into laboratory animals and humans support this hypothesis. When these same carcinogens are injected into the leg of a salamander, it does not result in cancer, but surprisingly causes the growth of a new accessory limb at that site. If injected into the lens of the eye, the salamander will regenerate a new lens. Thus, the identical carcinogenic stimulus can produce either purposeful regeneration, or a fatal malignancy, depending upon the evolutionary development of the organism.



The emotional distress associated with an anticipated traumatic incident is often greater than that encountered as a result of the physical event itself. Some examples are a child awaiting a well deserved spanking, or sitting in the dentist's waiting room prior to some procedure that proves practically painless. Therefore, the leap from physical to emotional loss should not be troublesome. The ability to regenerate lost or injured tissue in lower forms of life obviously involves something more than a simple local response. The message that tissue has been damaged or lost must be relayed to higher centers in the central nervous system which then initiate appropriate and coordinated reparative responses. With man's highly developed cerebral cortex, emotional loss may well be perceived as being as significant or even greater stress than a physical separation. The same signals may be sent to activate endocrine, immune, and central nervous system mechanisms to continue to respond in some manner to repair the damage. However, our attempts to stimulate replacement or purposeful new growth are futile. What may result instead, is new growth in the form of neoplasia which is malignant and beyond control.

In the Holmes-Rahe Scale, the four most stressful life change events all involve loss of important emotional relationships, with death of a spouse and divorce heading the list. If stress can cause cancer, one would therefore expect that affected individuals would demonstrate significantly higher rates of malignancy. It has long been recognized that widowed and divorced individuals die at much higher rates for all the leading causes of death including cancer. It is also quite clear that depression of immune system function predisposes to cancer, as is vividly illustrated by a host of AIDS related malignancies, including the rare Kaposi's sarcoma. Over the past two decades, a variety of studies have demonstrated that following loss of a spouse there is a prompt and impressive decline in immune system defenses, and possibly, this is aberrant adaptive response is a mechanism that may explain some stress related malignancies.

There is also evidence that increased stresses associated with progressive civilization, contribute to cancer. I do not refer here to such things as smoking, air pollution, asbestos,

radiation hazards, or other carcinogenic concerns, but rather to psychosocial stresses that were evident long before these modern problems. This concept is far from new, and was proposed in Tanchou's "Memoir on the Frequency of Cancer" delivered to the French Academy of Sciences over one hundred and sixty years ago. Tanchou noted that "cancer like insanity increases in a direct ratio to the civilization of the country". He noted that in Paris, the annual cancer mortality rate over an eleven year period was .80 per thousand. While it was only .2 per thousand in London. Thus he proudly concluded that the data "proved that Paris is four times more civilized than London". Powell's *The Pathology of Cancer* (1908) stated: "There can be little doubt that the various influences grouped under the title of civilization play a part in producing a tendency to Cancer." Similarly, Roberts wrote in *Malignancy and Evolution* (1926), "I take the view commonly held that, whatever its origin, cancer is very largely a disease of civilization".

The renowned medical missionary, Dr. Albert Schweitzer, wrote "on my arrival in Gabon in 1913, I was astonished to find no cases of cancer", over the years, cases began to appear in growing numbers, and he concluded "my observations incline me to attribute this to the fact that the natives are living more and more after the manner of the whites".

The celebrated anthropologist and Arctic explorer, Vilhjalmur Stefansson, in his book which was actually entitled, *Cancer: Disease of Civilization?*, noted the absence of cancer in the Eskimos upon his arrival in the Arctic, but a subsequent increase in the incidence of the disease as closer contact with white civilization was established. He quoted Sir Robert McCarrison, a physician who had studied 11,000 Hunza natives in Kashmir from 1904-1911. Cancer was unknown, and these individuals seemed to preserve their youthful physique and appearance well into their sixties and seventies, and to enjoy unusual longevity. McCarrison attributed this to the fact that they were "far removed from the refinement of civilization.....and endowed with a nervous system of notable stability". Both Stefansson and Schweitzer believed this had nothing to do with diet, but resulted entirely from the stresses associated with progressive civilization.

In an July, 1927 article in *Cancer*, Dr. William Howard Hay noted: "A study of the distribution of cancer, among the races of the entire earth, shows a cancer ratio in about proportion to which civilization living predominates; so evidently something inherent in the habits of civilization is responsible for the difference of cancer incidence compared with the uncivilized races and tribes. Climate has nothing to do with this difference, as witness the fact that tribes living naturally will show a complete absence until mixture with more civilization, even so does cancer begin to show its head". One of the most persuasive arguments is to be found in Dr. Alexander Berglas' work, *Cancer; Its Nature, Cause and Cure* (1957). Throughout this book runs the theme that cancer is a disease from which primitive peoples are relatively or wholly free, and that we are "threatened with death from cancer because of our inability to adapt to present day living conditions. Over the years,

cancer research has become the domain of specialists in various fields. Despite the outstanding contributions of scientists, we have been getting farther away from our goal, the curing of cancer. This specialized work, and the knowledge gained through the study of individual processes, has had the peculiar result of becoming an obstacle to the whole. More than thirty years in the field of cancer research have convinced me that it is not to our advantage to continue along this road of detailed analysis. I have come to the conclusion that cancer may perhaps be just another intelligible natural process whose cause is to be found in our environment and mode of life".

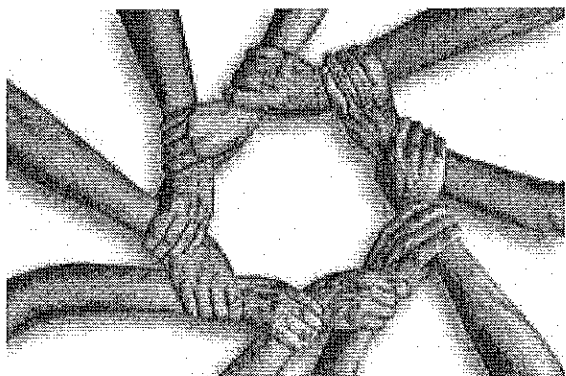
Our latest government figures report a puzzling increase in the incidence of breast cancer in middle-aged females. The experts have no explanation, but I believe this may also be related to the stress of "civilization". It has been well established that the younger a woman is when she has her first child or even becomes pregnant, the less likely she is to develop breast cancer. Pregnancy lowers prolactin, a pituitary hormone that stimulates breast tissue growth and promotes breast cancer in experimental animals. As more and more women enter the work force, they tend to remain single, marry and decide not to have children, or do so only when they are much older. The per cent of women having their first child after the age of 35 has more than quintupled since 1970. Similarly, career oriented women, especially those with no children, have a much higher incidence of deadly ovarian cancer. Single working women have fourteen times the average risk of ovarian cancer than a matched group of homemakers. Job stress itself may be a factor, sometimes because of overt and covert sexual harassment. Many married women have to juggle work responsibilities with being a wife, supermom, single parent, or providing custodial duties for an aging parent or relative. In addition, they find that despite equal or superior training, experience and ability, they are paid less than their male counterparts, and usually reach a dead end when they try to reach the upper rungs of the corporate ladder. Other demographic groups ranging from children, adolescents and the elderly also have unique stresses not experienced generations ago as a consequence of changes imposed by the pressures of contemporary civilization. One can only speculate as to whether this may also have implications for an increase in certain malignancies.



Is it all bad news? I don't think so. All the great integrative systems of the body operate on a system of checks and balances. The autonomic nervous system has balancing antagonistic but complementary sympathetic and parasympathetic components. The endocrine system is regulated by feedback mechanisms between pituitary and target gland hormones that operate much like a thermostat to maintain homeostasis. We know much less about how such homeostasis is achieved in the immune or central nervous system, but it appears plausible that if distress can cause adverse effects, there is quite likely good stress, or what Selye termed "eustress" that promotes health. Sir William Osler noted that the course of

tuberculosis depended more on "what the patient has in his head than what he has in his chest". Ishigami in Japan came to a similar conclusion in his paper "The Influence of Psychic acts On The Progress of Pulmonary Tuberculosis", which appeared in the American Review of Tuberculosis in 1919. Some stable patients often deteriorated and died after learning of the loss of a loved one. In other, more severe cases, a surprisingly complete recovery came about, despite the fact that no specific therapy was available. "These patients are found to be optimistic and not easily worried", he wrote.

A firm faith, feeling of social support from family and friends, all appear to be powerful stress buffers. It is not surprising, therefore, that such attributes have also been reported to be associated with a lower risk of cancer. A lack of emotional support as well as certain other traits were convincingly demonstrated by both Eysenck and Grossarth-Maticek to be highly predictive of cancer. More importantly, they have shown in extensive, long term prospective studies that stress reduction strategies were effective in reducing malignancy by 50% in individuals assessed as being cancer prone. Spiegel's study similarly demonstrated that metastatic breast cancer patients who participated in group social support activities had an 18-month increase in survival compared to controls who received only routine treatment. Fawzy and coworkers found that if a 6-week stress management intervention was added to the treatment for early stage melanoma it enhanced immune system function when compared to controls. After 6 years, the stress management group had less than half the rate of recurrence and deaths. How can one explain the numerous well documented cases of spontaneous remission of cancer? Ikemi's meticulous studies of such patients suggested that a firm faith and a strong positive belief system was the common denominator. Anecdotal but irrefutable reports of cancer cures from shrines, faith healers, comfrey, krebiozen, laetrile, coffee enemas, acupuncture, macrobiotic diets, and other alternative treatments abound. Yet, like spontaneous remission they are extremely rare, and can never be predicted. Here again, a strong faith in whatever the individual believes in, may provide the best explanation. But how is this mediated? How does the placebo effect work? How are the benefits of faith healing or "therapeutic touch" achieved? Is there such a thing as psychic healing? No consistent immune, neuroendocrine, or central nervous system changes have ever been demonstrated in connection with such responses.



Good health essentially depends on good communication – good communication within the internal environment, as well as with the external environment, in order to preserve homeostasis. That holds true for all living systems, ranging upward from the cell to an organ, person, family, corporation, nation, or a society. What we often fail to appreciate, is that these systems are in constant

communication, and problems at one level, can reverberate up and down the line.

Essentially, the basic problem with the cancer cell is that it does not communicate properly, as evidenced by these quotes from Yamasaki's article on non-genotoxic mechanisms of carcinogenesis: "Cancer can be regarded as a rebellion in an orderly society of cells when they neglect their neighbors and grow autonomously over surrounding normal cells".

"Since intercellular communication plays an important role in maintaining an orderly society, it must be disturbed in the process of carcinogenesis".

"Evidence suggests that blockage of intercellular communication is important in the promotion process of carcinogenesis".

While we cannot define stress, all of our research confirms that the sense of being out of control is always distressful. That also happens to be the best definition of the cancer cell – it is essentially a cell out of control, because it does not communicate. Could it be that the beneficial effects of a firm faith, or visual imagery, are somehow related to the development of a sense of control? Can that message somehow filter down through the body's complex informational network to cancer cells? We know that the brain has hard wired as well as humoral connections with the immune system that may transmit such messages. However, it is clear that there are receptor sites on cell membranes for very subtle electrical energies similar in nature to those that are generated in the body. EEG wave patterns may be much more than simply the noise of the machinery of the brain. They may well represent messages being sent to other parts of the body. This is consistent with Nordenstrom's theory of an internal electrical circulatory system and his dramatically successful treatment of metastatic lung tumors using weak electrical energies. Understanding how such mind/body interactions are mediated, may help us to learn how to stimulate, simulate, or emulate such mechanisms, to tap into the wisdom of the body and its awesome potential for self healing. Considerable evidence suggests that such forces play an even more important role in stress-cancer relationships because of their ability to control cell growth at its very basic level.

We are all exposed daily to a host of potential physical carcinogens in our environment but are there psychosocial carcinogens as well? What determines resistance or susceptibility to cancer? Behavioral factors and inappropriate responses to stress must also be considered along with genetic factors in attempting to understand why some individuals develop cancer, or what the clinical course will be. Impaired host resistance due to disturbances in immune system function seem to be an important factor as evidenced by the increase in malignancies in patients with AIDS and the melanoma studies by Fawzy and the benefit of stress reduction has been demonstrated in both of these fatal disorders. Similarly, Cohen's detailed experiments on the effect of stress on the development of colds found that rates for both laboratory evidence of infection and clinical colds correlated precisely with the

magnitude of psychological stress scores for each of the five rhinoviruses used in healthy volunteers. In addition, he also demonstrated the protective effects of strong social support.

Our current preoccupation is with cancer epidemiology, the roots of which epi (on), demos (people), logos (reason), connote something that has been thrust upon us from outside. What we must now begin to appreciate is what I have referred to as the endemiology of cancer, and those influences emanating from within the individual which may be equally significant and potentially under our control. Louis Pasteur, the great proponent of the germ theory of disease, engaged in many debates with his famous contemporary Claude Bernard. On his deathbed, he allegedly stated: "Bernard avait raison, Le germe n'est rien, c'est le terrain qui est tout". (Bernard was right. The microbe is nothing, the soil is everything). In the final analysis, we are left with what every "complete" physician eventually learns, namely, that, "Many times it is much more important to know what kind of patient has the disease, than what kind of disease the patient has".

Paul J. Rosch, M.D., F.A.C.P.  
President, The American Institute Of Stress

Clinical Professor of Medicine and Psychiatry  
New York Medical College

(The above is based on prior chapters and articles that are listed in the following **Suggested Readings**)

6387 Camp Bowie Blvd. Ste  
B - #334  
Fort Worth, TX 76116 USA  
Phone: (682) 239-6823  
Fax: (817) 394-0593  
Email: [Contact Us](#)

<a href="#">&gt; Home</a>	<a href="#">&gt; Memberships</a>
<a href="#">&gt; Stress Facts</a>	<a href="#">&gt; Publications</a>
<a href="#">&gt; Blog</a>	<a href="#">&gt; Learning Center</a>
<a href="#">&gt; Daily Life</a>	<a href="#">&gt; Military</a>

LOGIN

Username

Password

☒ Remember Me

Login →

[Register](#)

GET SOCIAL

AIS does not provide any  
clinical services nor are we  
able to respond to requests



for assistance with  
personal problems other  
than to suggest resources  
that may be helpful when  
appropriate.

---

The American Institute of Stress was founded in Yonkers, New York in 1978 and moved to Texas in 2012. It is a Texas 501(3)c nonprofit corporation. Your tax deductible gift allows us to continue helping you along with Service Members and civilians navigate stressful situations to have a happier, more rewarding life.

© Copyright 1979 - 2017 | All Rights Reserved | Hill Shepherd Marketing Group

---

## MEDICAL NEWS TODAY

---

# Stress fuels cancer spread by triggering master gene

By Catharine Paddock PhD | Published Tuesday 27 August 2013

**A new study from the US published in the *Journal of Clinical Investigation* finds that activation of a master gene called ATF3 that is important for helping cells adapt to stress may be involved in helping breast, and possibly other cancers spread to other parts of the body (metastasis).**

With the vast majority of all cancer suffering and death associated with metastasis, researchers are keen to learn more about what causes it. The American Cancer Society says metastasis is the single most significant challenge to management of cancer.

## Stress could be unifying theme in cancer spread

Previous studies have shown that stress is a risk factor for cancer, and for example, that psychological stress is linked to breast cancer aggressiveness.

And researchers already know that ATF3 is activated when all types of cells experience stressful conditions that threaten their ability to maintain a constant internal environment (homeostasis).

Under normal circumstances, triggering ATF3 protects the body from harm by causing normal cells to commit suicide if there is a risk they have become permanently damaged by the stressful conditions (eg lack of oxygen or irradiation).

When cancer cells first arise, the immune system recognizes them as foreign agents and enlists immune cells to attack them. In the early stages of cancer development this works. But then things go wrong: one reason is cancer cells start to send signals to immune cells that cause them to misbehave in a way that helps the tumor grow.

In the new study, researchers at Ohio State University show that cancer cells are able to switch on ATF3 in immune cells that have been summoned to tumor sites. The result is ATF3 then causes the immune cells to malfunction and allow cancer cells to escape from the tumor and spread to other parts of the body.

Senior author Tsonwin Hai, a professor of molecular and cellular biochemistry at Ohio, says:

"If your body does not help cancer cells, they cannot spread as far. So really, the rest of the cells in the body help cancer cells to move, to set up shop at distant sites. And one of the unifying themes here is stress."

## **Study suggests cancer cells target AFT3 in myeloid cells**

In previous work, Prof Hai and her team found expression of ATF3 was linked to poorer outcomes in 300 breast cancer patients.

When they examined tumor samples from those patients they were stunned to find expression of ATF3 in certain immune cells was tied to poorer outcomes whereas ATF3 in cancer cells showed no such link.

In the new study, the researchers investigated those clinical results further by conducting two experiments in mice.

They first injected breast cancer cells in normal mice and in mice that could not express ATF3 in any cells.

The breast cancer in normal mice spread to the lungs much faster and more extensively than it did in the mice lacking ATF3.

In the second experiment, the team repeated what they did in the first experiment, except that instead of mice that could not express ATF3 in any cells, they used mice that had been genetically engineered to lack ATF3 only in a group of immune system cells called myeloid cells.

The results of the second experiment were similar to those of the first experiment, leading Prof Hai and her team to write:

"In conclusion, we identified ATF3 as a regulator in myeloid cells that enhances breast cancer metastasis and has predictive value for clinical outcomes."

## Stress gene could be target for drugs to fight metastasis

If further studies confirm these findings, the team believe the stress gene could one day be a target for drugs that fight cancer spread.

In the meantime, Prof Hai says, they help us better understand how tumor cells hijack the body's own resources to promote cancer survival and spread.

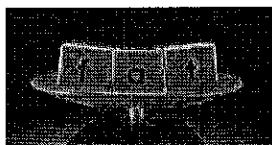
There are lots of ways to switch on ATF3 in cells, as well as the signals sent by cancer cells, a high-fat diet, radiation, chemotherapy, UV damage and even chronic behavioral stress, are others.

The team now plans to investigate further how these and other stressors affect immune cells through switching on ATF3, changing them from attacking cancer cells to helping cancer cells.

Written by Catharine Paddock PhD

ADVERTISEMENT

Ad



**4 Foods you must not eat :**

Cut down a bit of your belly every day by never eating these 4



**Have a medical question? Connect with an online doctor**  
**GET STARTED**

## References

"Transcription factor ATF3 links host adaptive response to breast cancer metastasis"; Chris C. Wolford, Stephen J. McConoughey, Swati P. Jalgaonkar, Marino Leon, Anand S. Merchant, Johnna L. Dominick, Xin Yin, Yiseok Chang, Erik J. Zmuda, Sandra A. O'Toole, Ewan K.A. Millar, Stephanie L. Roller, Charles L. Shapiro, Michael C. Ostrowski, Robert L. Sutherland, Tsonwin Hai; *J Clin Invest* 2013, 123(7), 2893-2906; DOI: 10.1172/JCI64410.

Additional source: Ohio State University.

## Additional information

## Citations



Popular news	Your MNT	About us
Editorial articles	Log in or sign up	Our editorial team
All news topics	Newsletters	Contact us
Knowledge center	Share our content	Advertise with MNT

## get our newsletter

Health tips, wellness advice and more.

Enter your email address

**SUBSCRIBE**

Your privacy is important to us.

Healthline Media UK Ltd, Brighton, UK.

© 2004-2017 All rights reserved. MNT is the registered trade mark of Healthline Media. Any medical information published on this website is not intended as a substitute for informed medical advice and you should not take any action before consulting with a healthcare professional.



This page was printed from: <https://www.medicalnewstoday.com/articles/265254.php>

Visit [www.medicalnewstoday.com](http://www.medicalnewstoday.com) for medical news and health news headlines posted throughout the day, every day.

---

2017 Healthline Media UK Ltd. All rights reserved. MNT is the registered trade mark of Healthline Media. Any medical information published on this website is not intended as a substitute for informed medical advice and you should not take any action before consulting with a healthcare professional.



April 4, 2016

Ron Van Den Heuvel  
2077A Lawrence Dr  
De Pere, WI 54115

Dear Ron,

Thank you for being a VIP for the 62nd Annual CP Telethon, and for your amazing support of the CP Centers! The Telethon was a wonderful, moving, and emotional experience for our clients, staff and community as a whole. Ron, you are an impactful part of this awe inspiring event, helping fundraise over \$1,242,000 for local children and adults with a variety of mobility, communication, fine and gross motor, and sensory conditions.

Your selfless effort to fundraise \$10,565 as a VIP makes a great impact for individuals in your community. Thank you, Ron, for all the ways you reached out to the community through your network to make those pledges and gifts possible.

This year, the VIP panels raised a total of \$327,630! Enclosed please find a sheet detailing the subtotal raised by VIP's for each hour of the Telethon; incredible achievements in support of CP's mission, Celebrating All Abilities and Unlocking Potential!

As we reflect on the Telethon and more than sixty years of community support, we are especially appreciative of those kind volunteers that make our work possible. Please accept our grateful appreciation to you for bringing hope and touching lives in our Northeast Wisconsin community.

With gratitude,

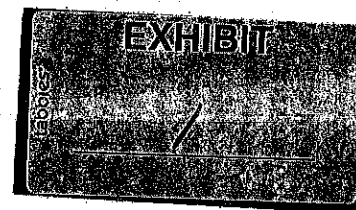
  
Jon Syndergaard  
Executive Director

Adam Sutter  
Development Director

*Thanks for your  
excellent work Ron!*



Cerebral Palsy, Inc. | 2801 South Webster Avenue, Green Bay, WI 54301 | Phone: 920-337-1121 | [www.cp-center.org](http://www.cp-center.org)




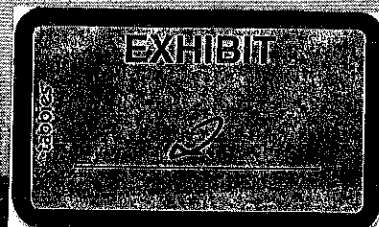


CERTIFICATE OF APPRECIATION  
PRESENTED TO

**Ron & Kelly Van Den Heuvel**

FOR YOUR GENEROUS SUPPORT

  
Joseph J. Neldenbuch  
St. Vincent Hospital Administrator

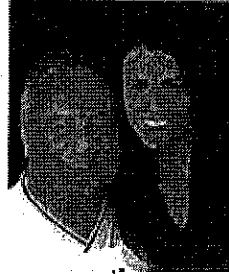


# 2015 Co-Chairs

## *Ron & Kelly Van Den Heuvel*

### 2015 SIGNATURE CHEFS AUCTION CO-CHAIRS

Ron and Kelly Van Den Heuvel have been proud supporters of The March of Dimes and children's charities throughout Northeast Wisconsin and Savannah, Georgia. Working alongside the March of Dimes in their mission to give every baby a fighting chance. They support the March of Dimes and their mission to improve the health of all babies by preventing birth defects, infant mortality and premature births.



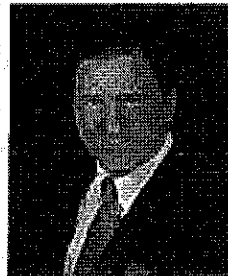
We look forward to continuing our work with The March of Dimes in the effort to give all babies a healthy start in life.

## *Master of Ceremonies*

## *Bill Jartz*

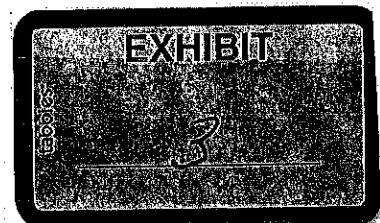
### 5, 6 & 10 PM. NEWS ANCHOR FOR WBAY TV 2

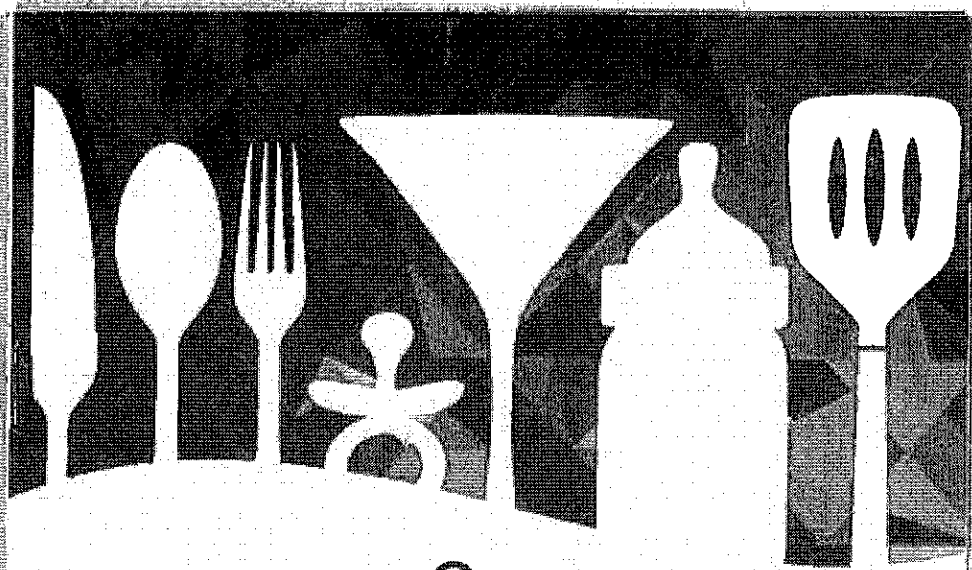
As the WBAY sports director, Bill won the admiration of Northeast Wisconsin's sports fans, performing play-by-play duties for pre-season Packer football games, and hosting the award-winning "Monday Night Kick-Off" throughout the regular schedule.



In late October 1998, Bill followed the path of another sports veteran - Chuck Ramsay - to assume a new challenge as a news anchor, joining Cami Rapson on Action 2 News at Ten. Bill felt it was time for a change, and it also gave him weekends free to spend with his wife, Mary. Four years later, with the retirement of the venerable anchor, Bill followed in Chuck's footsteps again to assume the mantle of 5 and 6 p.m. co-anchor.

Bill has been the March of Dimes Signature Chefs Auction Celebrity Emcee for over 20 years! "I've supported the March of Dimes for twenty years and their mission to give all babies a healthy start in life and each October I look forward to the Signature Chefs Auction!"





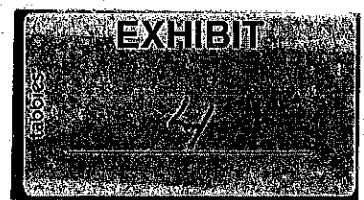
march  of dimes®  
*Signature Chefs Auction*

EVENT PROGRAM  
*and*  
AUCTION GUIDE

Tuesday, October 20, 2015 | 5:30pm  
at the Radisson Hotel & Conference Center



Presenting Sponsors



## Ron Van Den Heuvel

---

**From:** DeJardin, Tammy <TDeJardin@marchofdimes.org>  
**Sent:** Friday, November 6, 2015 4:28 PM  
**To:** Ron Van Den Heuvel  
**Subject:** RE: 2015 chefs auction dinner

**Categories:** PRINTED

Hi Ron:

Sorry I didn't write to you sooner, we just had our Fox Cities Chefs Auction so it has been so busy since the Green Bay Chefs Auction.

I did want to tell you and Kelly how much I and the March of Dimes appreciated everything you did to make the event a huge success!!!

We went over our budget of \$72,000, by raising over \$74,000! Everything went well and I hope all the guests enjoyed the evening. Because of both of you we had phenomenal auction packages!!

We should have a recap meeting whenever you both have time. We should have Pattie also there so we can start to plan for 2016.

Please let me know how you felt the event went and if there is a day that would work into your schedules.

Thanks so much for everything you do for the March of Dimes!

.....  
Tammy DeJardin  
Director of Development - North Division

March of Dimes  
Wisconsin Chapter  
677 Baeten Road, Suite 100  
Green Bay, WI 54304  
Direct (920) 278-3129  
Main Line (920) 337-9099  
Cell: (920) 819-8328  
Fax (920) 337-9141



A FIGHTING CHANCE FOR EVERY BABY™

[marchofdimes.com/wisconsin](http://marchofdimes.com/wisconsin)

---

**From:** Ron Van Den Heuvel [mailto:rvdh@greenboxna.com]  
**Sent:** Friday, November 06, 2015 3:11 PM  
**To:** DeJardin, Tammy  
**Subject:** 2015 chefs auction dinner



*bellin*  
*health*

★ THE RAY & PAT VAN DEN HEUVEL  
FAMILY POWER PLANT ★

IN ACKNOWLEDGMENT OF THE GUIDANCE, EXPERTISE, AND SKILL  
PROVIDED BY THE TEAM OF DEDICATED INDIVIDUALS WHO MADE  
THIS FACILITY POSSIBLE

**PROJECT MANAGERS**

PAUL VLIES, BELLIN HEALTH  
CHRIS GRZYBOWSKI, SOMERVILLE, INC.

**ARCHITECT / ENGINEER**

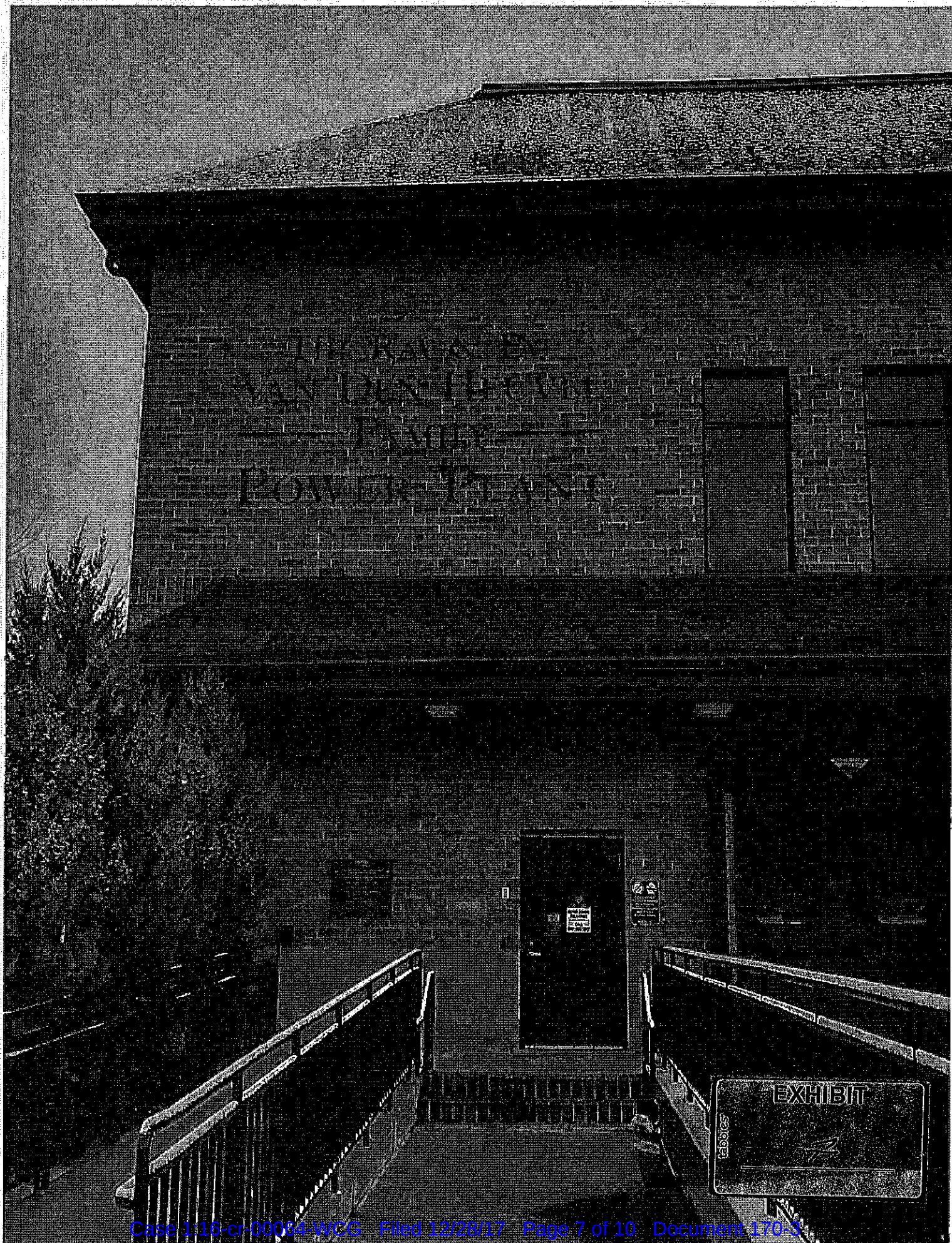
SOMERVILLE, INC.

**CONTRACTORS**

GENERAL CONTRACTOR	THE SELMER CO
ELECTRICAL CONTRACTOR	VDH ELECTRIC, INC.
PLUMBING & HEATING	TWEET GAROT MECHANICAL, INC.
FIRE PROTECTION	PAGE CORPORATION
TEMPERATURE CONTROLS	JOHNSON CONTROLS
ELEVATOR CONTRACTOR	OTIS ELEVATOR, INC.

**AUGUST 30, 2002**





**THE RAY VAN DEN HEUVEL FAMILY CAMPUS CENTER  
DEDICATED  
OCTOBER 10, 2000**

**WILLIAM J. HYNES  
PRESIDENT**

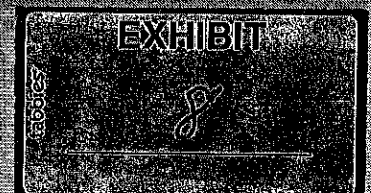
**THOMAS A. MANION  
CHANCELLOR**

**ANN MURPHY  
TRUSTEE  
FUND-RAISING CHAIR**

**PAUL O. GEHL  
TRUSTEE  
CO-CHAIR**

**THIS FACILITY, ONCE KNOWN AS VAN DYKE GYMNASIUM AND LATER AS VAN DYKE HALL, WAS RENOVATED AND EXPANDED FOR THE BENEFIT OF ALL PERSONS WHO VALUE LEARNING BEYOND THE CLASSROOM.**

**THE RAY VAN DEN HEUVEL FAMILY, LIFELONG RESIDENTS OF DE PERE, SAW THE NEED TO PROVIDE OPPORTUNITIES FOR EXPERIENTIAL-LEARNING IN A CASUAL SPACE, INCORPORATING CULTURAL DIVERSITY, MENTORING AND INDIVIDUAL GROWTH. WITH THEIR SUPPORT, A FACILITY WAS CREATED WHERE HEALTHY LIFESTYLES WOULD BLEND TOGETHER SOCIAL, RECREATIONAL AND SPIRITUAL PROGRAMS TO STRENGTHEN THE SENSE OF COMMUNITY ON CAMPUS. THEIR NAMING GIFT ENABLED THE COLLEGE TO CREATE A LEARNING AND SOCIAL ENVIRONMENT FOR ALL TO ENJOY. THE ACTIVITIES THAT TAKE PLACE WITHIN THESE WALLS HELP TO INFUSE THE COLLEGE COMMUNITY WITH THE NORBERTINE PRINCIPLES OF COMMUNITY AND SERVICE.**



## RAY VAN DEN HEUVEL FAMILY CAMPUS CENTER

THE FOLLOWING BENEFACTORS HAVE UNITED TO CREATE THIS ATTRACTIVE AND FUNCTIONAL CAMPUS CENTER TO ENHANCE THE LIFE OF THE CAMPUS COMMUNITY. THE CONCEPT OF COMMUNITY, WHICH MIRRORS THE VALUE-CENTERED MISSION OF ST. NORBERT COLLEGE, AND THE STRENGTHENING OF EACH STUDENT'S PERSONAL, INTELLECTUAL AND SPIRITUAL DEVELOPMENT ARE FOSTERED THROUGH THE CO-CURRICULAR DIMENSIONS OF COLLEGE LIFE OCCURRING IN THIS CENTER.

### VHC, INC.

PHILIP AND ELIZABETH HENDRICKSON  
PATRICK R. AND ANN M. MURPHY  
[IN MEMORY OF ROLAND M. MURPHY]  
PAUL O. AND CAROL H. GEHL  
RON AND JAN VAN DEN HEUVEL

SALLY AND ED THOMPSON  
THE GENTINE FOUNDATION, INC.  
JOE AND MAC LA FORCE  
ROLAND AND SUE ELLEN STEPHENSON  
ANONYMOUS

MRS. DOLORES "DOLLY" CUENE  
CORNERSTONE FOUNDATION OF NORTHEASTERN WISCONSIN, INC.  
LEO N. AND BARBARA CROWLEY  
FORT JAMES CORPORATION  
HILLIARD FAMILY FOUNDATION  
THE LUTSEY FAMILY FOUNDATION  
ROBERT C. AND AGNES M. HEIN  
K.C. STOCK FOUNDATION

WILLIAM AND CINDY BAIN  
BEL GIOIOSO CHEESE, INC.  
CUENE FAMILY FOUNDATION  
CHRIS AND EVIE HARTWIG  
HAROLD AND ARLEEN VANDEN HEUVEL  
DAN AND NANCY DICKINSON  
ASSOCIATED BANK  
AUSTIN GRAY IRON FOUNDRY  
STEVE BISCHEL  
DAVID AND NANCY HUBER  
PETER AND KATHLEEN REINES  
KENNETH AND VIRGINIA TRUDELL  
JOHN M. FITZGIBBONS  
PATRICK AND PATRICIA VOSS  
CLASS OF 1997  
CLASS OF 1999  
CLIFFORD E. AND DOLORES T. MURPHY FAMILY

EXHIBIT

9

RAY VAN DEN HEUVEL FAMILY  
CAMPUS CENTER

EXHIBIT

10